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CONTENTS

PEPERANGAN KONVENSYENAL

— secebis tinjauan

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Peperangan konvensyenal? Ketika Latihan Gonzales diadakan tiada lama dahulu, penulis rencana telah disoal oleh seorang parajurit mengapa dia mesti berkedudukan di hutan belantara untuk menyertai latihan ala-peperangan konvensyenal itu; bukankah, katanya, peperangan itu adalah peperangan terbuka? Rencana ini adalah secebis huraian bagi persoalan tersebut.

PERUBAHAN

Tentera Darat Malaysia mulai heboh dengan desas-desus gara-gara peperangan konvensyenal sejak tahun 1975 dengan terbitnya arahan yang bersangkutan dengan idea peperangan tersebut. Dari ketika itu alat-alat yang lazim menjadi simbol peperangan konvensyenal seperti topi besi, kereta perisai dan meriam jelas ditonjolkan di sekitar latihan terutama di dalam liputan akhbar dan television. Perajurit-parajurit juga nampak telah berubah gaya daripada gerak-geri 'jungle basher' kepada 'conventional soldier'. Jelas kelihatan pula pada cara mereka berjalan daripada langkah perlahan dan cermat dahulunya berubah kepada lagak yang bergegar dan segak. Di dalam masa yang singkat sahaja gara-gara peperangan konvensyenal telah merangkumi segala aspek pemikiran di segenap lapisan tentera daripada strata atasan hingga ke peringkat bawahan.

GONZALES V

Keadaan perubahan yang diperlukan ini amatlah menggalakkan; hanya ada beberapa perkara yang memerlukan penelitian fahaman. Misalnya, sewaktu latihan Gonzales V dahulu ada parajurit bertanya: Apakah sebabnya pasukan mereka ditugas mengambil kedudukan di satu kawasan yang sebahagiannya meliputi hutan — walhal pada pendapat mereka latihan itu ialah latihan konvensyenal. Pasukan yang tersebut itu ditugas berkedudukan di sebelah-menyebelah axis jalanraya di mana sebahagian kawasannya diliputi hutan rimba yang tebal. Dengan ini jelas beberapa kekeliruan telah timbul untuk memahami implikasi asas peperangan konvensyenal terutamanya mengenai kegunaan tanah (ground application) dan hal-hal yang berkaitan. Berlebih-lebih lagi perkara ini menjadi lebih ketara apabila tentera kita mementingkan kawasan latihan konvensyenal yang tidak boleh tidak meliputi kawasan tanah lapang seperti Kota Belud, di Sabah, Penarik di Trengganu atau di Ladang Tebu Kota Tinggi, Johor.

PENGELIRUAN

Punca utama kekeliruan ini muncul ialah kerana istilah 'conventional warfare' diterjemahkan bulat-bulat sebagai 'peperangan terbuka'. Ini memberi erti bahawa peperangan konvensyenal memerlukan tanah lapang yang luas supaya dapat pasukan-pasukan mengambil kedudukan yang terbuka. Ini bermakna juga bahawa pengertian ini mementingkan tanah lapang dan luas atau 'open terrain' sebagai faktor asas di dalam perang konvensyenal. Hal ini mengelirukan dari hakikat yang sebenarnya. Selain dari ini, dengan cara tidak langsung pengalaman umum memisahkan peperangan gerila seperti yang kita hadapi selama 30 tahun yang lepas di dalam hutan belantara daripada peperangan konvensyenal. Perkara ini dengan tidak disedari mempengaruhi pemikiran kita memisahkan hutan daripada ciri-ciri peperangan konvensyenal. Maka perlulah kita lihat terutamanya keadaan dan pandangan semasa dari sudut perkembangan-perkembangan di dalam beberapa bidang yangmana boleh membawakan fahaman baharu di dalam pengertian peperangan konvensyenal.

Dilihat dari pandangan umum peperangan konvensyenal diiktirafkan dari dua implikasi iaitu 'weapon system' yangmana ini mempengaruhi implikasi yang lain iaitu 'method of warfare' atau cara peperangan. Apabila dilihat dari kacamata 'protagonist' barat adalah jelas bahawa peperangan konvensyenal diiktiraf dari implikasi 'weapon system'. Dengan sebab kebanyakan negara-negara barat kini berupaya membentuk dan mempunyai senjata nuklear maka satu sefahaman wujud di antara mereka di mana peningkatan peperangan dapat diiktiraf dan dibezakan di antara satu peringkat ke satu peringkat yang lain, iaitu daripada peringkat konvensyenal ke peringkat yang lebih besar iaitu peperangan nuklear. Persefahaman ini sudah pasti wujud. Dengan ini adalah percayai peperangan di peringkat konvensyenal dapat di kawal manakala kemarakan (escalation) ke peringkat Nuklear harus tidak dapat dikawal dan mungkin akan terlanjur ke arah

pembinasaan manusia dan isi alam jagat ini kelak.

PELBAGAI KONSEP PEPERANGAN

Di negara-negara Dunia Ketiga, peperangan konvensyenal secara umum dilihat dari segi 'method of warfare'. Di negara-negara ini peperangan mencetus dari dua punca iaitu di antara dua buah negara atau pemberontakan menentang kerajaan dalam sesebuah negara itu. Bagi jenis yang ke dua ini peperangannya disebut 'insurgency' yangmana ianya meliputi hakikat peperangan revolusi. Di dalam konteks ini, Mao Tze Tung menekankan iaitu perkara yang penting di dalam peperangan revolusi ialah mengetahui bilakah masanya peringkat peperangan gerila hendak dipertingkatkan kepada peringkat peperangan konvensyenal.

Kita telah melihat contoh kemerebakan daripada peperangan gerila ke peringkat Konvensyenal ini berlaku di peringkat akhir peperangan Vietnam Selatan pada Tahun 1962 — 1975. Dalam pada itu sering disebutkan bahawa serangan Musim Bunga 1972 oleh Vietcong/Vietnam Utara dan serangan terakhir 1975 sebagai serangan konvensyenal. Apa yang muncul dengan cara jelas di dalam peringkat kemarakan konvensyenal seperti yang digambarkan di atas ialah satu-satu barisan hadapan peperangan yang jelas, di mana, di peringkat peperangan gerila barisan tersebut tiada wujud.

Kedua-dua serangan yang dinyatakan di atas adalah serangan-serangan besar, dalam mana segala pasukan dan peralatan disusun rapi mengikut susunan formasi perang termasuk kereta-kereta kebal, meriam-meriam, roket, kelengkapan udara dan laut. Peralatan dan bala tentera ini diatur rapi meskipun ianya terhad. Tambahan kepada kelengkapan ini ialah pasukan-pasukan gerila. Seperti diketahui umum peperangan ini telah berlaku dipelbagai kawasan Vietnam — di pantai, sawah-padi, kawasan pergunungan, delta dan lain-lain lagi. Kereta-kereta kebal telah digunakan di mana sahaja keadaan tanah mengizinkan, manakala pasukan infantri pula telah bergerak di merata kawasan peperangan. Di samping itu beberapa daerah telah diawasi rapi oleh unit-unit gerila, pendek-kata tiada sebarang pun kawasan yang terelak dari gerakan ini. Apa dan mana-mana sahaja kawasan yang boleh memberi menafaat, telah digunakan secara habis-habisan.

KECUNDANGAN INGGERIS

Semasa Peperangan Dunia Kedua beberapa anggapan dibuat oleh pihak Inggeris apabila merumuskan langkah-langkah pertahanan Semenanjung Tanah Melayu dan Singapura. Mereka menganggap hutan di Semenanjung sebagai 'impenetrable', dan kononnya mustahil dapat ditembusi oleh tentera Jepun sekiranya mereka menyerang Tanah Melayu. Oleh itu rancangan pertahanan Inggeris menumpukan kekuatan mereka untuk menentang kemaraan Jepun dengan kedudukan-kedudukan menghalang axis jalan-jalan raya utama sahaja. Jepun ketahui akan kedudukan ini; oleh itu tenteranya yang hendak digunakan untuk menyerang Tanah Melayu dilatih khusus di Pulau Hainan sehingga mahir dengan keadaan hutan yangmana perlu digunakan di dalam gerakan itu untuk mengatasi tektik Inggeris yang mengenepikan langsung faktor ini. Perkara ini menjadi satu faktor yang penting di dalam kekalahan Inggeris pada masa itu. Tentera Jepun dapat menawan hampir kesemua kedudukan tentera Inggeris dari Tumpat, Kroh dan Padang Besar hingga ke Singapura dengan cara 'bypassing' hampir kesemua kedudukan Inggeris dengan menggunakan hutan di sekeliling.

Kesemuanya ini memberikan kesimpulan bahawa membuat asumpsi dan ramalan membabi-buta itu boleh membawakan mudarat yang merbahaya. Segala faktor seharusnya diamati dan dianalisa demi untuk mengukuhkan kedudukan masing-masing.

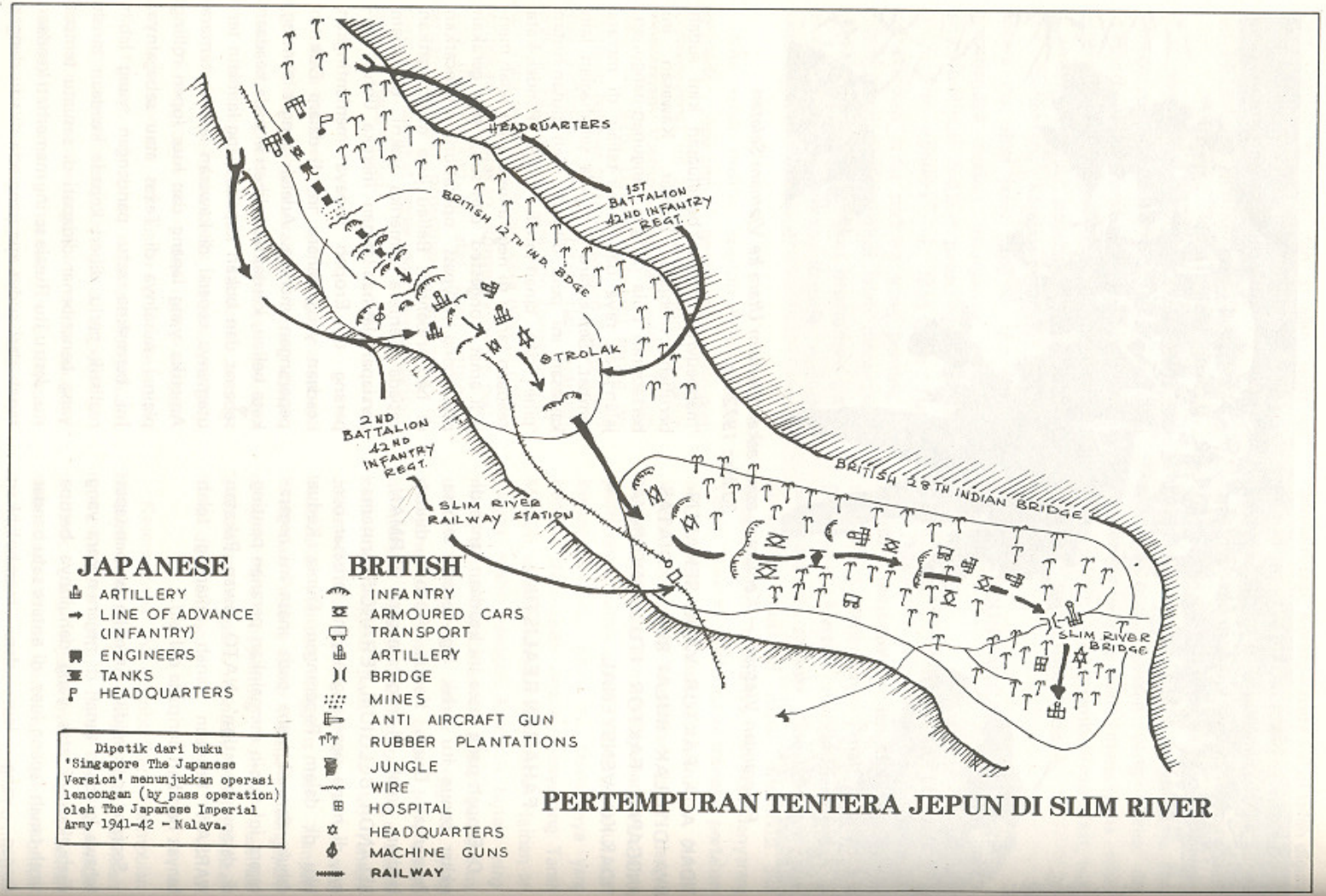
Peperangan Vietnam — Kemaraan askar-askar Vietnam Utara ke Vietnam Selatan 30 Mac 1972

TIDAK ADA FAKTOR YANG SEHARUSNYA DITOLAK BULAT-BULAT DIATAS ANGGAPAN FAKTOR ITU KONONNYA TIDAK KONVENSYENAL.

FAHAMAN REALISTIK

Di Eropah pada masa ini keadaan tanah di sekitar benua itu tidak lagi seperti semasa Peperangan Dunia Kedua. Apabila dilihat keadaan tanah di negara-negara JERMAN, BELANDA, BELGIUM, PERANCIS terutamanya, di mana peperangan yang terbesar berlaku di dalam Peperangan Dunia Kedua dahulu dan di mana pada masa ini negara-negara ini masih memainkan peranan penting di dalam 'equation' NATO lawan Pakatan WARSAW keadaan tanah sekarang telah banyak berubah daripada dahulu.

Seorang penyelidik Amerika berpendapat bahawa keadaan tanah di negara-negara yang disebutkan di atas yang dahulunya berupa tanah-tanah lapang luas, di antara satu bandar dengan yang lain dan membolehkan 'manoeuvre' dengan berleluasan kini sudah berubah menjadi bandar. Kawasan ini bertaburan pula dengan bangunan-bangunan, jalan-jalan raya dan taliair-taliair di merata tempat. Sementara itu pula sebahagian lain kawasan ini pula diliputi oleh hutan-hutan 'pine' dan tanah-tanah tinggi. Pendek-kata keadaan tanah di negara-negara ini telah menjadi amat 'congested' dan sukar bagi gerakan melencong (bypass operation) dilancarkan di bandar-bandar. Beliau juga mengingatkan kepada Tentera Amerika yakni, di dalam persiapan latihan-latihan mereka untuk berperang di Eropah supaya mementingkan keadaan yang baharu ini di dalam Doktrin peperangan mereka. Adalah sangat penting, kata beliau, keutamaan diberi kepada keadaan sebenar dan bukan kepada yang lain-lain terutamanya seperti di kawasan latihan tentera Amerika yang lapang dan luas (open rolling plains) misalnya di Texas atau sebagainya. Ini bermakna satu pandangan yang lebih realistik perlu diberi kepada keadaan tanah yang benar-benar didapati di sesuatu tempat itu. Jestru itu Russia sering memerhati keadaan tanah dari sudut apa yang ada di situ dengan



Dipetik dari buku 'Singapore The Japanese Version' menunjukkan operasi lencongan (by pass operation) oleh The Japanese Imperial Army 1941-42 - Malaya.

PERTEMPURAN TENTERA JEPUN DI SLIM RIVER

realistik sekali. Doktrin Tentera Soviet mengutamakan keadaan khusus (specific environment) yangmana akan menentukan muslihat, latihan yang diperlukan dan alat-alat yang sesuai bagi kawasan itu. Doktrin peperangan kawasan 'khusus' yang wujud kini dan yang dianggap penting oleh mereka ialah peperangan di kawasan polar, padang pasir, hutan, belukar, paya, bukit, pergunungan dan kawasan bandar (built up areas). Pendek-kata di dalam latihan-latihan, mereka mengutamakan segala aspek 'khusus' yang wujud di kawasan-kawasan itu.

KEADAAN TANAH DI SEMENANJUNG

Sekiranya kita melihat keadaan di sekitar negara kita dan biarlah kita mengambil Semenanjung Malaysia sahaja sebagai contoh, kita akan dapati ada keadaan yang memerlukan kajian yang terperinci. Tidak kira dari arah mana musuh akan merempuh Semenanjung Malaysia, mereka akan pasti menempuh beberapa keadaan tanah yang tertentu. Dengan sepintas lalu keadaan tanah di Semenanjung Malaysia bolehlah disusun seperti berikut:

* Tanah lapang berdekatan pantai dan dari utara ke selatan berhampiran pantai pula keadaannya dipenuhi tanah gambut, paya, sawah padi, dan kadangkala oleh ladang-ladang getah serta ladang-ladang kelapa-sawit yang luas.

* Bukit-bukau dan gunung-ganang yang dipenuhi hutan tebal sekiranya rempuhan melalui kawasan utara-selatan meredasi Banjaran Titiwangsa yakni dari KROH dan JELI hingga ke GEMAS.

* Di lereng-lereng bukit dan gunung ini pula terletak kawasan tanaman getah dan kelapa-sawit disertai hutan tebal yangmana keadaan ini amat baik untuk perlindungan dari pandangan udara mahupun darat.

* Kawasan-kawasan bandar yang sedang membangun dengan pesatnya.

Segala bentuk kawasan ini perlu difahami dari segi muslihat, latihan dan alat kelengkapan yang sesuai baginya. Tiada satupun daripada kawasan ini yang harus diabaikan.

Suatu pemandangan tanah paya di Semenanjung Malaysia

Tidakkah pandangan dan pergerakan (Manouvre) kereta perisai ini terhad?

PENGGUNAAN KERETA-KEBAL

Istilah 'peperangan terbuka' yang mengelirukan ini ialah hasil daripada fahaman 'open warfare' terutamanya selepas kereta kebal diperkenalkan ke medan perang. Konsep 'mobile warfare' mula dianuti dari ketika itu hinggalah sekarang, terutamanya di dalam keadaan perang yang pantas atau lancar (fluid) di mana kereta kebal memainkan peranan utama di dalam kedua-dua hakikat kekuatan kombat (combat power) iaitu kekuatan tembakan (fire power) dan pergerakan dinamis (manoeuvre). Kereta-kebal memanglah menjadi teras kekuatan hampir ke semua Tentera Darat di dalam dunia ini.

Kereta-kebal berkehendakkan dua perkara utama untuk mendapat efek yang maksima di dalam penggunaannya. Pertama ialah keadaan kemampuan lihat jarak jauh (observation) supaya senjata tembak terus (direct fire) yang jarak jauhnya dapat digunakan dengan maksima. Kedua ialah keadaan tanah lapang atau terbuka yang sesuai untuk digunakan bagi meredas desa (cross-country). Sekiranya dua faktor yang disebutkan ini wujud maka kereta-kebal akan dapat digunakan sepenuhnya sebagai senjata untuk memberi pukulan hebat lagi mengejutkan (shock action) di dalam satu-satu pertempuran. Faktor-faktor ini kini menghadkan keupayaan kereta-kereta kebal.

'DIMENSI VERTICLE'

Seperti yang telah dihuraikan, keadaan tanah di Eropah Barat kini, tidak lagi membolehkan kereta kebal bergerak secara leluasan, tambahan pula dengan pandangan (observation) menjadi terhad kereta-kereta kebal akan menjadi mangsa kepada peluru berpandu yang dilancar daripada helikopter atau pesawat terbang. Pengenalan helikopter ke medan peperangan telah menimbulkan suatu dimensi 'verticle' yangmana ianya telah membawakan suatu pembaharuan di arina peperangan

konvensyenal. Jestru itu dimensi baharu ini telah meluaskan lagi skop bagi peperangan konvensyenal terutama di negara-negara di mana pada suatu ketika dahulu keadaan tanahnya mencurigakan mengenai peperangan tersebut.

MENGHADAPI HAKIKAT PERANG KONVENSYENAL

Di negara seperti di Malaysia di mana kegunaan kereta kebal memang terhad kepada beberapa kawasan tertentu dengan sebab pandangan yang terhalang dan pergerakan dinamis yang dihadkan kepada sistem jalanraya; ini tidaklah bermakna perang konvensyenal hanya terhad kepada kawasan-kawasan tertentu sahaja. Pengalaman pahit Inggeris semasa peperangan Dunia Kedua menunjukkan hutan tebal Semenanjung Tanah Melayu boleh ditembusi oleh pasukan Infanteri. Dengan munculnya helikopter dan pesawat terbang pada umumnya membolehkan pemandangan jauh, peninjauan, tembakan peluru berpandu dengan jarak jauh dan pergerakan dinamis. Kemampuan ini perlu diingat adalah tambahan kepada faktor-faktor lain yang sedia ada sebelumnya.

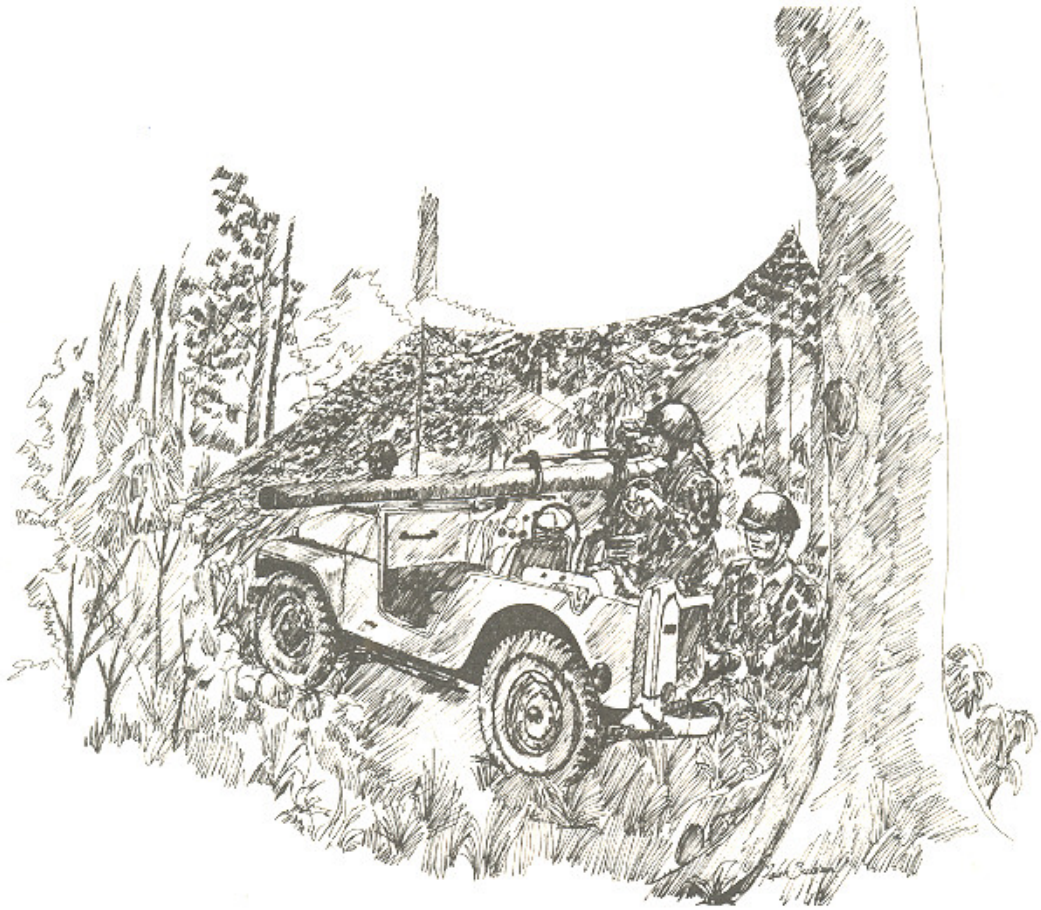
KESIMPULAN

Keadaan peperangan konvensyenal bukanlah terhad kepada mana-mana negara. Di dalam satu-satu negara itu pula ianya tidak terhad kepada mana-mana kawasan. Segala faktor akan timbul mengikut keadaan di sekeliling dan kepintaran pihak pengguna. Di padang pasir yang luas nescaya kereta kebal, pesawat terbang dan peluru berpandu akan menjadi faktor yang utama di dalam peperangan di situ. Di Eropah pula mungkin berlainan hakikatnya.

Di negara-negara tropika seperti Malaysia, Indo China dan sebagainya ada faktor-faktor lain yang timbul seperti keadaan hutan tebal dan kekurangan sistem jalan yang cukup.

Dimensi tegak (verticle) membawa menafaat yang lebih efektif

Keadaan ini akan menimbulkan masalah yang berlainan daripada negara lain yang memerlukan penyelesaian yang tersendiri di dalam konteks peperangan konvensyenal. Terpulanglah kepada kebijaksanaan dan kemampuan sipengguna untuk menentukan satu-satu faktor itu dapat menguatkan mereka dan di sebaliknya mengurangkan kebolehan musuh. Hutan tebal Malaysia, umpamanya, perlu digunakan untuk menguatkan tenaga kebolehan kita menentang mana-mana musuh yang ingin menyerang negara kita dari apa segi sekalipun. Sekiranya tidak, nescaya musuh akan menggunakannya untuk melemahkan kita. Kebolehan dan kemampuan tentera dilihat dari kebolehan musuh yang menentang di dalam suasana sekeliling yang wujud pada masa itu dan bukan di dalam keadaan yang diidam-idamkan.



KEPERLUAN MEMPERTINGKATKAN KEUPAYAAN ANTI-ARMOR INFANTRI

Mejar Kassim B Abdul Kadir

Konsep Anti Armor Tentera Darat kita memerlukan penglibatan usaha dari semua perkhidmatan. Semua keupayaan ini digunakan sebagai satu sistem integrasi menentang pasukan armor musuh. Rancana ini memberikan perkembangan kemampuan anti armor Infantri dewasa ini, kelemahan-kelemahannya dan apa yang perlu untuk meningkatkan keupayaan Infantri menentang armor.

TINJAUAN AM

Sejarah peperangan menentang kereta kebal telah bermula pada 1917 di mana tentera Jerman telah menghasilkan senjata anti armor infantri untuk menentang kereta-kereta kebal British dalam Perang Dunia Pertama. Tetapi, senjata anti armor tidak mendapat kemajuan yang sebenarnya kerana pada ketika itu bahaya besar kepada kereta-kereta kebal adalah dari meriam-meriam artileri. Senjata-senjata anti armor ini, hanya mula berkembang mulai penghujung Perang Dunia Kedua dengan bertujuan untuk memusnahkan kereta kebal.

Jika kita selidiki secara mendalam, sesebuah kereta kebal boleh dimusnahkan atau lebih tepat lagi dilumpuhkan dengan dua cara:

* Dengan melumpuhkannya (meletupkan track dan/atau enjin dan sebagainya.

* Dengan membunuh kerunya.

Kuasa penembusan oleh senjata ringan anti armor infantri yang menggunakan amunasi HEAT atau HESH adalah didapati amat berkesan kepada armor yang boleh dibekalkan kepada kereta kebal. Keadaan ini bertukar apabila armor CHOBHAM (sejenis armor yang mengandungi berbagai lapisan) diperkenalkan. Armor jenis ini khusus dibuat untuk menentang amunasi HEAT dan HESH— di mana ianya akan membiaskan peluru HEAT dan akan meresapkan getaran dari peluru HESH sebelum ianya sampai kelapisan dalam armor tersebut. Akibat dari penggunaan armor CHOBHAM ini maka berbagai sistem senjata anti armor infantri telah dianggap tidak lagi mampu untuk mengatasi kereta-kereta kebal yang digunakan dewasa ini yang dipasangkan dengan armor CHOBHAM.

Meskipun demikian, perkembangan terbaru dalam sistem anti armor telah memberikan kita harapan dalam peperangan anti armor. Sistem anti armor ini menggunakan teknologi daya kimia (chemical energy) atau daya kinetik (kinetic energy). Penerimaan teknologi tersebut berbeza dari satu negara ke satu negara. Seperkara yang tidak dipersoalkan adalah hanya sistem yang menggunakan 'hollow charge' (cas kosong) sahaja yang didapati paling sesuai bagi senjata-senjata anti armor infantri seperti pelancar roket, 'recoiless gun', peluru berpandu dari jenerasi pertama dan kedua serta juga untuk kegunaan meriam-meriam yang mempunyai tekanan 'muzzle' dan kederasan yang rendah. Sebagai kesimpulan bolehlah kita katakan bahawa falsafah anti armor blok barat (negara-negara bukan komunis) berat bergantung kepada prinsip 'hollow charge.'

ANCAMAN

Berdasarkan kepada perkembangan politik dan keselamatan di rantau ini, kita tidak boleh memandang ringan bahawa kemungkinan Malaysia akan menghadapi ancaman dari tentera asing yang mempunyai keupayaan angkatan armor. Sungguhpun sebahagian besar dari angkatan asing itu merupakan infantri, kita juga tidak boleh menafikan bahawa ianya juga mempunyai beberapa rejimen armor untuk digerakkan. Rejimen-rejimen ini akan terdiri dari kereta kebal ringan dan sedang. Bakal musuh kita juga mempunyai kereta perisai pengangkut (APC) sama ada jenis beroda atau berantai dalam yunit-yunit armor, infantri, artileri dan jurutera.

Satu perkara yang harus mendapat perhatian adalah bakal musuh kita itu mungkin akan bersubahat dengan salah satu kuasa-kuasa besar dan jesteru itu mungkin akan bergantung kepada kuasa besar berkenaan, dari segi pembekalan peralatan serta doktrin. Doktrin kuasa besar yang di maksudkan, sering menekankan bahawa serangan yang berjaya hanya akan dapat dihasilkan dengan pemilihan tepat akan tempat rempuhan utama (main thrust) dan dengan mengumpulkan segala angkatan dan senjata untuk mencapai

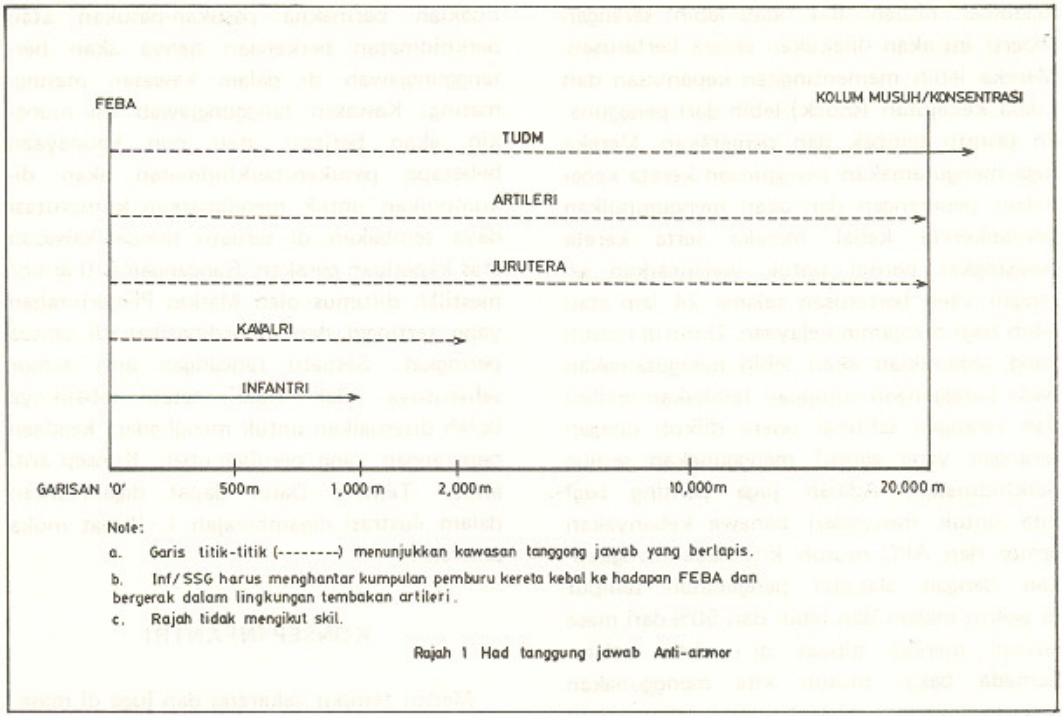
kelebihan nisbah 6:1 atau lebih; serangan seperti ini akan dilakukan secara berterusan. Mereka lebih mementingkan kepantasan dan kuasa kekejutan (shock) lebih dari penggunaan prinsip tembak dan pergerakan. Mereka juga mengutamakan penggunaan kereta kebal dalam peperangan dan akan mengumpulkan kereta-kereta kebal mereka serta kereta pengangkat perisai untuk melancarkan serangan yang berterusan selama 24 jam atau lebih bagi menjamin kejayaan. Doktrin musuh yang sedemikian akan lebih mengutamakan pada penggunaan tumpuan tembakan artileri dan serangan taktikal udara diikuti dengan serangan yang agresif menggunakan semua perkhidmatan. Adalah juga penting bagi kita untuk menyedari bahawa kebanyakan armor dan APC musuh kita tiada dilengkapkan dengan alat-alat penglihatan tempur di waktu malam dan lebih dari 50% dari masa latihan mereka dibuat di waktu malam. Samada bakal musuh kita menggunakan doktrin-doktrin sebagai yang dinyatakan belumlah jelas lagi. Meskipun demikian, dari pengalaman-pengelaman yang didapati dalam konflik di rantau ini jelas menunjukkan doktrin tersebut telah digunakan.

KONSEP ANTI ARMOR

Sejajar dengan penilaian kita terhadap ancaman yang mungkin berlaku, Tentera Darat telah menerima bahawa dalam rancangan anti armor kita perlulah melibatkan usaha dari semua perkhidmatan. Rancangan anti armor ini juga melibatkan semua perkhidmatan yang berasaskan pada jarak berkesan sistem senjata yang ada pada mereka. Dengan itu adalah logik bagi kita menggunakan satu sistem integrasi agar kita dapat menumpukan konsentrasi kuasa tembakan dalam kawasan yang akan dipertikaikan di hadapan FEBA (Forward Edge of Battle Area) atau *Ketepian Hadapan Kawasan Pertempuran.* Di dalam konsep sistem integrasi ini, kawasan tempur di hadapan FEBA akan dibahagi-bahagikan kepada kawasan tanggungjawab pasukan/perkhidmatan yang berkenaan. Ini tidaklah bermakna pasukan-pasukan atau perkhidmatan berkenaan hanya akan bertanggungjawab di dalam kawasan masing-masing. Kawasan tanggungjawab ini mungkin akan berlapis atau pun keupayaan beberapa pasukan/perkhidmatan akan dikumpulkan untuk mendapatkan konsentrasi daya tembakan di sesuatu tempat/kawasan atas keperluan gerakan. Rancangan anti armor mestilah dirumus oleh Markas Pemerintahan yang tertinggi dan dikordinasikan di semua peringkat. Sesuatu rancangan anti armor seharusnya tidak 'rigid', tetapi sebaliknya boleh disesuaikan untuk menghadapi keadaan peperangan yang berubah-ubah. Konsep anti armor Tentera Darat dapat digambarkan dalam ilustrasi digambarajah 1. (Lihat muka sebelah).

KONSEP INFANTRI

Medan tempur sekarang dan juga di masa-masa akan datang menggambarkan satu keadaan peperangan yang mudah berubah. Untuk melaksanakan satu peperangan di bawah keadaan yang sedemikian, adalah penting bagi semua pasukan tempur mempunyai organisasi yang lebih 'mobile' lagi 'flexible' agar berkemampuan untuk diubah-ubah mengikut keadaan-keadaan yang akan dihadapi dapat dicapai. Dengan keutamaan yang diberikan kepada pasukan armor yang 'mechanized', serta juga mobiliti udara, adalah amat penting bagi setiap anggota infantri untuk bersedia sepenuhnya bertempur dalam medan peperangan yang dikuasai oleh pasukan armor serta formasi 'mobile'. Pasukan infantri berserta dengan lain-lain pasukan mestilah mampu untuk mengalahkan serangan armor. Adalah paling penting bagi anggota infantri mengetahui bagaimana menggunakan segera segala sumber-sumber anti armor, semada yang organik atau bukan organik yang boleh didapati. Asas konsep ini berkisar di sekeliling rancangan pemusnahan pasukan armor musuh pada jarak yang paling jauh — seberapa boleh dari kawasan pertahanan. Segala senjata anti armor, ATGM (peluru



Note:

a. Garis titik-titik (--------) menunjukkan kawasan tanggong jawab yang berlapis.

b. Inf/SSG harus menghantar kumpulan pemburu kereta kebal ke hadapan FEBA dan bergerak dalam lingkungan tembakan artileri.

c. Rajah tidak mengikut skil.

Rajah 1 Had tanggung jawab Anti-armor

berpandu 'anti tank') dan juga meriam-meriam jika ditempatkan dengan tepat dan mencapai konsentrasi, ianya mungkin akan dapat menghampakan daya serangan armor musuh. Konsep anti armor infantri masa kini melibatkan pemusnahan kereta kebal musuh secara progresif. Ini boleh dihasilkan dengan sistem-sistem berikut:

* *Senjata Anti Armor Berat (SAB) / Heavy Anti Armor Weapons (HAWs).* Ini adalah senjata-senjata jarak jauh untuk memusnahkan sasaran di jarak 1000 m atau lebih ketika musuh masih jauh dari kedudukan pertahanan. Satu contoh senjata jenis ini adalah senjata 106 mm RR. Tujuan senjata ini adalah:

* Untuk melambatkan pergerakan angkatan musuh agar ianya akan mara dengan berhati-hati dengan menggunakan perlindungan.

* Untuk memecah-belahkan formasi serangan musuh dari jauh.

* Untuk mengakibatkan kecederaan dan kerosakkan maksima kepada musuh seberapa awal yang boleh, jesteru itu melemahkan daya tempurnya.

* *Senjata Anti Armor Medium (SAM) / Medium Anti Armor Weapons (MAWs).* Pada amnya senjata jenis ini mempunyai jarak tembakan hingga 1000 m kecuali pada senjata MILAN (ATGM) yang mana mempunyai jarak dua kali ganda tetapi saiz dan berat SAM. Biasanya jenis ini merupakan senjata kompeni. Senjata-senjata jenis ini bertujuah untuk memusnahkan armor musuh yang telah berjaya melepaskan diri dari pertempuran awal yakni, dari senjata jenis SAB. Satu contoh senjata jenis ini adalah senjata 84 mm Carl Gustav.

* *Senjata Anti Armor Ringan (SAR) / Light Anti Armor Weapons (LAWs).* Jenis ini adalah senjata-senjata jarak dekat dan bertujuan untuk memusnahkan kereta kebal hingga ke jarak 300 m. Senjata

jenis ini merupakan sumber terakhir bagi pasukan infantri untuk menentang kereta kebal. Senjata-senjata dalam kategori ini meliputi grened, sama ada jenis lontaran tangan atau lancara refal; 'recoiless-gun' dan juga beberapa jenis senjata anti armor siap pakai atau pakai habis seperti LAW 80, ARMBRUST, VIPER dan APILAS.

PERKEMBANGAN KEMAMPUAN ANTI ARMOR

Buat masa kini, batalion-batalion infantri hanya dilengkapkan dengan senjata 84 mm Carl Gustav. Ini adalah senjata jenis 'recoiless' dengan jarak maksima yang berkesan sejauh 450m untuk sasaran statik. Setiap batalion dibekalkan dengan 8 laras senjata ini. Jumlah ini amatlah tidak mencukupi jika kita telah mentafsir ancaman kita dengan tepat. Berdasarkan kepada konsep yang diterima oleh infantri, kita seharusnya menambahkan bilangan senjata-senjata yang lebih berkesan.

Perkembangan kemampuan infantri kini meliputi perkara berikut:

* Penubuhan satu kompeni bantuan di dalam batalion gaya baru yang mengandungi:

(1) Satu pelatun anti kereta kebal yang dilengkapi dengan 4 x 106 mm RR.

(2) Satu pelatun Mesin Gun Berat yang dilengkapi dengan 8 Mesin Gun yang mempunyai keupayaan anti armor yang terhad jika peluru AP (Armour Piercing) digunakan.

* 84 mm Carl Gustav dikekalkan sebagai senjata anti armor dalam kompeni. Senjata jenis ini adalah dalam kategori SAM. Amunasi yang mempunyai jarak yang berkesan hingga 600 m serta kuasa penembusan yang lebih baik sudah pun dipasarkan. Bagaimanapun pembelian amunasi jenis ini telah ditangguhkan kerana keadaan berjimat cermat negara.

* Kita juga telah menyedari ketiadaan kemampuan anti armor dalam pelatun atau seksyen. Pada hakikatnya, pihak berkuasa bersetuju untuk memberikan kemampuan anti armor hingga ke peringkat pelatun atau seksyen. Berbagai jenis senjata dalam kategori SAR telah dipertimbangkan untuk dibuat percubaan dan penilaian.

Berbagai senjata anti armor jenis SAR sedang atau akan dipertimbangkan untuk dimasukkan dalam inventori infantri. Senjata-senjata ini adalah:

* *Sistem Grened Lancaran Refal (Bullet Trap Sistem).* Senjata jenis ini adalah dalam golongan SAR dan grened-grened yang digunakan untuk anti armor boeh mengenai sasaran hingga ke jarak 150 M. Tentera Darat kita sedang menimbangkan sistem ini kerana ianya murah dan mempunyai berbagai kemampuan seperti anti armor atau anti anggota.

* *SAR Pakai Habis (Disposable LAW).* Terdapat dalam pasaran berbagai jenis SAR yang mungkin sesuai untuk penggunaan di negara kita. Kebanyakan dari senjata ini boleh menembak hingga ke jarak 30 m ke 500 m. Ianya kos efektif kerana kita dijamin ketepatan pada sasaran dengan satu tembakan. Senjata-senjata ini mempunyai jarak yang lebih baik, yang harus menjadi satu faktor utama dalam pertimbangan kita. Kemungkinan senjata jenis ini akan dapat diperkenalkan pnggunaannya dalam pasukan infanteri kita pada masa selepas tahun 1985.

* *Peluru Berpandu Anti Tank (ATGMs).* Senjata jenis ini adalah antara yang terbaik untuk infantri. 'Shaped Charge' yang dibuat secara halus boleh menembusi armor setebal 5½ kali ganda garispusat bahan letupan (war-head) amunasi tersebut. Ianya ringan, boeh dibawa oleh anggota (man-portable) dan dijamin akan kena pada sasaran. Antara ATGM yang terkenal adalah jenis MILAN, TOW, HOT dan DRAGONS. Kesemua ini

digunakan oleh NATO. Dari inventori blok Soviet pula antara yang boleh kita dapati adalah jenis AT 3 – SAGGER dan AT 4 – SPIGOT. Senjata-senjata jenis ini juga dikira kos efektif kerana di jamin kena sasaran dengan satu tembakan. Satu lagi kebaikan senjata jenis ini adalah ianya boleh dipasang kepada kenderaan atau helikopter. Penggunaan ATGM oleh Tentera Mesir dalam peperangan YOM KIPPUR 1973 telah dapat membukti kesan efektif ATGM untuk kegunaan infantri menentang armor. Adalah difikirkan penting bagi kita menimbangkan penggunaan ATGM dalam inventori kita. Satu kajian dan penyelidikan rapi adalah diperlukan untuk menilai sistem ATGM ini samada sesuai untuk kegunaan dalam keadaan tanah negara kita. Keadaan tumbuh-tumbuhan yang tebal di negara kita mungkin membataskan penggunaan ATGM oleh pasukan infantri. Jika ini keadaannya, sistem ATGM jika diterima boleh dipasang kepada helikopter sebagai sebahagian dari sistem integrasi yang telah kita ujudkan dalam konsep anti armor.

HAD SISTEM ANTI ARMOR INFNTRI SEKARANG

Telah kita ketahui bahawa sistem anti armor jika diletakkan pada tempat yang sesuai, dikawal dan dapat mengenasasaran di jarak yang maksima adalah berkesan terhadap kumpulan besar armor. Masaalah besar yang akan kita hadapi adalah mengumpulkan senjata-senjata yang secukupnya untuk menghasilkan daya tembakan yang cukup dalam pertahanan untuk melumpuhkan serangan armor dari musuh. Dalam hubungan ini, bukan harus kita pertimbangkan berapa kompeni atau batalion yang diperlukan untuk melumpuhkan armor musuh, sebaliknya apakah campuran senjata/sistem anti armor yang diperlukan untuk menghasilkan konsentrasi tembakan yang perlu mengatasi sesuatu kumpulan armor. Tumpuan kita haruslah kepada memusnahkan sasaran. Dengan sumber-sumber anti armor yang terhad, kita harus memberi tumpuan terhadap keperluan 'campuran' sistem anti armor yang tepat di tempat yang sesuai dan tepat pada masanya untuk mendatangkan hasil yang diperlukan. Tambahan pula keadaan tanah negara kita membolehkan penggunaan sistem anti armor dengan berkesan untuk tujuan pertahanan dari serangan armor.

Berdasarkan konsep yang telah kita terima sekarang dan ancaman yang mungkin kita hadapi serta juga sumber-sumber anti armor yang ada pada kita, bolehlah kita katakan kemampuan anti armor infantri sangat-sangat tidak mencukupi. Ini boleh diputuskan berdasarkan sebab-sebab berikut:

* Senajta anti armor yang ada sekarang, 84 mm Carl Gustav, hanya boleh menembak sasaran dalam jarak 450 m. Setiap kompeni hanya mempunyai 2 senjata tersebut. Dalam gerakan anti armor, kita memerlukan 2 senjata berkenaan untuk menjadikan satu kumpulan tembakan (fire unit). Ini bermakna di sepanjang hadapan sesebuah kompeni dalam pertahanan (500 – 1000 m), kita hanya akan mendapat satu kumpulan tembakan. Maksima yang boleh digunakan oleh sesebuah batalion di sepanjang hadapannya (2000 m – 4000 m) hanya 4 kumpulan tembakan (8 senjata 84 mm Carl Gustav). Sebaliknya di dalam kawasan yang luasnya 1000 m musuh boleh menggunakan sebanyak 16 – 20 kereta kebal atau APC. Ini menunjukkan kemampuan kita sangat berkurangan. Buat masa ini kita tidak mampu mengujudkan pendalaman (depth) dalam penggunaan sistem anti armor yang diperlukan untuk menghadapi serangan armor.

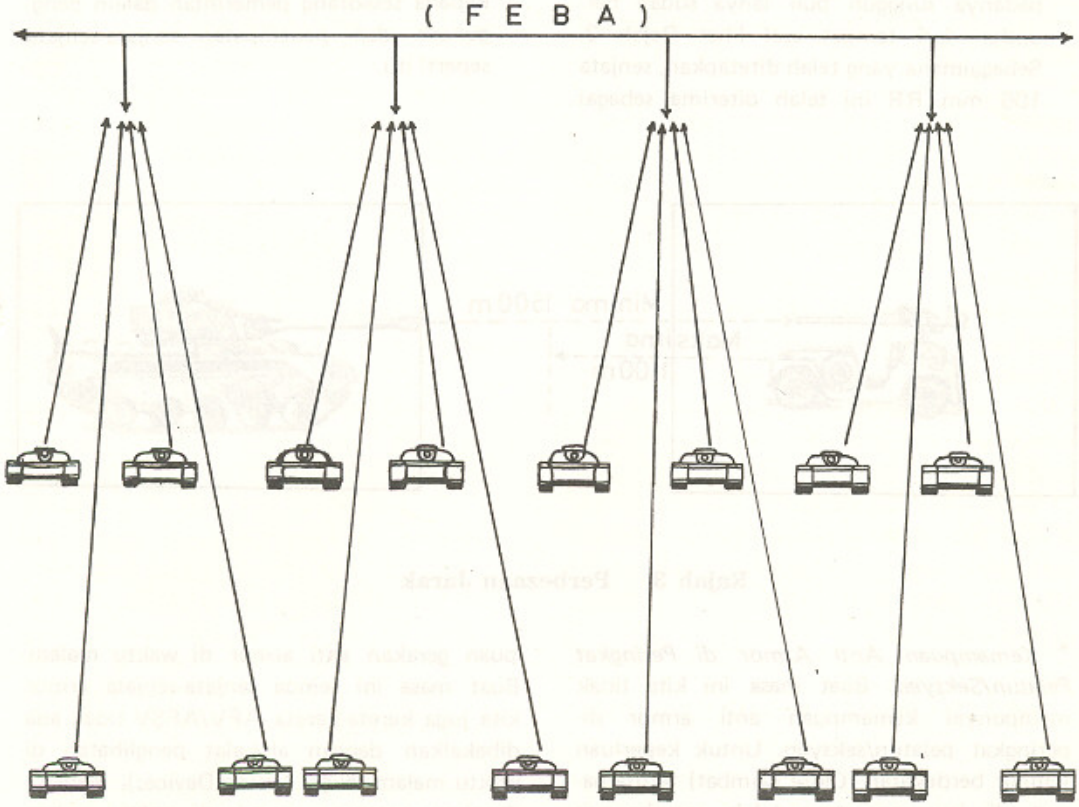
* Keadaan saling bantu-membantu tidak dapat dicapai.

* Mengujudkan konsentrasi senjata-senjata anti armor di tempat-tempat tertentu tidak dapat dibuat.

* Simpanan tidak ada.

* Kita tidak ada mobiliti untuk mengundurkan senjata-senjata tersebut jika ditempatkan jauh di hadapan FEBA.

Keadaan ini dapat dibayangkan seperti di rajah 2



Rajah 2 Nisbah Pertentangan

* Kemasukan senjata 106 RR untuk batalion-batalion gaya baru sebanyak 4 laras setiap batalion tidak banyak memberi ancaman kepada musuh. Sebab-sebabnya adalah:

  * Senjata 106 mm RR adalah bertujuan untuk memusnahkan kereta kebal musuh di jarak maksima 1100 m. Setiap batalion hanya boleh mengujudkan 2 kumpulan tembakan di hadapannya.

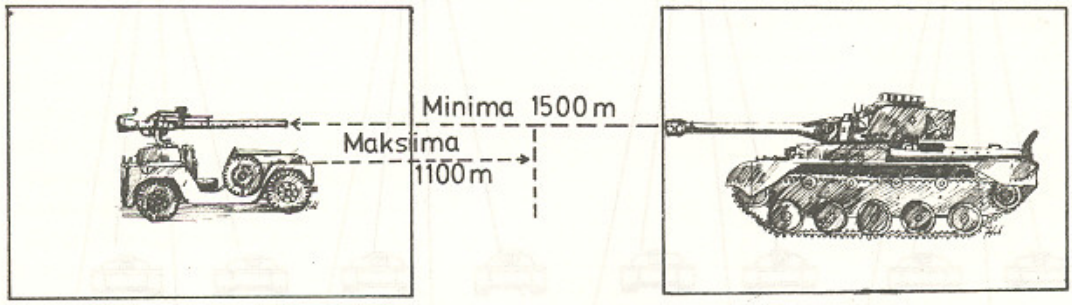
  * Batalion tidak banyak mendapatkan tembakan saling bantu-membantu.

  * Pendalaman tidak tercapai kerana senjata seterusnya, iaitu 84 mm Carl Gustav hanya boleh menembak di jarak maksima 450 m.

  * Senjata 106 mm RR adalah sudah lama berbanding dengan kereta kebal utama dewasa ini. Ianya tidak berkesan langsung terhadap CHOBHAM armor.

  * Memandangkan jarak maksima kereta kebal jenis T 55 dan T 62 adalah antara 1500 – 2000 m, kebaikan atau kelebihan

adalah kepada musuh. Setelah senjata 106 mm RR ini dapat dikesan, kereta kebal yang dimaksudkan masih boleh membawa tembakan yang berkesan kepadanya sungguh pun ianya sudah berundur dari tempat asal lihat Rajah 3. Sebagaimana yang telah ditetapkan, senjata 106 mm RR ini telah diterima sebagai SAB infantri yang utama. Jesteru itu, kita harus menimbangkan, agar bilangannya dalam setiap batalion ditambah supaya dapat memberi kebebasan yang lebih kepada seseorang pemerintah dalam penggunaan dan penempatan senjata-senjata seperti itu.



Rajah 3 Perbezaan Jarak

* *Kemampuan Anti Armor di Peringkat Pelatun/Seksyen.* Buat masa ini kita tidak mempunyai kemampuan anti armor di-peringkat pelatun/seksyen. Untuk keperluan tempur berdekatan (Close Combat) terutamanya di kawasan yang telah membangun seperti kampung, bandar, atau untuk keperluan pemusnahan atau pemburuan kereta kebal, adalah amat perlu senjata-senjata anti armor yang sesuai dibekalkan kepada pelatun atau seksyen. Senjata-senjata ini hendaklah dari siri SAR. Tambahan pula, keadaan tumbuh-tumbuhan di negara kita yang rapat, memerlukan kita menggunakan senjata-senjata jenis ini di mana kita hanya boleh menembak kepada kumpulan armor musuh dari jarak yang kurang daripada 500 m di kebanyakan tempat. Dengan adanya senjata-senjata jenis ini yang dibekalkan kepada pelatun atau seksyen, bolehlah kita menambah kemampuan anti armor infantri kita dengan menasabah.

Satu kecacatan besar dalam gerakan anti armor kita adalah ketiadaan langsung kemampuan gerakan anti armor di waktu malam. Buat masa ini semua senjata-senjata armor kita juga kereta-kereta AFV/AFSV tidak ada dibekalkan dengan alat-alat penglihatan di waktu malam (Night Vision Devices). Memandangkan ancaman musuh di waktu malam dan juga kemampuannya untuk bergerak di waktu malam, boleh dikatakan bahawa keupayaan kita untuk menentang armor musuh dengan berkesan dalam gelap adalah tipis sekali. Keru senjata-senjata anti armor kita tidak akan boleh mendapatkan sasarannya dan meletakkan senjata yang ada padanya itu dengan tepat untuk menghasilkan pemusnahan kepada sasaran itu. Walaubagaimanapun kelemahan ini sudah disedari dan kita berharap akan mendapat alat-alat penglihatan di waktu malam dilengkapkan kepada sistem anti armor kita di masa akan datang.

LANGKAH-LANGKAH MEMPERBAIKI KEMAMPUAN ANTI ARMOR INFANTRI

Dari kenyataan-kenyataan di atas, nyata

sekali kemampuan infantri dalam gerakan anti armor sangat-sangat berkurangan. Pasukan infantri perlu diberikan kemampuan yang setimpal dalam menjalankan peranannya dalam kontek keseluruhan konsep anti armor Tentera Darat kita. Perkara-perkara yang berikut harus mendapat perhatian:

* *84 mm RCL.* Ini adalah satu senjata yang berkesan dan jika amunasi yang terbaru kita gunakan, ianya boleh menembak dengan berkesan hingga jarak 60 m. Peruntukan 2 senjata tersebut kepada tiap-tiap kompeni yang ada sekarang sangat-sangat tidak mencukupi. Adalah dicadangkan agar ianya diberikan 3 kali ganda menjadi 6 senjata tip-tiap kompeni.

* Senjata Siri SAR Pakai Hab*is (Disposable LAW).* Senjata jenis ini adalah lebih mahal dari sistem 'bullet trap'/grened, akan tetapi ianya lebih berkesan dan biasanya boleh menjamin mengenai sasaran dengan satu tembakan. Senjata jenis ini sungguhpun mahal tetapi dikira kos efektif, jika dibandingkan dengan ketepatan sistem 'bullet trap'/grened. Sistem sejata jenis tersebut perlu diberikan kepada pelatun/seksyen agar dapat menambahkan kemampuan infantri untuk memusnahkan armor musuh dalam jarak 300 – 500 m.

* *Alat-Alat Penglihatan Malam/Night Fighting Devices.* Keupayaan infantri untuk menjalankan operasi di waktu malam dalam peperangan konvensyenal dewasa ini amatlah perlu ditingkatkan. Alat-alat penglihatan malam yang sesuai perlu dibeli dan dibekalkan kepada infantri supaya ianya dapat menggunakan sepenuhnya segala sistem anti armor yang ada sekarang atau yang akan datang. Seseorang anggota infantri itu harus berkebolehan mencari dan mendapatkan sasarannya dan boleh menggunakan sistem senjata yang ada padanya dengan berkesan untuk memusnahkan musuh pada siang hari mahupun pada waktu malam.

* *Periokapi Anti-Armor.* Kini penggunaan periokapi anti armor tidak mendapat perhatian yang sewajarnya dalam Infantri. Penggunaan senjata ini hanya banyak ditumpukan kepada tiori sahaja, dan anggota-anggota infantri tidak mendapat kesempatan untuk berlatih dengannya. Periokapi anti armor adalah kosefektif dan jika digunakan dengan bijak akan dapat menghampakan tujuan musuh. Ianya merupakan satu jenis senjata yang sangat berkesan jika digunakan bersama dengan senjata-senjata lain. Selain dari mempunyai sistem senjata yang sesuai, satu faktor lain yang sangat penting untuk kita menentang serangan armor musuh adalah latihan. Anggota infantri itu harus dilatih sepenuhnya dalam penggunaan dan penempatan sistem-sistem senjata yang ada padanya. Ianya mesti mencapai kemahiran serta kepercayaan diri yang diperlukan darinya untuk memusnahkan armor musuh dan terus selamat. Jika membuat analisa mengenai pemusnahan kereta kebal, maka dapatlah ia memberi kita kesimpulan bahawa latihan-latihan individu seseorang anggota itu boleh dibagikan kepada 3 fasa seprti berikut:

  * *Fasa I.* Mengajar setiap anggota segala sifat-sifat dan keupayaan kereta-kereta kebal musuh.

  * *Fasa II.* Menunjukkan kepadanya bahawa kereta-kereta kebal itu boleh dimusnahkan dan membentukkan kepercayaan diri sendiri di dalam anggota itu bahawa ianya juga berkebolehan memusnahkan kereta-kereta kebal itu.

  * *Fasa III.* Melatihkan anggota di dalam taktik dan teknik peperangan anti armor agar membolehkannya samada sendirian atau sebagai ahli sesuatu kumpulan 'tank hunting' untuk memusnahkan musuh.

PENUTUP

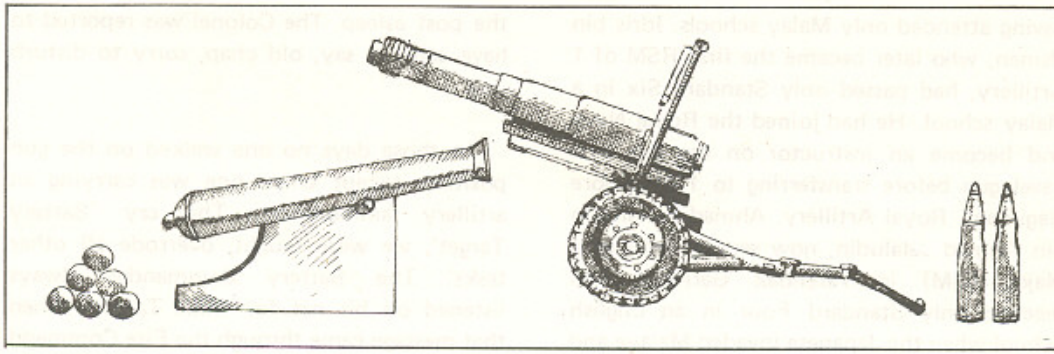
Kita harus ingat bahawa dalam gerakan anti armor, tiada satu pasukan atau per-

khidmatan yang akan dapat menentang serangan armor dengan sendirinya. Rancangan dan koordinasi yang bermula di peringkat pemerintahan yang tertinggi adalah diperlukan demi untuk menentukan satu sistem integrasi melibatkan semua pasukan mahupun perkhidmatan yang boleh memusnahkan serangan armor. Gerakan anti armor adalah tanggungjawab semua pasukan atau perkhidmatan.

Dari segi infantri, keupayaan anti armor di peringkat batalion perlu di tingkatkan lagi. Peruntukan senjata-senjata yang ada sekarang perlu diulangkaji agar dapat memberikan anggota infantri itu peranan dan keupayaan yang menasabah dalam rancangan anti armor. Sistem baru dalam golongan SAB (HAW) dan SAR (LAW) perlu dimasukkan atau ditambahkan kepada inventori kita. Keupayaan untuk menjalankan gerakan anti armor di waktu malam juga perlu diujudkan dengan segera.

Berasaskan kenyataan ini, kita harus membentuk satu cara latihan yang sistematik untuk melatih anggota-anggota infantri kita dalam gerakan anti armor. Anggota-anggota kita mestilah siap sedia secara psikologi untuk keluar kehadapan FEBA dan memburu armor musuh. Anggota infantri kita mestilah percaya dan yakin bahawa musuh-musuh itu berserta dengan kumpulan armornya boleh dimusnahkan.

Mejar Kassim B Abdul Kadir kelepasan Maktab Tentera Diraja telah ditauliah pada 25 Februari 1968. Beliau telah menghadiri 'Infantri Commanders' Course' di Sekolah Infantri Warminister, UK pada Tahun 1975 dan lulus dari Defence Services and Staff College, Bangladesh pada Tahun 1982. Di atas keberaniannya menyerang sebuah khemah Pengganas Komunis di Negeri Kedah pada Tahun 1971 beliau telah dianugerahkan Pingat Panglima Gagah Berani (PGB). Kini beliau bertugas selaku seorang Pegawai Turus di Jabatanarah Infantri, Kementerian Pertahanan.



THE EVOLUTION OF THE MALAYSIAN ARTILLERY

Kolonel Abu Bakar B Mohd Salleh

This article traces the origins of the Malaysian Artillery and the development of its equipment and concept of employment. The writer feels that the Malaysian Army having been preoccupied with a limited insurgency threat for a long time, the artillery is not quite ready to meet a major conventional threat.

EARLY DAYS

The Malaysian Artillery was founded in 1957 with 89 other ranks, eight 25-pounder guns and 17 vehicles, all of them transferred from 1 Singapore Regiment, Royal Artillery. It can be said that its beginning is even older since several of the pioneers who formed the nucleus had begun their careers as gunners much earlier in British units stationed in Malaya or Singapore. Some of them had served in the 7th Coast Artillery Regiment which saw action in the battle of Singapore in February 1942. 1 Singapore Regiment, Royal Artillery, was one of the successor units of this Regiment. Although an element of the British Army, B and C batteries of this regiment took an active part in the fight against the Communist Terrorist Organisation (CTO) during the Emergency of 1948 – 60. On the eve of Merdeka in August 1957, the decision to form Malaya's own artillery unit was taken. Thus it was that six British officers, two British SNCOs and 89 Malay other ranks left Pulau Belakang Mati (home of the 1 Singapore Regiment, Royal Artillery) for Camp Kajang in August 1957 to establish the 1st Field Battery, Federation Artillery, under the command of Major P. Sherston Baker MC.

For the benefit of the present generation of gunners, it is interesting to take a brief look at the commitment to the service and the disciplinary standards of the gunners of those early days. Very few of these pioneers were proficient in English, most of them

having attended only Malay schools. Idris bin Osman, who later became the first RSM of 1 Artillery, had passed only Standard Six in a Malay school. He had joined the Royal Navy and become an instructor on the 4.5 inch naval gun before transferring to 1 Singapore Regiment, Royal Artillery. Ahmad Baharudin bin Ahmad Jalaludin, now serving with us a Major (QM) in Terendak Garrison, had reached only Standard Four in an English School when the Japanese invaded Malaya and put a stop to his formal education. On joining the Regiment after the war and passing out as best recruit, he was sent to the School of Artillery, Larkhill, to attend the Signal Instructor course.

In terms of operational commitment, the old gunners set exemplary standards. For example, it was quite normal to detail a fatigue-party of four to six men to unload a trainful of 25-pounder ammunition. By the time they completed the task, invariably, their fingers were not only blistered but also hardened that they could hardly straighten them for several days. When returning from an operation, irrespective of the time, whether it was day or night, the gunners had to wash and clean the guns and other equipment, check and account them before putting them in the store. The officers on their part, had to see that these chores were done, ensure that the men were fed and sent to bed. Only then they could fall out.

The men were happy despite the hard work and strict discipline. There were no cases of absence without leave, neither were there any problems related to inefficiency on the part of the officers. Many games and competitions were organised in those days. Lieutenant-Colonel W. E. Black MBE was our first Commanding Officer. As a typical gunner, he never failed to stress the importance of artillery. He never had time for inefficient or ill-disciplined officers. In one exercise he decided to check one of the observation posts at about 0300 hours and found the officer of the post asleep. The Colonel was reported to have said, 'I say, old chap, sorry to disturb you'.

In those days no one walked on the gun position except when one was carrying an artillery ammunition. The cry 'Battery Target', we were taught, overrode all other tasks. The Battery Commander always listened on his net for 'Mike Target'. When that message came through the Fire Command Net, all other communication stopped. The Gun Position Officer, his Technical Assistant at the command post and the gun numbers knew their Battery Commander's dream and pride was for his battery to be nominated by Regimental Tactical Headquarters as a ranging battery. Officers worked as hard if not harder than the men. On arrival at Asahan after some five hours' journey (the unhurried journey was perhaps one of the reasons why accidents seldom occurred in those days), the officers took off their shirts to supervise and assist the unloading of guns, ammunition and stores. Only then could they go to the officers' mess for a drink. Those officers and the men were truly proud of being gunners and of doing their tasks well.

ARTILLERY EQUIPMENT

Like the personnel who comprised the 1st Field Battery, Federation Artillery, the equipment for this pioneer unit also came from B Field Battery, 1 Singapore Regiment, Royal Artillery. The 25-pounders thus acquired remained the mainstay until 1962, when they were replaced with 105mm pack howitzers. By 1970, the total artillery force level came upto three close support regiments and a battery of low level air defence (LLAD). Despite the introduction of the 105mm howitzer, all command post equipment of 25-pounder days continued to be used with the exception of 'artillery board' which was replaced by 'plotter'. The artillery board was, however, not discarded entirely; it continued

to be used, and is still being used, for initial training purposes.

At the gun end, prismscope, gun rule and fuze indicator were introduced to improve the general performance of the fire unit. On the transport side, two types of vehicles, ie, the long-wheel-base land rover and the forward control land rover, were introduced as replacements for the 4 x 4 Austin gun-tower. For the carriage of artillery ammuntion, gun stores, G1098 and other general stores, Austin and Bedford GS cargo 3-ton trucks were acquired. The C 12 VHF mounted set, which continued in use in the artillery regiment in the early sixties, was replaced in 1964 by the HF 156 set which, in turn, was replaced, a year later, by the A13 set. In 1969, the A13 was replaced with the TRA 921 and TRA 906 sets. A year later, the PRC 77 replaced the well-used VHF A 41 set.

The Federation Artillery acquired an air defence capability in 1967 through the acquisition of 20 mm Oerlikon low-level air defence (LLAD) guns from the Royal Malaysian Navy. Two years later, the first LLAD battery, S Battery, was formed equipped with 40 L 70 LLAD guns and MK 7/3 local warning radar. A second battery, T Battery, was formed in November 1970 equipped with 40/60 mm LLAD guns presented by the Australian government. In April 1980, the air defence batteries were organised into a regiment. About the same time the 40 L 70 and the 40/60 mm guns were withdrawn from service and replaced with the BOFI 40 mm System 75 together with Giraffe local warning radar. With the acquisition of this system, which is equipped with a laser sight, and the semi-fire control capability provided by the Giraffe radar, the performance potential of the Air Defence Regiment improved significantly.

The seventies saw further development of the Artillery in terms of its equipment. New types of field guns and associated equipment, simulators and survey instruments were purchased during this period. In July 1972 American M102 guns of 105 mm calibre were received. Since these guns worked on the deflection principle, it became necessary not only to introduce the graphical computing instrument (GCI) and the graphical firing table (GFT), but also to begin using collimators instead of the prismscopes which went with the 105 mm pack howitzer. In the field of survey, great improvements in range and azimuth accuracies were achieved by the introduction of the theodolite/electronic distance meter and the gyroscopic orientator — range accuracy improved by about 300 per cent and azimuth accuracy about 500 per cent. With the provision of an 'Inventron' type simulator in August 1980, it became possible to provide realistic training for gun position and observation post officers (GPOs and OPs) in various types of shoot, complete with audio and visual presentation. On the transportation side, between 1976 and 78, the Austin and Bedford 3-ton trucks were withdrawn from service and replaced with Volvo 2-ton trucks as gun-tower and Mercedez Benz 3-ton trucks as GS cargo. The 7-ton F 88 was acquired for use as gun-tower for the BOFI 40 mm System 75.

CONCEPT OF ARTILLERY EMPLOYMENT

The concept of artillery employment in the conventional war setting revolves around several major factors. These include:

* Correct artillery resources and quantum to support the ground troops.
* Correct affiliation.
* Correct application.
* Correct gunner staff at the various levels of command, not only as advisers, but also to command and control the artillery resources placed under the command.

The consequences of not giving due weight to these factors are grave. This is best

illustrated by a historical example. It is generally believed that the General Officer Commanding (GOC) 3rd Indian Corps, Lt Gen Bond, was wrong in his appreciation of the threat to Malaya before the Japanese invasion. He recommended an artillery force level of only 14 field and four anti-tank batteries to support the three allied divisions in Malaya. At the height of the battle for Malaya, the actual artillery force level was much larger: there were seven close-support regiments and one mountain regiment. Even this force level was considered grossly inadequate.

The error in General Bond's appreciation came about because he did not have any artillery staff at his headquarters. In fact both of his flank divisional commanders, ie, the 9th Indian division in the east coast and the 11th Indian division in the west coast, were also without artillery advisers. Not having artillery advice became the accepted practice at even lower infantry formations. On the Kota Bharu front, for instance, the 8th Indian Brigade which consisted of seven infantry battalions was supported by only three batteries. These three batteries had three different guns: one was equipped with the 4.5 inch howitzer, another with the 3.7 inch gun and the third had the 2-pounder gun. The 8th Indian Brigade commander did not feel the need of an artillery regimental commander as his adviser. Acting without proper artillery advice, he committed costly errors of judgement which allowed the 56th (TAKUMI) regiment an easy breakthrough.

In the Malayan campaign, the following major tactical and technical errors were committed.

* A mountain battery was deployed smack on the beach in penny numbers.
* The brigades did not have fire plans, especially for defensive fire (DF) tasks.
* The principle of 'concentration of effort' was violated.
* Artillery batteries were placed in reserve.
* Plans did not include alternative gun positions to cover the withdrawal.
* No provision was made for counter battery fire.

These serious errors might have been avoided if the brigade commanders had the benefit of proper artillery advice.

The Malaysian Army has not learnt the lessons of the Malayan campaign because, since 1948, the Army has been preoccupied with fighting the communist terrorists in the jungle. As fighting in the jungle is predominantly an infantry-based operation, the ratio of artillery units supporting the infantry has always been unbalanced. For example, one artillery battery raised in 1957 continued providing fire support for three infantry brigades consisting of seven battalions for the next five years. Current artillery force level allows an affiliation of only one regiment to a division.

Since the formation of 1st Field Battery, Federation Artillery in August 1957, the gunners have been deployed to meet a limited insurgency threat. This threat did not warrant the deployment of artillery in large numbers since the targets – terrorists operating in small groups – could not be classified as artillery targets. The guns were therefore generally used in the harassing fire role or to flush the enemy out to an area where security forces were waiting in ambush or, sometimes, to extricate security forces caught in a difficult situation. Very seldom were the guns used in the attacks on communist terrorist camps because of the difficulty in pinpointing the grid references of these camps and the unavailability of the necessary meteorological information for accurately firing the initial salvo.

The period of Indonesian Confrontation in the early sixties saw greater usage of the guns, especially in Sabah and Sarawak. How-

ever the pattern of operations of the gunners remained more or less the same as in the period of the Malayan Emergency. The guns were deployed, at times even singly, in the harassing fire role, to boost the morale of the ground troops.

With such limited use of the artillery, the development of the Malaysian Artillery remained dormant. Formation commanders were quite content with the comparatively minor role allocated to the artillery.

Towards the end of the sixties, with the situation in Vietnam becoming increasingly difficult for the Americans to contain, the communist terrorists in the Malaysia/Thai border areas raised the tempo of their militant activities. This development necessitated the deployment of artillery guns in greater numbers in support of counter-terrorist operations. At last some of the basic principles of artillery employment came to be observed. This period also saw the Army conduct several conventional warfare exercises such as the ARANG, IKUTAN dan BERISASA series.

The importance of artillery was recognised by the late seventies. By that time, South Vietnam, Cambodia and Laos had fallen to the communists. Large-scale operations were held by our Army in South Thailand in which artillery in regimental strength was used for the first time. However, when these operations ended, the guns were deployed on routine roulement tasks.

Despite the recognition of the importance of artillery in the late seventies and the significant involvement of this arm in operations and exercises, it was still not clear if a clearly defined concept for the employment of field artillery had emerged. Although training establishments taught the norm that artillery should be employed on the scale of one battery to a battalion, artillery was employed, in actual practice (ie, in operations and exercises), one battery to a brigade. This practice is appropriate for the continuing limited insurgency threat, but not conducive to the development of artillery employment in conventional operations.

Currently, the Malaysian Artillery has four close support regiments, but they have no medium or locating capability. The lone air defence regiment has only two operational batteries. If a conventional threat materialises from the north, the artillery resources will have to be split. 2 Div and 4 Div would each have one and a half close support regiments; 3 Div would have a depleted regiment. That this artillery support is grossly inadequate is appreciated if we care to note that it is about half the artillery support available to the Allied forces in the Malayan campaign. Under existing conditions, some infantry battalions will not have any artillery affiliation. Worse still, there seems to be no agency to command and control the artillery resources available to the Corps Commander (The senior artillery officer at Corps HQ performs a staff function, not one of command and control). Present circumstances being such, only limited artillery tasks can be undertaken if a conventional threat materialises.

At present, the air defence cover which the Army can provide for the nation rests on two low level gun batteries. In the event of a conventional conflict, these two batteries may be assigned to the two front-line divisions, leaving the rest with no air defence cover at all. Or, the batteries may be assigned to the protection of strike airbases and radar sites, leaving field formation HQs without any air defence cover. Air defence appears to be an area that has been critically neglected.

CONCLUSION

Now the question is: with such limited resources, could a concept of artillery employ-

ment be formulated? It seems inevitable that, if a threat arises, the available artillery resources will be deployed on an ad hoc basis in the hope that they will prove to be adequate. Gunners always like to remind one another that it is the ammunition, not the howitzers or the guns, that counts. This being so, the current exercise (brought about by cuts in defence spending) to redefine the ammunition scales, the Armed Forces Ammunition Rate (AFAR), etc is a cause for concern. One can only hope that this exercise will not make the bad situation worse.

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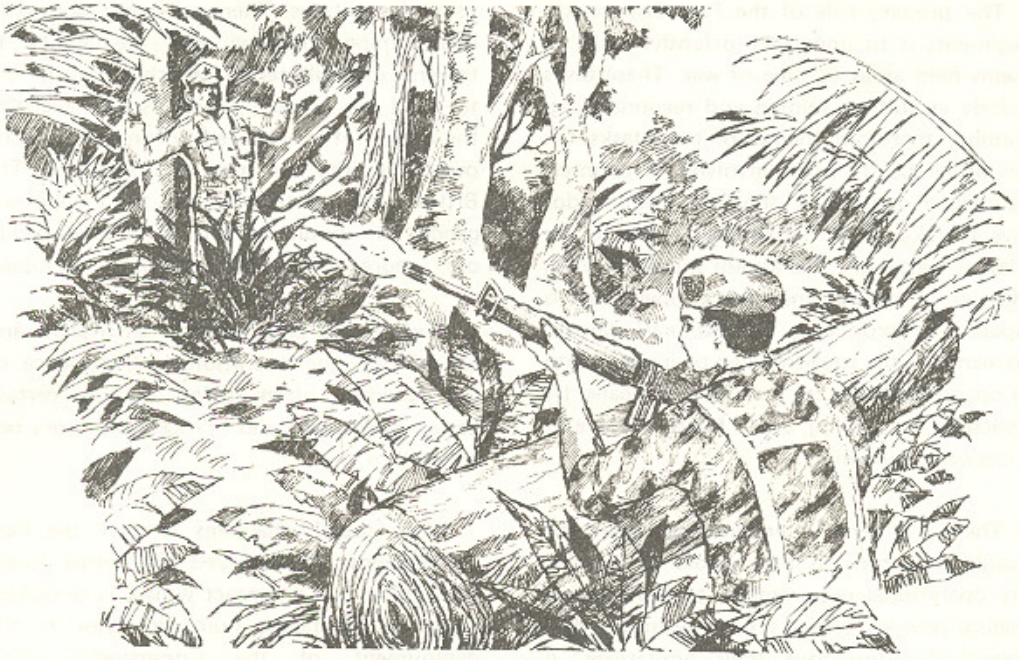


IMPROVING THE PERFORMANCE OF THE PARA COMMANDO SQUADRON IN COUNTER — INSURGENCY OPERATIONS

Leftenan Kolonel Zaini B Said

The writer claims that the roles and capabilities of the Para Commandos are not well understood outside the Regiment and the Commandos are often deployed in haste in counter-insurgency operations without adequate preparation. Being forced to operate without the benefit of proper intelligence and often in unfamiliar areas, the Commandos achieve little success. Certain changes are necessary to obtain better operational success.

The performance of the assault squadron of the Para Commando Regiment in counter-insurgency operations can be considerably improved provided certain changes are made in its organisation, equipment and tactics. This is the conclusion arrived at after studying the operational performance of these squadrons as well as the conditions and procedures within which they operate at present. Two major weaknesses have been identified. First, the role and capabilities of the Para Commando Regiment are not well understood; second, the Para Commando squadrons do not conform to proven procedures and practices during operations.

The primary role of the Para Commando Regiments is to undertake offensive tasks in enemy-held areas in time of war. These tasks include assaulting, raiding and reconnoitring. Training, therefore, focuses on these tasks. On the other hand, when involved in counter-insurgency operations, the Para Commandos have to take on a role similar to that of an infantry battalion. The assault squadron when engaged in counter-insurgency operations is capable of producing 20 five-man patrols. Elements of the squadron can be inserted into an operational area by a variety of means: by parachute, rappelling, small boats, surface or underwater swimming.

There is a general tendency to regard the assault squadrons to be capable of meeting any operational requirement, to have almost magical powers. This is a misconception. Para Commandos too have their limitations. A clear understanding of what the squadrons can and cannot do is necessary for a commander to assign realistic tasks for the squadrons and thus employ them effectively in counter-insurgency operations.

The ability of an assault squadron to operate 20 small patrols is one of its strong points. But this ability has, so far, seldom been fully utilised. By operating so many patrols, a squadron can not only increase the area and degree of search and surveillance but also be more effective in other ways. By virtue of their small size, patrols are usually more alert, silent and wary and thereby enhance the chances of finding and dealing with the enemy. It is known that the communist terrorists (CTs) get very jittery when we employ this technique. By operating numerous patrols it is also possible to employ the technique of protracted small-scale ambush, ie, laying numerous ambushes in an area for a considerable period of time. Another skill of the Commandos that can be put to good use is the squadron personnel's knowledge of demolitions. The squadron can therefore be tasked to set up more booby traps and lay ambushes using demolitions. There are many more skills like sniping, tracking and the ability to traverse difficult terrain which can all be put to good use. Finally, there is also available the option of inserting squadron personnel by parachute into an area of operations. The British used this technique in the First Emergency. We should be able to do better with our more advanced parachute canopies.

Despite the possession of such skills and capabilities, the operational performance of the squadron often suffers because certain basic principles and procedures are not adhered to.

What usually happens is that the Para Commandos are deployed after other forces have either had a contact with CTs or sighted them in significant numbers. Prior to the deployment of the Commandos, their commander is briefed and given his orders at the headquarters of the unit or formation which he has been called upon to support. After these preliminaries, the squadron is deployed as planned by the headquarters of the supported unit, leaving only a small administrative and liaison element behind at that headquarters. The tasks assigned to the squadron by the supported unit usually include assault, follow-up or search of the enemy. Once these tasks are completed, or, if no contact is made with the enemy, the squadron is withdrawn from the operational area to return to its base

As a matter of fact, this kind of "fire brigade" deployment has achieved very little in terms of CTs eliminated or even contacted, the main reason being that the CTs had moved out before the Commandos were inserted into the area. Whatever success is achieved is gained in moves made either before or after the conduct of the main operation, in a rather coincidental manner.

Another basic fault which has contributed to the poor operational performance of the

Para Commando squadrons is the lack of accurate and detailed intelligence available to them before deployment to the area of operation and while operating in the area. This happens because of the very short time available to the squadron to compile, analyse and digest the limited intelligence usually available and to make an in depth study of the area of operations. Consequently, judged by the standards of the Special Forces, the deployment of the squadron to the operational area can only be described as "blind". The squadron has to start practically from scratch to procure intelligence since its operational procedures often do not permit the transmission of more current and detailed intelligence from the headquarters of the supported unit.

The consistent practice of employing Para Commando squadrons as reaction forces has several ill-consequences. The initiative for action is left to the CTs. The haste and unpredictability of the deployment of the Commando squadrons often result in poor planning and preparation and usually lead to poor performance and results. Moreover, given the tactics of the CTs who avoid contact or disperse into small groups when threatened, the reaction force is left with nothing to attack or pursue most of the time. The experience of the First Emergency has shown that contacts with the enemy were achieved by units which had been allotted their own areas of operation and which had therefore the necessary period of time to master the terrain and gain information on the activities of the enemy. It is clearly inconsistent with this experience to employ Para Commando units as reaction forces in counter-insurgency operations. This is not to deny that circumstances may sometimes arise requiring the employment of reaction forces. These are occasions when quick contact with the target can be made and the assault troops are adequately prepared to overcome it.

Another drawback of employing the Para Commandos as a reaction force is that the troops employed in this fashion are provided with inadequate intelligence on the enemy. Consequently they often find themselves unfamiliar with the terrain of the area. As already mentioned, whatever intelligence available is provided by the headquarters of the unit being supported. This is usually studied casually due to lack of time. Once deployed in the operational area, the squadron requires supportive and additional intelligence from the police, civilians in the area and appropriate government departments. Regrettably, this requirement is often not met because the squadron's liaison element left behind at the headquarters of the supported unit are not qualified to undertake this task. Even if they were, it would be very difficult for them to do a useful job because existing doctrines and procedures do not permit them to have direct contacts with non-military sources of intelligence.

Experience has also shown that the manner in which the squadron is currently organised for counter-insurgency operations is not suitable for that purpose. Comprising as it does of a headquarters element, three assault troops and a support section, the headquarters usually goes with one of the assault troops when the whole squadron is deployed and reports directly to the supported headquarters. The main weakness is in the composition and location of the squadron headquarters element. The fact that it is physically divorced from the headquarters being supported limits its ability to coordinate planning and liaison beyond the pre-deployment period. Even if this weakness is rectified by co-locating the squadron headquarters with the headquarters of the supported unit, there would still be problems because the squadron headquarters does not include personnel who can provide the kind of support which the troops in the field require for effective performance. The required support includes intelligence gathering and dissemination, psychological operations, civil-military liaison, military

police coordination and co-ordination with supporting arms. The squadron commander, his second-in-command, the clerks and storekeepers, who currently comprise the headquarters, cannot undertake these tasks. Personnel with appropriate skills would have to be added to the headquarters.

Yet another area of weakness is the loss of surprise and security resulting from the adoption of tactics and techniques which are obviously familiar to the enemy. It is possible to beat the CTs at their own game. Their modus operandi is based on ingenuity, security, surprise and deception. Our tactics and techniques should be similarly oriented, with the addition of another principle — offensive action. Regrettably this is not sufficiently emphasized in many Para Commando deployments.

In the First Emergency there were several instances of elements of the Special Air Service Regiment achieving success through clandestine operations. They would infiltrate into areas where CTs were suspected to be operating, wait patiently for weeks without being observed and surprise the enemy in well-laid ambushes. These cases clearly showed that secure, irregular and unconventional methods of operating were often necessary to obtain good results. Although we acknowledge the effectiveness of such tactics and techniques, there is a seeming reluctance to permit the Para Commando squadron and its elements to employ them.

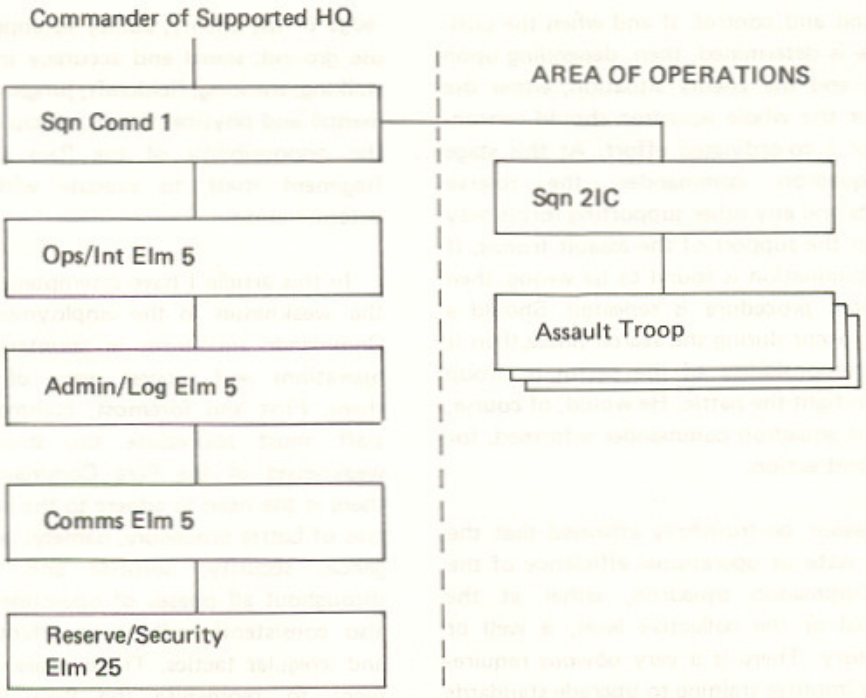
Finally, we should consider acquiring more suitable equipment for counter-insurgency operations. The ability of the troops to operate much more effectively at night will be enhanced by the acquisition of night vision devices and scopes. Detection of the enemy will be facilitated by the provision of remote sensors. Individual performance will be improved and the risk of detection by the enemy while waiting in ambush positions will be reduced by the issue of light-weight precooked rations. While suggesting that we should acquire better equipment, it is acknowledged that success hinges much more on the quality of the commanders and the men.

To remedy the weaknesses outlined above, some modifications have to be made to the organisation and doctrine of the Para Commando squadron. But the modifications must be such as will not require drastic reductions or increases in the existing establishment.

It is suggested that the squadron headquarters should be reinforced and reorganised to include the following: an operations and intelligence element; a communications element; a logistics and administrative element; and, a reserve and security element. The operations and intelligence element should be headed by a qualified officer. The additional personnel required to man the expanded headquarters could be drawn from the existing establishment of the squadron. The existing support section should form a part of the headquarters and serve as the reserve and security element. The assault troops would remain unchanged in organisation. The suggested reorganisation of the squadron is reflected in the following diagram. (see next page.)

It is envisaged that the four elements of the headquarters would have the functions of the staff of a commander, ie, they would assist the squadron commander in the execution of the mission. A squadron headquarters, reorganised as proposed, would be able to conduct limited psychological operations and provide some medical and rescue services. It would also have personnel capable of planning, conducting and co-ordinating operations with supporting arms and those able to work with the aborigines. Its maximum strength should not exceed 45.

The operational doctrine of the squadron



PROPOSED REORGANISATION OF THE PARA COMMANDO SQUADRON

should be offensive and action-oriented. It should emphasize the vital role of intelligence and security in achieving operational success.

Instead of employing Para Commando squadrons as reaction forces in unfamiliar areas, we should adopt the practice of allotting a specific area of responsibility to each squadron. This will permit the squadron, even while it is stationed at its home base, to get to know its area well. Subsequently, should counter-insurgency operations become necessary in that area, the squadron responsible for the area will naturally be the first choice to be deployed there. When deployment becomes necessary, the squadron headquarters should move to a point close to the headquarters of the supported unit. Assault troops should move into the area only after the squadron commander has briefed them in detail on intelligence and orders. The troops should remain under his direct command and control throughout the operations. The squadron headquarters staff should be allowed to make direct contacts with the police, government departments in the area and any other organisation, if they find such action necessary for the effective pursuit of the squadron's mission.

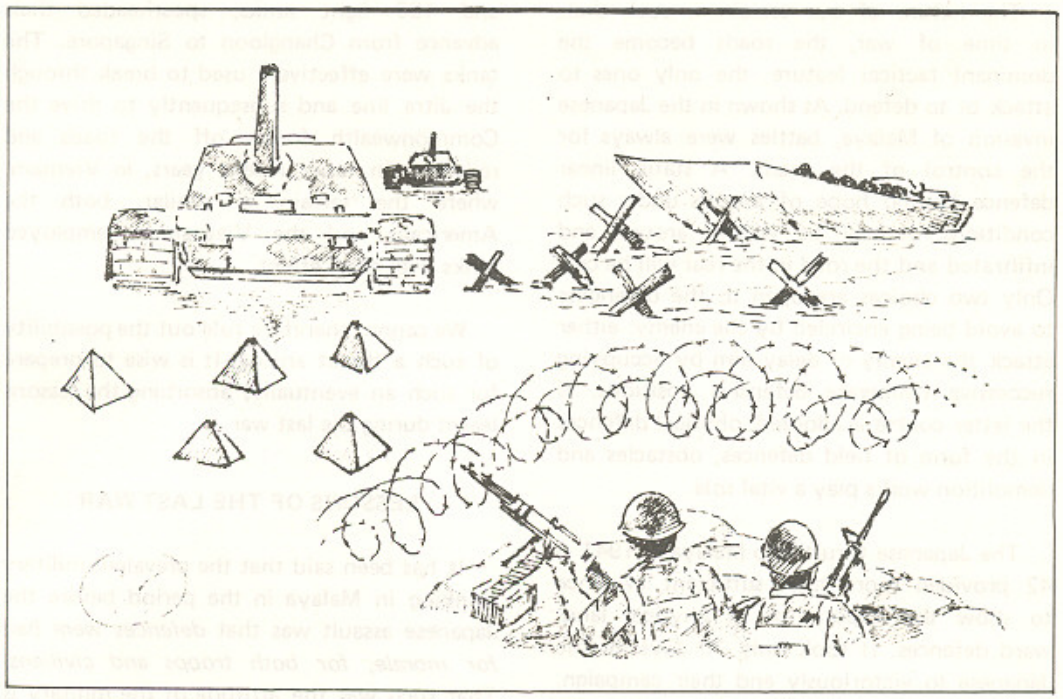
As for the tactics, the assault troops should emphasize small-group operations and adopt irregular tactics and techniques. The basic aim should be to determine the area where the enemy is likely to be found (critical area). To be successful in this, the troops would have to conduct a careful and systematic search in small patrols to discover the signs and patterns of enemy activity. Of couse, this effort is to be made in consonance with the support provided by the squadron headquarters in the form of intelligence, assessment, logistics and

command and control. If and when the critical area is determined, then, depending upon its size and the enemy situation, either the troop or the whole squadron should concentrate for a co-ordinated effort. At this stage the squadron commander, the reserve elements and any other supporting forces may come to the support of the assault troops. If the determination is found to be wrong, then the whole procedure is repeated. Should a contact occur during the search phase,then it is the responsibility of the patrol or troop leader to fight the battle. He would, of course, keep the squadron commander informed, for subsequent action.

It cannot be truthfully affirmed that the current state of operational efficiency of the Para Commando squadron, either at the individual or the collective level, is well or satisfactory. There is a very *obvious* requirement to improve training to upgrade standards of skill, knowledge and expertise. The areas which require emphasis are numerous: knowledge of the enemy; ability to appreciate and use ground; speed and accuracy in shooting; stalking; tracking; fieldcraft; jungle navigation; mental and physical fitness; discipline. This is the responsibility of the Para Commando Regiment itself, to execute with fanatical determination.

In this article I have attempted to identify the weaknesses in the employment of Para Commando squadrons in counter-insurgency operations and suggest ways of rectifying them. First and foremost, commanders and staff must appreciate the strengths and weaknesses of the Para Commandos. Then there is the need to adhere to the basic principles of battle procedure, namely: good intelligence; security; surprise and deception, throughout all phases of operation. We must also consistently adhere to offensive action and irregular tactics. There is also a requirement to reorganise the Para Commando squadron if it is to achieve significant results in counter-insurgency operations.

Leftenan Kolonel Zaini B Said of the Malaysian Special Service Regiment is a graduate of the Royal Military College, Sungei Besi and the Marine Command and staff College, USA. Besides holding the appointments of Brigade Major and Staff Officer Grade 2, Army Staff Division, he has also held the command of 22 Para Commando Regiment. Currently he is the Chief of Staff at HQ 21 Special Service Group.



SCHEME OF PHYSICAL DEFENCE WORKS TO COUNTER A POSSIBLE ENEMY ATTACK

Mejar Ahmad Dahalan B Dalimi

The writer claims that failure to prepare adequate physical defences in advance was a major factor which contributed to the fall of Malaya and Singapore to the Japanese in 1941 – 42 and adds that, despite having experienced this bitter lesson, we are not paying attention to the need of a scheme of physical land defences for the country. He then goes on to describe how physical defence works can be incorporated into development projects. There must be close coordination of effort between the civil and military authorities in order to implement a suitable scheme during peace time.

THE IMPORTANCE OF PHYSICAL DEFENCE WORKS

It is axiomatic that any position in which an army intends to await the enemy's attack should be one which offers solid advantages of terrain. Such advantages 'multiply the army's strength'. Where nature helps a good deal, but not as much as one would wish, field defences, artificial obstacles and demolition works must come to one's aid.

The nature of our terrain is such that, in time of war, the roads become the dominant tactical feature, the only ones to attack or to defend. As shown in the Japanese invasion of Malaya, battles were always for the control of the roads. A static linear defence has no hope of success under such conditions. It will be walked around and infiltrated and the road in the rear will be cut. Only two choices are open to the defenders to avoid being encircled by the enemy: either attack the enemy or delay him by occupying successive deliberate defensive positions. If the latter course is adopted, physical defences in the form of field defences, obstacles and demolition works play a vital role.

The Japanese thrust into Malaya in 1941 – 42 provided more than sufficient evidence to show the importance of physical landward defences. It took only 70 days for the Japanese to victoriously end their campaign. If the physical landward defences had been deliberately thought out and prepared accordingly in advance, instead of the ad hoc and disorganised way they were prepared, the story might have been different. We should not allow such catastrophic blunders to be repeated. The effort to plan and execute such defence works should be undertaken while the threat is not that imminent. It will be amply rewarded if we happen to face another external thrust.

PROBABLE THREAT

The threat may come in any or all the following forms: airstrikes; amphibious landing and assault; paratroopers or airmobile assault landing; infantry and armour thrust.

Of course there are those who consider that our terrain does not lend itself to an armour (tank) thrust and therefore discount the likelihood of such a threat. However, it is a fact that the Japanese used tanks effectively in the Malayan campaign. Their 3rd Tank Group, equipped with 80 medium and 100 light tanks, spearheaded their advance from Changloon to Singapore. The tanks were effectively used to break through the Jitra line and subsequently to drive the Commonwealth forces off the roads and railways. In more recent years, in Vietnam, where the terrain is similar, both the Americans and the Vietnamese employed tanks with good effect.

We cannot therefore rule out the possibility of such a threat arising. It is wise to prepare for such an eventuality absorbing the lessons learnt during the last war.

LESSONS OF THE LAST WAR

It has been said that the prevalent military thinking in Malaya in the period before the Japanese assault was that *defences were bad for morale, for both troops and civilians.* That such was the attitude of the military is borne out by the fact that, despite the acceptance of the possibility of a landward invasion of Malaya by the British Joint Command Tactical Appreciation of October 1940, no significant landward defences were planned or erected even after the Japanese had landed in Malaya. It is therefore not surprising that the Japanese managed to overrun Malaya and Singapore in 70 days. The ineffectiveness of the physical landward defences are clearly reflected in the casualties suffered by the two sides. The Commonwealth forces lost 138,708 killed, wounded, missing and captured. General Yamashita's forces, although outnumbered 3:1, suffered only 9,824 casualties. This is a terrible balance sheet. It should have been the other way round as the defenders, under normal circumstances, suffer fewer casualties than the attackers.

The need of physical defence works so clearly shown by the experience of the Japanese invasion was not appreciated in the post-war period because we faced a new kind of threat – the internal Communist rebellion. Unsurprisingly, we did not deduce the lessons

of the Malayan campaign and take corrective steps to prevent the recurrence of the mistakes of that campaign. Now with the possibility of an external threat having emerged once again, we ought to examine the inadequacies of our landward defences and take steps to remedy them.

NEED FOR EARLY PREPARATION

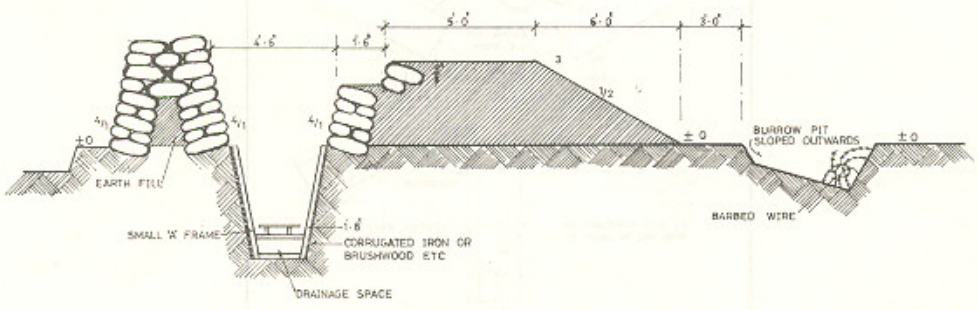
First and foremost, we must appreciate the fact that physical defence works cannot be prepared overnight. Failure to recognise and accept this may lead to reverses in battle.

FACTORS RELEVANT TO PREPARATION OF DEFENCE WORKS

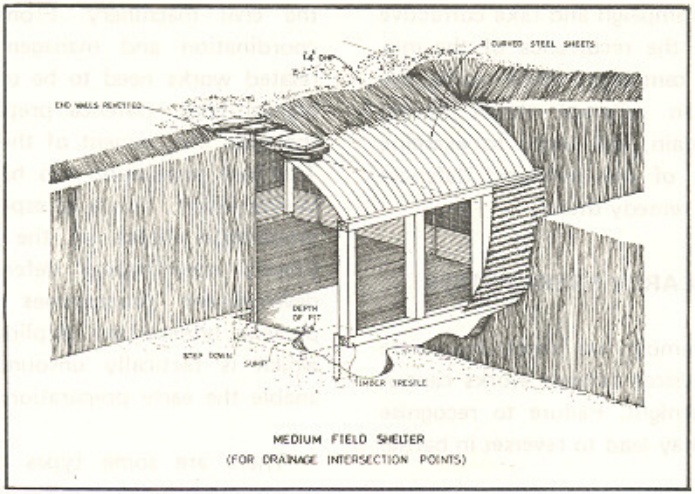
To achieve effective planning and execution of Engineer tasks requires the consideration of several factors. These include up-to date data in terms of Engineer Intelligence, the time required to implement the works, its relation to the overall defence concept, etc.

Planning and execution require the involvement of not only military planners but also the civil machinery. From the start, the coordination and management of all the related works need to be undertaken at the highest level. Defence preparation calls for the total involvement of the security forces. The civil population too has a role to play in this effort. This is so especially during the preparation phase of the defence works. Closely coordinating defence works with development programmes will not only prevent unnecessary duplication of works, which is tactically unsound, but will also enable the early preparation of the defences.

There are some types of field defence construction which can be incorporated with civil-orientated construction projects. Field defences like strong points, pill boxes, gun emplacements, various types of trenches and bunkers could easily be constructed in line with various municipal needs. For example, when we plan for the construction of urban area drainage and sewage systems, slightly modified standard trench design can be used to construct the drains. Such drains would serve the military purpose if they are of sufficient depth and mutually supporting. Bunkers could be incorporated into these drainage systems.

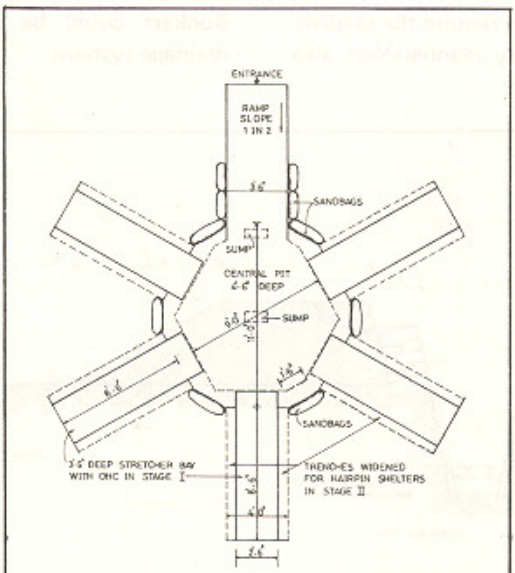


FIRE TRENCH WITH PARTIAL BREASTWORKS IN WET SOIL
(BY MODIFYING URBAN DRAINAGE)

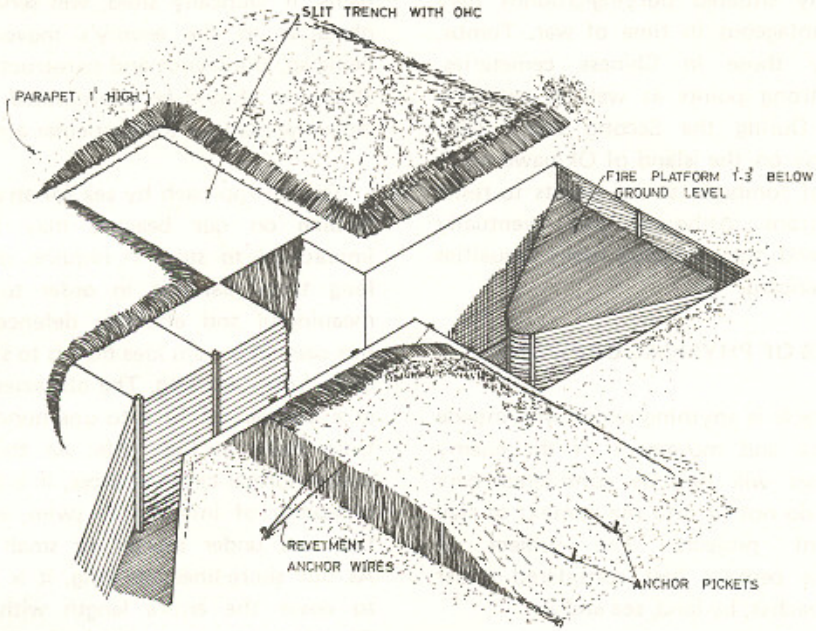


MEDIUM FIELD SHELTER
(FOR DRAINAGE INTERSECTION POINTS)

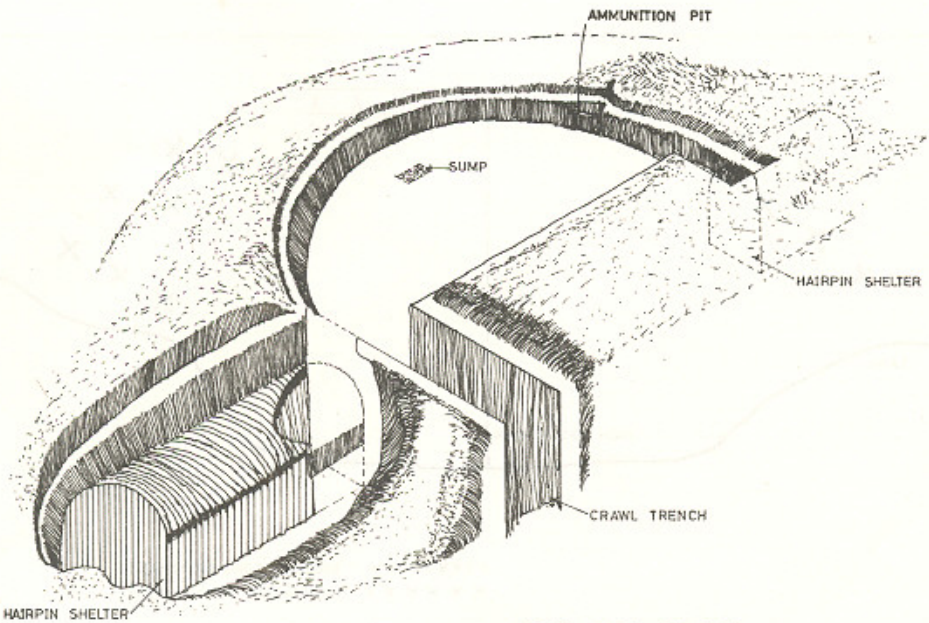
Another area which can be looked into for the purpose of providing field defences is the urban beautification programme. At present municipalities draw up their plans for this purpose without consulting the Ministry of Defence. As a matter of fact, the designs of some of the monumental structures could easily be tailored to the designs of unfinished defence works such as pill boxes, gun emplacements, bunkers, etc. The parks and recreational areas, where such monumental structures are to be erected, would have to be tactically located covering likely enemy approaches. If this is done, the structures can be easily converted into defence posts when the need arises.



CENTRAL PIT TYPE REGIMENTAL AID POST
(MODIFIED FOR CHILDREN'S PLAYGROUND)



SKETCH OF OPEN MMG EMPLACEMENT
(FOR PUBLIC RECREATIONAL PLACE)



SKETCH OF 3-INCH MORTAR EMPLACEMENT
(FOR RECREATIONAL PLACE)

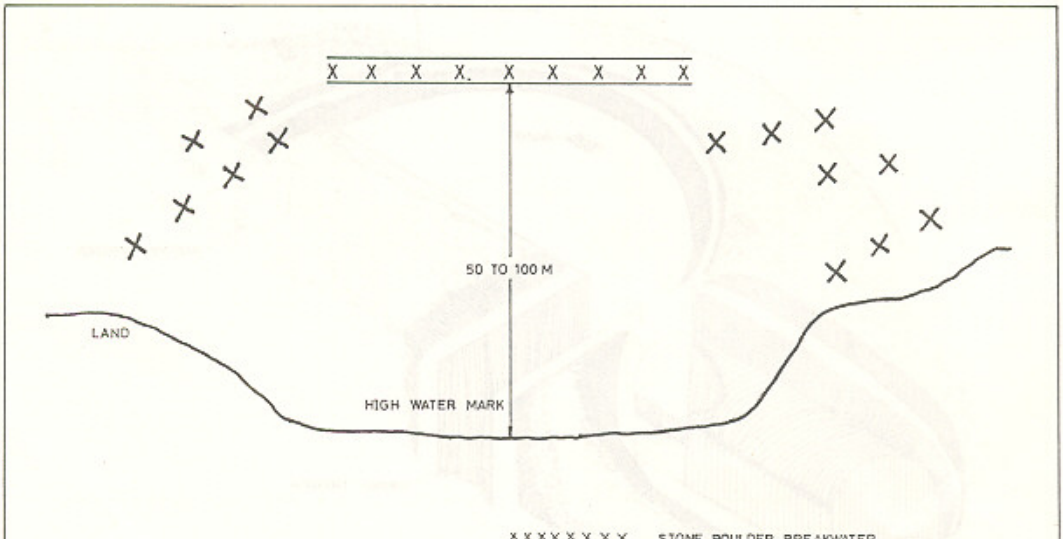
Tactically situated burying-grounds may prove advantageous in time of war. Tombs, particularly those in Chinese cemeteries, serve as strong points as well as anti-tank obstacles. During the Second World War, the Japanese on the island of Okinawa made good use of tombs as strong points to resist the Americans. Although they eventually lost the island, they inflicted heavy casualties on the Americans.

TYPES OF PHYSICAL DEFENCES

An *obstacle* is anything which will impede the advance and movement of the enemy force. Mines will not be considered here since they do not fit into the context of civil development projects. The subject of *obstacles* is perhaps best considered under three approaches; by land, sea and air.

As far as approach by land is concerned, structures which will serve as anti-tank and anti-vehicle obstacles deserve the most attention. Irrigation canals, artificial lakes and dams, if tactically sited, will serve as useful obstacles to the enemy's movement. This being so, the layout and construction of such structures should be coordinated to suit the defensive plan for the particular area.

Enemy approach by sea for an amphibious landing on our beaches may prove very impractical to stop. It requires detailed and long term planning in order to achieve a meaningful and effective defence works in this case. The main idea here is to stop landing craft from beaching. The obstacles should be at a distance of fifty to one hundred metres from shore at high tide. At this distance, under normal circumstances, it is beyond the capability of infantry to swim, especially if they are under mortar or small arms fire. As our shore-lines are long, it is impractical to cover the entire length with obstacles. Therefore the most likely landing beaches have to be determined and filled with some form of obstacles which could also serve as, say, breakwaters, anchoring facility for fishermen's boats, navigational markers, etc.



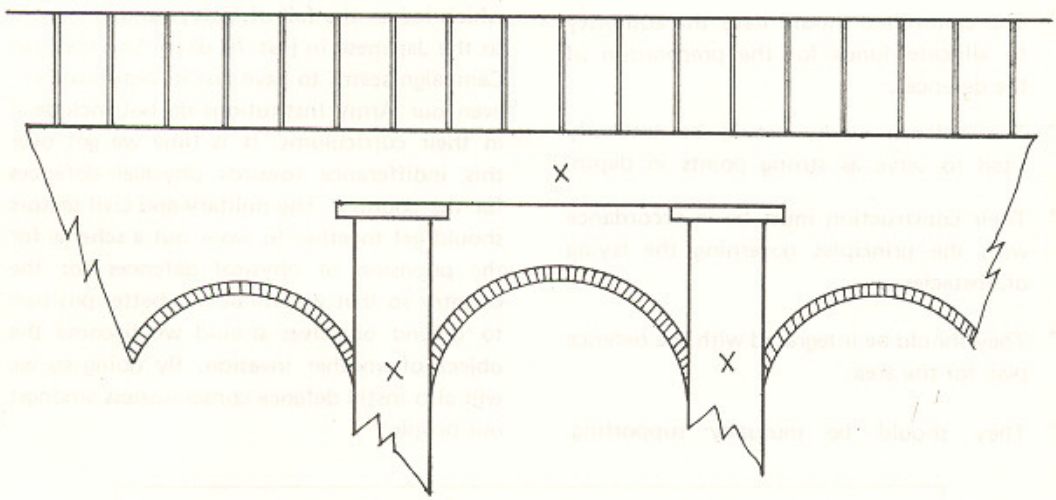
AERIAL VIEW OF BEACH DEFENCE WORKS

To counter the threat of paratroopers and air-landing of troops is also difficult since possible sites for such approach are countless. Here again, the most likely sites have to be determined. As a general rule, all possible sites within a radius of ten kilometres from key points and strategic defensive locations should be prepared with obstacles.

Finally, there is the need for the preparation of demolition works. Most countries which experienced the bitterness of the Second World War have taken steps to incorporate demolition requirements in their construction projects.

During the Japanese invasion, Commonwealth forces in Malaya failed to blow up several key structures to impede the Japanese advance because there was insufficient time to prepare the demolition charges. Very few store dumps were blown up; this helped to ease the logistics problems of the Japanese.

What many countries have done is that deliberate demolition requirements are included in the design and construction of key installations, structures, buildings and facilities. Chambers appropriate to the required explosive charges are constructed as part of the project, to be used when needed. The key installations, structures and facilities to be provided with demolition chambers include all major bridges, culverts, power generating plants, fuel dumps, telecommunication and broadcasting centres, ports and ferry points, water reservoirs and related facilities, airfields, parts of the rail network and even sections of roads where cratering effects are desired.



X – POSSIBLE DEMOLITION CHAMBERS IN AN RC BRIDGE

LAYING OF PHYSICAL DEFENCES

Whatever concept of defence works one may adopt, the governing factor should be its suitability in relation to the overall defence concept of the country. The scheme of physical defences revolves around the general concept adopted by the Army as a whole. It will never be of use if it is planned or implemented in isolation. In order to have a meaningful scheme of physical defences, it is suggested that a system be formulated to prepare field defences, obstacles and demolition works in peace time. For peace time preparation of physical defences to be effective, the following requirements must be fulfilled:

* It should be under the direction of a committee at the highest possible level, preferably at the National Security Council level, with power to direct any department to incorporate physical defences in their undertakings, especially in construction projects.
* The committee should have the authority to allocate funds for the preparation of the defences.
* The defence works should be tactically sited to serve as strong points in depth.
* Their construction must be in accordance with the principles governing the laying of obstacles.
* They should be integrated with the defence plan for the area.
* They should be mutually supporting.
* They should be laid to reinforce constricted localities such as road defiles, crossing points, bridges and areas between embankments.

Several data and much information are required to meet the above requirements in planning. These include records and designs of all the major bridges in the country, information on constricted localities and points which are likely approaches of the enemy, details of probable landing areas and beaches, classification of our terrain in terms of tank and infantry mobility and information on the terrain features covering roads and railway axes.

CONCLUSION

At present we tend to forget or pay little attention to the requirement of physical defences for the country. The importance of this requirement cannot be more clearly emphasized than by recalling the neglects which led to the fall of Malaya and Singapore to the Japanese in just 70 days. The Malayan Campaign seems to have lost its significance — even our Army Institutions do not include it in their curriculums. It is time we got over this indifference towards physical defences for the country. The military and civil sectors should get together to work out a scheme for the provision of physical defences for the country so that we will be in a better position to defend ourselves should we become the object of another invasion. By doing so we will also instill defence consciousness amongst our people.

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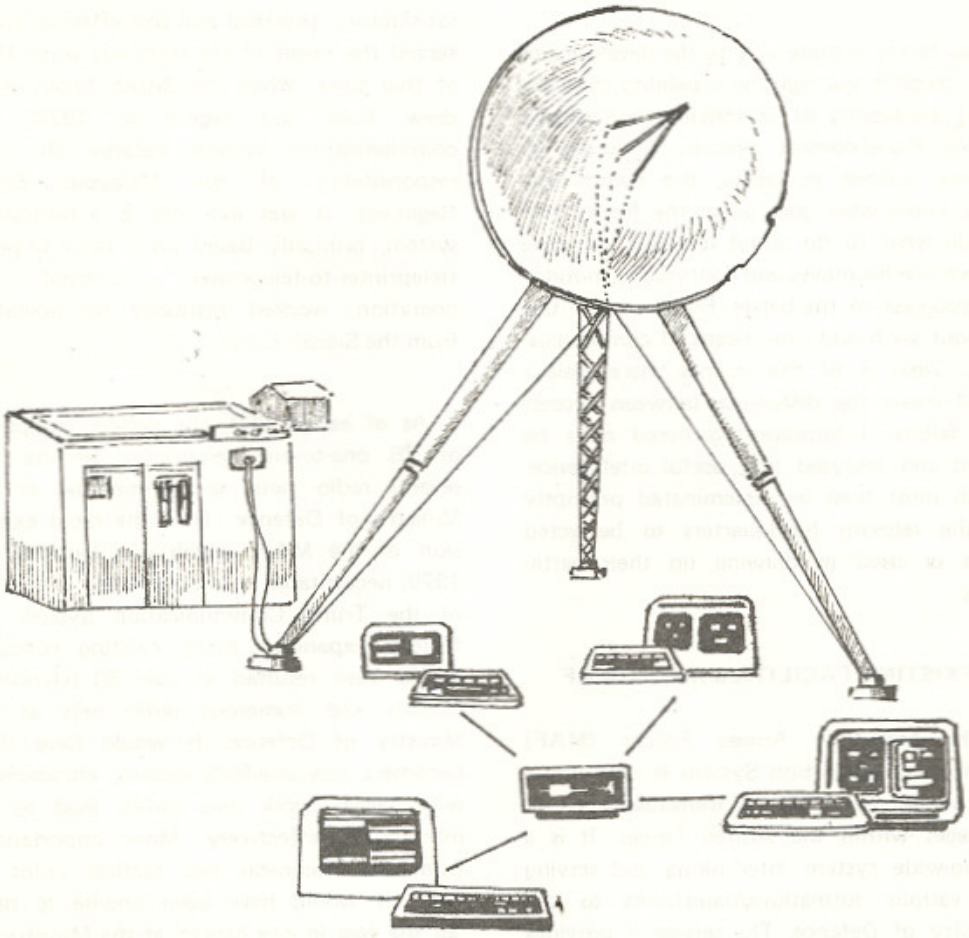

MAF TRUNK COMMUNICATION SYSTEM A CASE FOR AUTOMATION

Leftenan Kolonel Hew Kim Yew

The article traces the development of the MAF Trunk Communication system from its beginning to the present and focuses on its inadequacies and weaknesses in order to highlight the urgent need to overhaul this system. Arguing on the premise that swift and sure communications are a vital requirement for the efficient functioning of the Armed Forces, the writer advances a strong case for the acquisition and installation of a fully automatic switching system.

COMMUNICATIONS, A VITAL ELEMENT

No factor is more vital to the development of a credible war fighting capability than the ready availability of an efficient and reliable command-and-control system. In order to achieve success in battle, the commander must know what goes on at the front, then decide what to do about it, order someone to execute his moves and continue to monitor the progress of the battle. He cannot do this without swift and sure means of communication. Time is of the essence here, delays could mean the difference between success and failure. Information gathered must be sieved and analysed into useful intelligence, which must then be disseminated promptly to the relevant headquarters to be acted upon or used in drawing up their battle plans.

EXISTING FACILITIES IN THE MAF

The Malaysian Armed Forces (MAF) Trunk Communication System is responsible for the safe handling and transmission of all messages within the Armed Forces. It is a nation-wide system interlinking and serving the various formations/bases/units to the Ministry of Defence. The service it provides includes the transmission of signal messages via teleprinter and radio circuits and the despatch of all official mail through civil and military road, rail and air services. However, the system is essentially manual in operation and static and, as such, is not suitably organized to provide command-and-control communications.

This system was established in the early 1950s. Although it has expanded considerably over the years, there has been little or no change in its concept of operations and its equipment and facilities. Initially it was a part of the overall Commonwealth Communications Army Network (COMCAN) with outlets to the United Kingdom and other Commonwealth countries through Singapore and RAAF Butterworth. It was found to be satisfactory, practical and cost-effective and it served the needs of the relatively small MAF at that time. When the British finally withdrew from this region in 1970, this communication system became the sole responsibility of the Malaysian Signal Regiment. It was and still is a centralised system, primarily based on a point-to-point (teleprinter-to-teleprinter) concept of operation, worked manually by operators from the Signals Corps.

As of early 1980, the system comprised of 26 one-to-one teleprinter circuits and several radio nets, all terminating at the Ministry of Defence. Then the rapid expansion of the MAF, which was launched in 1979, necessitated a corresponding expansion of the Trunk Communication System. Its further expansion along existing concepts would have resulted in over 50 teleprinter circuits and numerous radio nets at the Ministry of Defence. It would have then become a very unwieldy system, encumbered with heavy work and traffic load to be manageable effectively. More importantly, from the technical and tactical point of view, it would have been unwise to have 'all the eggs in one basket' at the Ministry of Defence. In the event of a breakdown at this centre, the whole system would become inoperative and the Ministry of Defence would be unable to communicate with the formations/bases/units and vice versa. For these reasons, the required expansion has been carried out by decentralizing the system. Several regional centres have been established, each to serve a number of tributary stations in its vicinity. This decentralised system has pruned down the larger communication centres to manageable proportions. Whilst this arrangement is an improvement upon its predecessor, it is only just satisfactory to meet the immediate requirement. The challenges of the 1980s and the 1990s cannot be met unless major improvements are brought about in the system by changing

not only its concept of operations but also its equipment and ancillary facilities.

SHORTCOMINGS OF THE SYSTEM

A number of weaknesses exist in the present system. Firstly, it is a manual 'torn-tape' system. Very large numbers of messages are received daily for transmission. Since the bulk of these has to be handled manually at two or more relay centres, the probability of human error, resulting from mishandling, creeps into the system. The incidence of such error can be expected to increase in the future as the number of circuits is increased. Furthermore, manual operation is slow and cumbersome and the specified message clearance timings for the order of precedence cannot be complied with. Messages of a priority nature which normally require clearance within two hours are now not always cleared within that time but may be delayed up to 24 hours. The system is manpower-intensive, particularly at the major relay centres. Unless and until manual handling is reduced to the absolute minimum in our message processing system, delays and inaccuracies will continue to occur.

Secondly, the traffic capacity of the system is limited because of its obsolescent design and the manual mode of operation. The speed of the system is determined by the operators' speed on the keyboard. The current capacity is barely adequate to meet the present traffic load. For certain, the system will not be able to cope with the anticipated increase in traffic load in the coming years. Duplication of circuits to cope with additional load will require increasing the manpower and incur higher operating costs.

Thirdly, the present system is not versatile enough; it handles only messages and packages. It does not have facilities for the transmission of maps, documents, diagrams and urgent letters in toto. These articles are now despatched by the Signal Despatch Service, which is time-consuming. The rapid method of 'facsimile' for despatching these articles is not available in the present system.

Fourthly, in the present system, on-line security is available on vital links only. In order to ensure security, the other stations must resort to off-line encryption and decryption. Off-line encryption and decryption is time-consuming and is, therefore, unacceptable in view of the likelihood of delay. Furthermore, the crypto equipment in current use is old; its repair and maintenance are becoming difficult and not cost-effective.

REQUIREMENTS TO BE MET

To overcome the weaknesses identified in the system, it is imperative that the MAF trunk communication network be redesigned giving due consideration to the following.

The replacement system should have an additional potential capacity to be activated in the future when further expansion of the system becomes necessary. This approach will ensure that the trunk communication needs of the Armed Forces for the next two decades can be met without having to replace the system in the next few years on account of limited capacity. This is a very important consideration since the capital investment on a new system is bound to be heavy.

The new system must be flexible enough to allow a number of alternative routes. It must be reliable and sturdy enough to ensure a high standard of technical and tactical survivability. It must be automatic and versatile enough to provide facilities for teleprinter, radio, facsimile and voice. The entire system must provide on-line security. The crypto system employed should not, in any way, degrade the capacity of the system or cause undue delay in the handling of classified messages. In meeting these requirements, the system should not, however, be too sophisticated or elaborate that its

management, maintenance and repair are beyond the level of the technical know-how available within the Armed Forces.

OPTIONS AVAILABLE

The advent of the microcomputer has presented new opportunities for compact and cost-effective automation to be applied to the many mundane manual functions associated with antiquated military telegraphic communication operations. Bearing this in mind, in designing a new system for the trunk network, several options are available. One possibility is the conversion of the existing decentralised system into a fully automatic switching system with the automatic switches at every regional centre, regardless of the number of stations served. However, the cost of such conversion would be prohibitively high. Moreover the system would be under-utilized.

An alternative and less costly system is to employ only one automatic switch at the major relay centre and feed in terminals to this switch. Whilst this would certainly be the most economical option, it would have the critical weakness that a breakdown at the nerve centre (switch) would paralyse the whole system. This fault is unacceptable in a vital communication system.

A more acceptable option is a compromise of the two, ie, a combination of switches and concentrators. It should be a 'Store and Forward Message Switching Network', comprising automatic switches and concentrators interlinked by dedicated (exclusive) transmission lines and supported by high power HF – SSB radio back up. It should have the flexibility to permit modification and expansion when the need arises in the future. It should allow software modules to be added or modified without hardware changes or software conflicts and with the minimum of changes in the overall design.

OPTIMUM SPECIFICATIONS

Since the system is to carry vital military communications, it must have a high availability of circuits. The components/modules of the system must be highly reliable and the whole system must be designed in such a manner that it will be possible to restore the service rapidly after a failure. To achieve maximum availability of circuits, the network would have to be purposely designed with route redundancy so that failed equipment or links can be bypassed without interruption of circuits. As an optimum insurance against equipment 'outage' (failure), critical relay centres would have to be equipped with hot stand-bys. Admittedly, this would be an expensive arrangement.

An alternative method of ensuring high availability of circuits would be to provide an effective back up system. The back up links could be a point-to-point system making use of either an alternative civil route or a military transmission channel. There are several other ways of ensuring high circuit availability. Needless to emphasize that the criterion for selecting the mode of the back up is that it must be uncomplicated and provide maximum benefits at minimum cost. Whatever, is the back up system selected, it should have the following capabilities:

* Provide teleprinter services between the automatic switches, concentrators and terminals serving the various subscribers.
* Provide a radio net to carry traffic from less important terminals.
* Enable automatic switching to function between the switches and the concentrators.
* Have the capacity to carry traffic load in a reduced automatic system.

The main system should have the facilities for teleprinter, facsimile and voice switching. The two latter facilities are becoming increasingly important. Their addition to the telex switching of the main system will cost comparatively little. These added facilities, on the other hand, will allow commanders at the highest level to speak directly or despatch vital documents quickly and in a secure mode to commanders on the ground. The teleprinter and facsimile switching facilities should be available to all users of the system, whereas the voice facility would be restricted to key commanders.

It would be ideal if the transmission links interconnecting the switches, concentrators and terminals could be provided and operated by military resources, ie, personnel and equipment. This, of course, would be extremely costly in capital expenditure. Since the need to economize is paramount, the system would have to be operated in concert with the civil telecommunication agency. Considering that the suggested system is static, using the resources of the civilian agency should prove to be satisfactory. The arrangement will certainly be cost-effective.

In summary, the replacement system for the trunk network should have the following capabilities/functions:

* Message archiving
* Message retrieval
* Message storing, queuing and routing in precedence order
* Message logging
* ACP 127 message format validation
* Automatic accounting and statistics
* Error detection and correction
* Adequate storage (up to 30 days if necessary)
* Alarms for flash messages
* Classification verification of channels
* Trunk control

FINANCIAL IMPLICATION

The financial outlay required to implement a fully automatic system with the specified functions and capabilities is estimated to be Ringgit six to eight million. However, part of this initial expenditure will be offset by the considerable saving in manpower and terminal equipment which the *automatic* character of the system permits. The table below shows the estimated saving in manpower.

Location of Regional Centres	Manpower Holding (Present)			Manpower Requirement (Automatic)			Manpower Saving		
	Cp1	LCp1	Pte	Cp1	LCp1	Pte	Cp1	LCp1	Pte
Central	26	26	40	4	4	12	22	22	28
South	14	14	24	4	4	12	10	10	12
East	14	14	28	4	4	12	10	10	16
North	14	14	20	4	4	12	10	10	8
Total	68	68	112	16	16	48	52	52	64

The annual financial saving for the manpower reduction, at current rates of pay and allowances, work out at Ringgit 1,325,500.00. A further financial saving of Ringgit 52,500.00 can be made annually from terminal equipment (teleprinter) rentals. The financial savings from these two areas will be able to cover the initial capital expenditure in approximately five years. More importantly, our service personnel will be able to gain valuable experience in the field of computer technology through the implementation of the automatic system.

CONCLUSION

There is a pressing need to automate the MAF trunk communication system. Technologically, our existing system is at least ten years behind the systems in use in many other countries. The antiquated system currently employed can no longer meet the increasing need for quick and reliable (swift and sure) communications within the Armed Forces. The fully automatic trunk communication system is the answer.

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AN APPROACH TOWARDS MANAGEMENT BY OBJECTIVES IN A TRANSPORT COMPANY

Mejar Leng Chong Hooi

The article attempts to review the weaknesses in the present management system of a Transport Company, assesses the management control required to improve the system, considers the applicability of the concept of Management by Objectives (MBO) and goes on to set short-term objectives for all sub-functions. It concludes that the concept of MBO is applicable and could be effectively practised in a Transport Company to achieve results by design.

The original paper, of which this article is a condensation, won the General Tan Sri Dato' Ghazali Seth Trophy at the Armed Forces Staff College where the writer was a student in 1982.

INTRODUCTION

The efficiency of transport support is invariably judged and measured by the users by the ability of the transport operators to provide the required number of vehicles at the right time and the right place. The most common reason given for not being able to meet a demand for transport is that there is a shortage of either vehicles or drivers. If one asks why a high percentage of unit vehicles is 'off the road' and why, in some instances, for as long as a half-year, the reasons given are likely to be: spares shortage, accidents, no replacements for the damaged vehicles, etc.

If the current transport problems are to be tackled properly, we would have to begin by examining the existing management system. This system is outmoded in concept and application, certainly incompatible with modern management practices. While it is accepted that the Army cannot operate exactly along the lines of a profit-oriented commercial organization, it (the Army) can nevertheless achieve greater efficiency in the management of its resources by adopting stricter standards of cost control. It cannot be denied that most government departments are not cost-conscious in their approach to resources management. This attitude must change in order to adhere to the present government's great concern in preventing wastage in public spending and ensuring proper accountability by those in charge of public funds and property. Above all, the Armed Forces' efforts towards building a modern, efficient, effective and professional organization demand sound management at unit level to maximise productivity and output. In keeping with this principle, this paper attempts to review the management system in Transport Companies.

FUNCTIONS OF A TRANSPORT COMPANY

Transportation, besides being the major function of the Service Corps, is the lifeline of the Armed Forces in its logistics maintenance system. A Transport Company's primary function is the transportation of troops and material. Additionally, second line Transport Companies have the function of supporting field units. They are the organizations which operate the forward maintenance airhead and establish and operate delivery points (DPs).

RESOURCES OF A TRANSPORT COMPANY

To perform the above functions, a Transport Company is provided with resources which fall into the following categories.

* Manpower.
* Vehicles.
* Stores and equipment.
* Fixed assets such as technical and living accommodation.

These resources have been allocated on the premise that a Transport Company is required to operate independently, both in peace and in war. Each component of the given resources serves a specific purpose.

It takes a considerable sum to establish a Transport Company. The capital costs have been estimated as follows:

Vehicles	$ 7,600,000.00
Stores and equipment	$ 300,000.00
Technical and living accommodation	$20,000,000.00
Total	$27,900,000.00

In addition, it costs $1,887,348.00 a year in personnel emoluments to operate a Transport Company.

In order to reflect the full cost of establishing and operating a Transport Company, the cost of the Light Aid Detachment (LAD) in terms of capital expenditure and personnel

emoluments must be added to the above figures. The capital expenditure on an LAD is estimated to be as follows:

Vehicles	$ 295,700.00
Stores and equipment	$ 264,000.00
Technical and living accommodation	$ 917,000.00
Total	$ 1,476,700.00

The personnel emoluments of LAD personnel in a Transport Company come to $251,688.00 per annum.

Thus the full cost of establishing a Transport Company is in the region of $30 million in capital expenditure alone and another sum in excess of $2 million to pay the annual personnel emoluments. This is indeed a substantial investment.

PRESENT MANAGEMENT SYSTEM

Units operate within the framework of Armed Forces Council Instructions, Armed Forces Orders, General Routine Orders, Administrative Orders and Directives, Technical Orders and Directives. A feature common to both administrative and technical orders and directives is that they were issued to meet specific requirements as dictated by the circumstances and needs of the time. A detailed study of the relevant orders and directives shows that they were not developmental in approach.

Another feature of the present system is that, at unit level, non-specific directives and orders are subjected to different interpretations and perceptions. Depending upon the extent to which the commanding officers have been exposed to modern management approaches and techniques, their dedication and capacity for work and their attitude and motivation, they perform differently. Yet their performances are deemed to be equally satisfactory because the present system does not allow the measurement of efficiency and effectiveness in quantified terms.

This state of affairs has arisen partly due to a misconception that the productivity and effectiveness of a Transport Company cannot be measured just as that of a civilian organization can be in terms of its profitability. In actual fact, most aspects of administrative, material, technical and training management can be quantified to provide a basis for measuring the extent to which objectives are achieved. Although the output of a Transport Company cannot be measured in terms of profitability, it can, nevertheless, be costed and measured in terms of cost-effectiveness per unit of service. In professional transport management in the private sector, cost-effectiveness per unit of operation is accepted as a measure of management-efficiency. This approach of measurement can be adopted for application in a Transport Company.

WEAKNESSES OF PRESENT SYSTEM

The present system of managing a Transport Company has the following weaknesses:

* Attitude of management is not service-orientated.
* Management is not sufficiently sensitive to user needs.
* There is little planning. Fleet resources are not properly controlled; their utilisation is not monitored and evaluated.
* Transport requirements are neither anticipated nor forecast.
* There is no awareness of cost-consciousness in the provision of transport at any of the levels of management.
* There is no sense of direction in management; it is always crisis management.
* Management is not result-orientated in approach at any level.

At present the major weakness in the

management of a Transport Company is the lack of corporate goals set by higher headquarters or by the officer commanding the unit. In the absence of objectives or goals to be pursued, units grope in the dark and function without a proper sense of purpose. The stage is thus set for crisis management. For an organization with about $30 million worth of resources at its disposal and which incurs a high operating cost, this is very unprofessional resource management indeed!

One consequence of the absence of corporate goals is that little attention is paid to data collection which is an essential prerequisite for the decision-making process. Management actions and decisions, therefore, tend to be mere responses to a situation or a crisis, whereas they ought to be deliberate. This approach could, at best, overcome a crisis, but it is unlikely to improve the effectiveness of management. The availability of transport being critical to the success of any operational plan, it is too dangerous to leave it to chance. Its availability must be ensured by design, through deliberate planning and control.

Consistent with the haphazard approach to management is the lack of proper planning. Although units have a general idea of what they need to do in their areas of responsibility, they have no specific action plan since there are no clearly laid-down goals or objectives. They are therefore unable to establish how their capacities had been utilised or whether their outputs matched their capacities. Consequently they are not in a position to effect remedial action to provide more effective support or achieve better output — the essence of the management function of directing and controlling. In the meantime, many transport demands are probably not being met, adversely affecting the administrative, operational and training efficiency of the user units. This is a case of expensive resources being unproductive. There is, therefore, an urgent need of deliberate planning to marshal all the resources of a Transport Company to achieve maximum productivity.

MANAGEMENT BY OBJECTIVES

Management by Objectives (MBO) is a principle of management which allows full scope for individual strength and responsibility and, at the same time gives common directions of vision and effort, establishes team work and harmonises the goals of the individuals with a common weal.

It is reasonable to expect that those who are entrusted with the responsibility to manage an organization should achieve the purpose with a minimum of resources, with as much 'surplus' as possible. If this philosophy is applied to a Transport Company, then the officer commanding the unit has the duty to develop as effective a transport service as possible with the human and material resources available to him.

If planning is to be effective, there must be an integral relationship between short-range and long-range objectives.

Long-range plans, drawn to specifications of objectives, are more speculative for distant years than for the immediate future. Short-range objectives, usually to be realized in the first year of a long-range plan, are likely to be both comprehensive and specific. The approach in planning should always be from the distant year to the present, not vice-versa, because what is to be done the first year must provide a foundation for what is to be done in subsequent years. This can be guaranteed only if short-range plans are part of long-range plans.

The ideal way to introduce MBO to an organization is to get its superior officers interested, or, at least, obtain their active support. While the setting of objectives should start at the top, it is not imperative that it be done so. It can, in fact, start at any

level. Regardless of starting point, the process for initiating MBO should follow these steps:

* Identification of organizational objectives.
* Preliminary setting of objectives at the top.
* Setting of subordinates' objectives.
* Reconciliation of goals and available resources.
* Adjustment to goals previously set.
* Decision on the final goals for the organization.
* Preparation of management guide for implementation.
* Review of performance.

MANAGEMENT CONTROL

The functions of a Transport Company can be conveniently grouped into five major management areas as follows:

* Administrative management.
* Material management.
* Technical management.
* Operational management.
* Training management.

For control to be effective, it is imperative that each of these areas be assessed against pre-set goals or objectives. The fluctuations and variations for each sub-function will provide us the trend of activities within the resource which is being controlled. They will also show us the performance level as measured against the set objectives. Within these variations and levels of performance, the management will be able to pinpoint the strengths and weaknesses in any particular area of management function. Appropriate action can then be taken.

APPLICATION IN TRANSPORT COMPANIES

There are two basic conditions to be met for the practice of MBO. Firstly, the function must be quantifiable, either quantitatively or qualitatively. Secondly, the objectives set for the function must be verifiable. Studies conducted indicate that the performances in all the five areas of function in a Transport Company are quantifiable, either qualitatively or quantitatively. The applicability of MBO in a Transport Company is therefore not in question; the question is, how well the objectives for each function can be set and monitored?

There are no existing guidelines in any of the management functions of a Transport Company which can be used as a basis for setting our objectives for each sub-function, except that of technical efficiency, which has been set at 75 per cent. However there are no management guides as to how this 75 per cent technical efficiency objective is to be measured or verified. Consequently, each Transport Company uses a different set of variables to compute its efficiency level.

There is, therefore, an urgent need to establish some form of standards to be used as objectives for a Transport Company. In all probability, the first set of objectives proposed for adoption may turn out to be controversial, but experience over a period of time would help to develop a more realistic set of objectives. Once sufficient data have been collected, collated, interpreted and reconciled, a more creditable set of objectives would emerge. The officer commanding a unit would, therefore, need to study his organizational needs thoroughly before embarking on setting objectives for each of the sub-functions of the major management areas.

The process of establishing objectives for each management sub-function is tedious and intellectually demanding. The experience, knowledge and foresight of the commanding officer will largely determine the objectives he comes up with. Unless he has the capability to plan, he will be unable to perceive realistic goals for his unit.

SETTING OBJECTIVES

The first step in setting objectives is for the commanding officer to determine what he perceives to be the more important goals for the unit to achieve in a given period. The initial goals set must be regarded as tentative and subject to modification as the entire chain of verifiable objectives is worked out by subordinate officers.

Taking into consideration the existing situation in respect of manpower manning, vehicle holding level, equipment and stores, a set of objectives as proposed in the Annexure could be adopted for each area of management relevant to a Transport Company.

IMPLEMENTATION OF MBO

The various steps involved in the implementation of a full MBO programme have been mentioned earlier in this paper. Each of these steps needs to be examined in detail.

DETERMINATION OF ORGANIZATIONAL OBJECTIVES. In the absence of relevant data to start with, it would be wise to be conservative in setting the objectives of a Transport Company at the initial stage. Taking the total situation into consideration, the objectives proposed in the Annexure appear to be practical and achievable. They could therefore be the initial objectives for a Transport Company. Experience gained in working towards those objectives may show the need to modify them in later years. Periodic reviews are necessary to ascertain their suitability and viability.

INTEGRATION OF ORGANIZATIONAL OBJECTIVES AND LONG-RANGE AIMS. As the organizational structure of a Transport Company is more or less fixed and its functions are laid down, the long-range effort must be directed towards the achievement of 100 per cent service efficiency. (In a business enterprise, the long-term objective may well be to capture a certain percentage of the market, but such an objective is clearly irrelevant in the case of a Transport Company.)

DETERMINATION OF DEPARTMENTAL OBJECTIVES. Since the setting of objectives for a Transport Company has been considered along functional lines of management, the objectives for each major management function as detailed in the Annexure are applicable.

DEVELOPMENT OF SHORT-RANGE PLANS. All the proposed objectives have been drawn up for an yearly period. Being a service-orientated establishment, it is felt that the yearly basis of the plan is appropriate and practical.

ANALYSIS OF KEY RESULTS. This is possible only when adequate information and data have been collected after the implementation of the MBO programme.

PREPARATION OF MANAGEMENT GUIDES. Apart from the setting of objectives, preparation of management guides for each area of management is vital to the success of an MBO programme. Since every objective has to be verifiable, the basis for this verification must be a major part of the programme.

The management information (data) required and the method of collection, compilation, collation and utilization have to be laid down for all officers to comply. Standard formats, the analysis to be made with the data collected, actions to be taken on the analysis and the likely follow-up actions required by the various implementation agencies must all be unambiguously spelt out.

The adoption and implementation of an MBO programme in a Transport Company requires that management guides for all

sub-management areas be drawn up. In drafting these guides, the initiator should take care to be systematic in his approach and go into details. The drawing up of management guides should not be viewed as restricting in any way the scope of actions open to the implementing agencies or curbing their flexibility in the process of verification. In interpreting and analysing management data, those undertaking the task should take into consideration the constraints and the environment within which the organization operates.

Problems encountered in collecting data in each of the sub-management areas of function will have to be closely monitored and evaluated, particularly at the initial stage of implementation. Likewise, the practicability and the usefulness of each management guide must be continually assessed and then adjusted or rewritten to reflect additional needs revealed by the experience gained from implementation.

PROVISION OF MEANS TO ACHIEVE THE SET OBJECTIVES. These means are incorporated into the unit establishment. What is required is the coordination of the employment of the means provided by the establishment through good communication to achieve the laid-down objectives.

EVALUATION AND REVIEW. At the initial stage of implementation monthly, quarterly, half-yearly and, finally, yearly reviews are suggested. The frequency of subsequent reviews will depend upon the needs of each unit. Over and above the periodic reviews, an annual review must be conducted, with the aid of standard formats and management guides, to assess the extent to which the set objectives have been achieved.

CONCLUSION

The concept of *management by objectives* provides a rational means of control and decision-making in management. It provides a basis for the assessment of staff productivity in all areas of management in a Transport Company.

If information is collected, collated and analysed scientifically, it will provide the basis for remedial action programmes and also assist in planning and control. Frequent reviews of trends in each management area will enable the commanding officer to gain intimate knowledge of the capacities, strengths and weaknesses of his unit.

The expensive resources of a Transport Company cannot be left to unprofessional management if good results are to be achieved. The desired level of service in the provision of second line transport, i.e., meeting all legitimate transport demands in the Transport Company's area of operation and beyond, can only be achieved through proper and effective management control of all available resources. The application of management by objectives provides the medium through which effective management can be achieved in a Transport Company.

ANNEXURE

PROPOSED OBJECTIVES FOR A TRANSPORT COMPANY

ADMINISTRATIVE MANAGEMENT

* Personnel Establishment and Holding.

  The manning level for all ranks should be at least 85%. The turnover for each rank structure should not exceed 20% per annum.

* Qualification and Training Level.

  Drivers.

  50% of drivers are to be Dvr Class I. All Dvr Class I are to be trained in motorcycle with cross-country riding capabilities.

30% of drivers are to be Driver Air-loader trained.
10% of the drivers are to be Basic Air Despatch trained.

Lance Corporals.
All LCpls are to be MT Corporal trained.
50% of LCpls are to be Mechanical Transport Driving Instructor (MTDI) trained.
10% LCpls are to be Basic AD trained.

Corporals.
All Cpls are to be MT Sgt trained.
50% of Cpls are to be MT Instr trained.
10% of Cpls are to be Basic AD trained.

Sergeants.
All Sgts and above are to be MT Sgt trained.
75% of the Sgts are to be MT Instr trained.
30% of the Sgts are to be trained in movement duties.

* Educational Level.

All personnel with Standard Five or Six qualification are to be upgraded to SPAT Rendah.
All personnel with SPAT Rendah or Form Two qualification are to be upgraded to SPAT Tinggi.
All personnel with qualifications between SPAT Tinggi and Form Four are to be encouraged to sit for the Sijil Pelajaran Malaysia examination.
All personnel with STP are to be encouraged to take up the Off-Campus course offered by University Sains Malaysia.

* Membership of Armed Forces Funds.

All ranks are to be members of the Dependents' Fund.
60% of all ranks are to contribute to the Education Fund.
All ranks are to participate in the Group Insurance Scheme.
40% of all ranks are to be members of the Armed Forces Cooperative.
50% of all ranks are to have savings in the POSB.
All ranks who qualify are to participate in the Amanah Saham Nasional.

* Annual Physical Test and Weapon Classification Level.

All ranks are to be battle fit in accordance with current PE test standards.
The unit should be able to mount a Commanding Officer's Parade within 24 hours without rehearsals.
All ranks are to be skilled at weapon handling and shooting upto the current annual classification standards for HK and SMG.

* Health Level.

The unit sick rate is to be less than 0.5% per annum.
All ranks are to be battle fit in accordance with current medical standards.

MATERIALS MANAGEMENT

* Holding of office equipment and stationery should be at least 80%.

* Holding of publications should be at least 90%.

* Barrack stores should be at least 80% of entitlement.

* G 1098 items should be held at 80% or more.

* Clothing stock should be held at 80%.

TECHNICAL MANAGEMENT

* The technical efficiency of the unit should be maintained at 85% or above.

* The fuel efficiency of 3-ton vehicles should be kept at 4 km per litre or better.

* The traffic accident rate of the unit should be reduced by 50% in comparison with that of the previous year.

* The driving proficiency of a driver should not be lower than 120,000 km per accident.

* The maintenance repair of vehicles should not exceed 2.7 cents per km.

* The cost of operation is not to exceed 20 cents per km.

* The unit should be able to meet at least 90% of all legitimate second line transport demand.

OPERATIONAL MANAGEMENT

* All officers, junior and senior NCOs should be effective in command and control.

* All ranks must be knowledgeable in all aspects of deployment drills at their respective levels.

* All ranks must be conversant in the effective application of minor tactics in attack, defence, patrolling and anti-MT ambush drill whilst operating in the field.

* All ranks should be exposed to the duties and responsibilities of their next higher appointment.

* At least one MT Platoon in a Company should be capable of being deployed for any Service Corps second line role at an hour's notice.

* The whole Company should be capable of being deployed for any Service Corps second line role at 4 hours' notice.

* The Company should be capable of meeting all Service Corps maintenance requirements of the Brigade it supports in the field.

TRAINING MANAGEMENT

The unit should conduct in a year:

* 4 refresher courses each of 2 weeks' duration and capacity 15 students.

* 2 refresher courses each of one week's duration and capacity 15 students.

* 2 Class I drivers courses each of 7 weeks' duration and capacity 20 students.

* One MT Cpls course of 4 weeks' duration for 15 students.

* One MT Sgts course of 6 weeks' duration for 15 students.

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SITUASI KESELAMATAN ANTARABANGSA

Leftenan Kolonel Hj Abu Zahrin B Hj Abu Bakar

Suatu rencana serius secara menyeluruh, padat dan penuh dengan fakta-fakta mengenai konflik antarabangsa serta perlumbaan senjatapi. Pengarang telah berjaya mempaparkan sebahagian dari situasi keselamatan antarabangsa. Beliau jua menyentuh mengenai pertukaran senjata-senjatapi, pertimbangan strateji Amerika Syarikat dan Soviet Union, serta juga tiori-tiori di sebalik kuasa nukeliar negara masing-masing.

PERTUKARAN SENJATA-SENJATAPI KE DUNIA KE 3

Pertukaran senjata-senjatapi dan teknologi tentera berlaku seimbang mengikut sistem antarabangsa dan kebangsaan yang mempengaruhi pembangunan, memainkan peranan penting dalam penjualan senjata-senjatapi dan teknologi tentera untuk pertimbangan politik dan strateji.[1] Perubahan suasana alam sekitar adalah satu kuasa penggerak utama[2] kepada modifikasi sistem senjata.

Di negara-negara Sosialis motif politik pertukaran senjata-senjatapi adalah lebih ketara dari pertimbangan ekonomi. Disebabkan oleh ekonomi terancam, penekanan lebih dibuat ke atas pencapaian tujuan politik tentera. Walau bagaimanapun kesan pada faktor-faktor ekonomi atau polisi pertukaran senjata-senjatapi Soviet Union tidak boleh diketepikan atau tiada diendahkan sama sekali, kerana adanya bukti menunjukkan strateji pengeluaran tentera dirancang 5 tahun untuk mempengaruhi penempatan senjata-senjatapi di luar negeri; Keupayaan Soviet untuk mengukur senjata-senjatapi adalah selaras dengan objektif polisi luarnya.[3] Di dalam negara *Kapitalis* keadaannya bebeda kerana sistem-sistem pengeluarannya lebih rumit dan juga ada pertaliannya di antara ekonomi, politik dan tenteranya. Pengeluar-pengeluar senjatapi berusaha untuk mengekspot lebih pengeluarannya untuk meringankan krisis ekonomi yang ujud di masa ini.[4] Namun, pertukaran senjata-senjatapi kuasa-kuasa Barat tidak hanya bergantung kepada pertimbangan ekonomi; motif politik dan tentera juga memainkan peranan yang agak penting. Faktor-faktor ekonomi menyebabkan perlunya untuk mengekspot, sementara kritria politik dan tentera dalam kebanyakan kes menentukan jenis ekspotnya.

Pembekalan senjata-senjatapi kepada negara-negara pengeluar minyak yang kaya sememangnya adalah digalakkan oleh kemahuan untuk menjamin pembekalan minyak kepada Eropah Barat dan Amerika Syarikat. Ekspot senjata-senjatapi juga memainkan peranan yang penting dalam *'pemusingan ringgit-petrol'* yang telah membolehkan negara-negara barat mengekalkan kedudukan mereka dalam sistem kewangan antarabangsa.

Satu aspek penting dalam perubahan sistem antarabangsa ialah kemunculan pusat kuasa-kuasa serantau di Dunia ke-3. Kebangkitan pusat-pusat serantau ini disebabkan oleh pengumpulan kekayaan minyak dan permulaan proses industrialisasi yang dalam kebanyakan kes melibatkan pengeluaran tentera.[5]

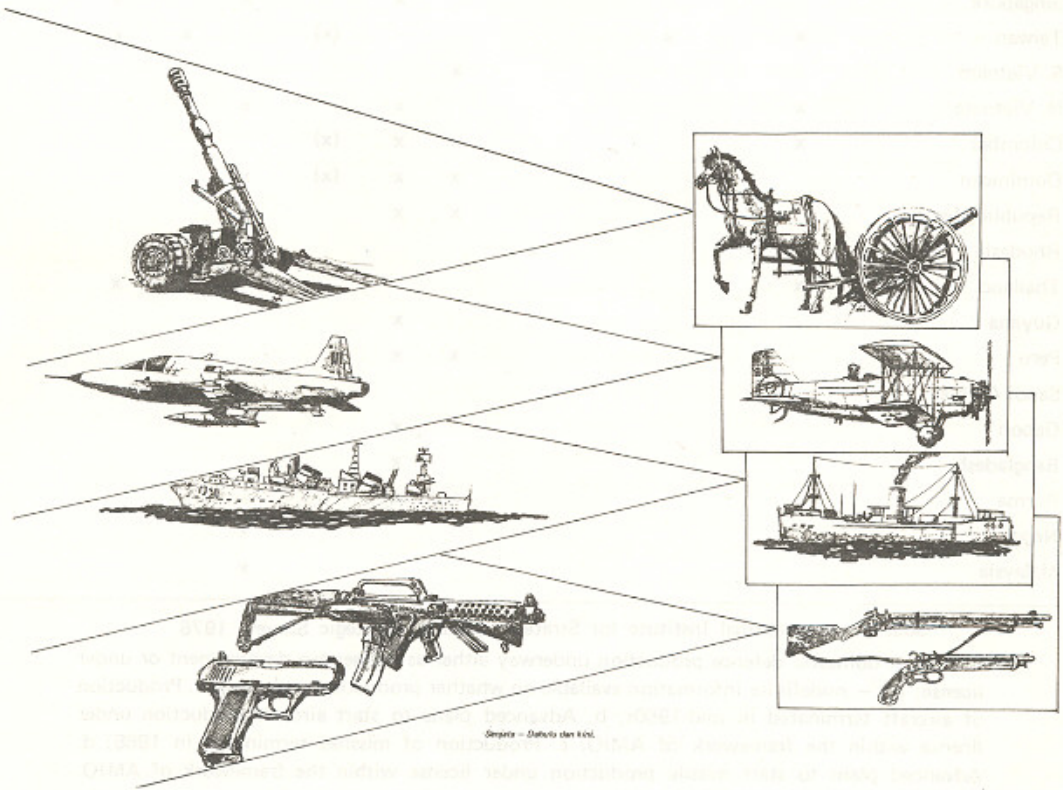
KONFLIK FORMASI – MELALUI PERTUKARAN SENJATA

Pertukaran senjata-senjatapi secara besar-besaran jarang sekali menjadi sebab utama ketidak-sefahaman serantau, kewujudannya boleh menyebabkan negeri-negeri terlibat dalam situasi sedemikian.[6] Umpamanya Perang Iraq atau Iran meletus kerana Iran mengalami perubahan politik, ekonomi, sosial dan kebudayaan. Pembekalan senjata-senjatapi lebih merumitkan lagi keadaan yang sedia ada. Biasanya ini berkait rapat, melalui kesimbangan kuasa dan perlumbaan negara-negara asing dalam sesuatu kawasan tertentu. Kesemua faktor-faktor luar bersama dengan keperluan politik dalam negeri dan keupayaan teknologi untuk menyerap sistem senjata-senjatapi moden, menentukan secara keseluruhan, bilangan, kualiti dan rentak pembekalan senjata-senjatapi kepada negara-negara Dunia ke-3.[7]

Pertukaran-pertukaran senjata-senjatapi secara tidak langsung adalah sebagai mempengaruhi keadaan tempatan ketidak-sefahaman dan menyerahkan kerjasama penerima-penerima senjata-senjatapi. Amerika Syarikat dan Soviet Union telah mencuba lebih 10 tahun untuk membantu penyokong-penyokongnya yang lama dan baru untuk menghalang pihak lawannya dari mencapai

keagungan. Perseimbangan yang sememangnya mempunyai latarbelakang politik yang rumit, telah dibuat oleh perlumbaan "Intro-Western" antara United Kingdom, Perancis, Amerika Syarikat khususnya dalam tahun-tahun 1950' an dan 1960' an.

Politik pembekal-pembekal senjatapi untuk membantu secara ketenteraan atau kuasa-kuasa tertentu dalam kawasan konflik, seperti bantuan ketenteraan Amerika Syarikat kepada Thailand, tidak semestinya mengakibatkan persimbangan setempat, kuasa ketenteraan Vietnam misalnya, melebihi semua kuasa-kuasa ASEAN.[8] Perbelanjaan-perbelanjaan ketenteraan, pertukaran-pertukaran senjata-senjatapi dan keupayaan kemajuan senjata-senjatapi nuklear umpamanya dijangka mempunyai kesan demonstrasi yang akan dimanifestasikan oleh berbagai corak penerimaan. Perlumbaan seumpama ini mudah menimbulkan ketegangan serantau dan menyebabkan kesan-kesan buruk dalam perlumbaan senjata-senjatapi. Penubuhan industri-industri senjatapi dalam negeri atau ternyata di pusat-pusat kuasa serantau seperti yang ditunjukkan di Rajah 1, yang mana ini mulai merebak ke negeri-negeri jiran yang menganggap pembekalan senjata-senjatapi sebagai satu ancaman spontan kepada keselamatan mereka.[9] India, Pakistan, Mesir dan Israel, sekurang-kurangnya sehingga 1977 menjadi contoh-contoh di mana keupayaan pengeluaran senjata-senjatapi dalam negeri telah melimpah dari satu negeri ke negeri yang lain. (Lihat muka sebelah).



DOMESTIC DEFENSE PRODUCTION IN DEVELOPING COUNTRIES 1965 AND 1975

	Aircraft		Missiles		Armoured fighting vehicles		Warships		Small arms		Electronic		Aircraft engines	
	'65	'75	'65	'75	'65	'75	'65	'75	'65	'75	'65	'75	'65	'75
India	x	x		x	x	x	x	x	x	x	x	x	x	x
Israel	x	x		x		x		x	x	x	x	x		x
S. Africa	x	x		x		x		x	x	x		x	x	x
Brazil	x	x		x		x	x	x	x	x			x	x
Argentina	x	x					x	x	x	x			x	x
Pakistan		x	x	x				x	x	x		x		
Chile		x					x	x	x	x				
Egypt	x[a]	x[b]	x[c]	x[d]					(x)	x				
Iran		x								x		x		
Indonesia	x	x						x	x	x				
N. Korea		x						x		x				
S. Korea		x						x		x				
Philippines		x						x		x				
Singapore								x		x		x		
Taiwan		x		x					(x)		x	x		
S. Vietnam							x							
N. Vietnam		x						x		x				
Colombia		x					x	x	(x)					
Dominican							x	x	(x)	x				
Republic Mexico							x	x		x				
Rhodesia						x				x				
Thailand		x										x		
Guyana								x						
Peru							x	x						
Saudi Arabia										x				
Gabon								x						
Bangladesh								x						
Burma							x	x						
Nepal										x				
Malaysia										x				

Source: International Institute for Strategic Studies, Strategic Survey, 1976

x – domestic defence production underway either as indigenous development or under license; (x) – nodefinite information available on whether production underway; a. Production of aircraft terminated in mid-1960s; b. Advanced plans to start aircraft production under license within the framework of AMIO; c. Production of missiles terminated in 1965; d. Advanced plans to start missile production under license within the framework of AMIO.

Rajah 1

Sistem senjata yang maju biasanya diikuti oleh ketidak-seimbangan kerana negara-negara yang mempunyai keupayaan lebih dan teknologi 'sofistikated' adalah yang pertama sekali untuk mengemukakannya. Oleh itu pembekal-pembekal senjata-senjatapi yang utama dibeban memikul tanggungjawab untuk tujuan ini kerana senjata-senjataapi ini selalunya lebih banyak diimpot dari dibuat di dalam negeri. Masalah yang unik dan lebih intensif disebabkan oleh keadaan rumit konflik serantau dan pembekalan senjata-senjatapi. Bukan sahaja pembekal-pembekal utama senjata-senjatapi menghantar senjata-senjatapi kepada negara-negara yang bertentangan (musuh), tetapi mungkin ada perlumbaan hangat yang sama di pihak penerima. Corak pembekalan senjata-senjatapi ke negara negara Timur Tengah adalah contoh-contoh bagi kategori ini.

Persepakatan industri-industri dan usaha-usaha untuk mengekalkan teknologi ketenteraan telah menyebabkan kesulitan untuk diselesaikan; lebih-lebih lagi kemajuan seperti ini adalah bertujuan untuk satu-satu sistem politik yang tertentu sahaja. Pengekalan sistem ini dan jaminan kemajuan nuklear seterusnya yang mana teknologinya telah diambil di luar negeri telah membawa beberapa pengaruh di sekitar Dunia ke 3. Tumpuan kuasa tentera telah menguatkan lagi stratifikasi dalam Dunia ke 3.

PERTUKARAN SENJATA-SENJATAPI DAN PERTIMBANGAN-PERTIMBANGAN STRATEJI

Sejak kebelakangan ini tidaklah dapat dinafikan bahawa pertukaran senjata-senjatapi adalah tinggi sekali dan sejauh mana kerapnya pengeluaran senjata-senjatapi membawa kepada perlumbaan senjatapi sedunia dan kemelesetan serta keselamatan dunia amnya adalah sukar dinilai. Satu jenis panduan senjata-senjatapi adalah perlu untuk mengekalkan keselamatan serantau dan untuk mengadakan persimbangan tempatan.

Di Utara Afrika perlumbaan senjata-senjatapi yang merbahaya sedang bekembang. Ditambah pula oleh konflik tempatan yang berlaku daripada tuntutan jajahan kuasa-kuasa besar menampakan hubungan mereka dengan kerajaan Republik Somali dan yang lainnya dengan Habsyah sementara United Kingdom memainkan peranan yang kecil di Kenya. Pembekalan senjata-senjatapi telah menampakkan minat umum dan mungkin tanggapan tanggungjawab untuk mengekalkan keselamatan di kawasan itu. Hari ini, Soviet Union telah pun berpengkalan di Afghanistan, manakala Amerika Syarikat pula membekalkan bantuan ketenteraan yang serupa ke Pakistan. Dalam pada itu Amerika juga mengukukuhkan lagi kedudukannya di Timur melalui penjualan dan kemudahan-kemudahan senjata-senjatapi yang sofistikated.

Motif-motif penukaran senjata-senjatapi adalah pelbagai. Ini boleh diklasifikasikan semata-mata untuk tujuan perdagangan. Yang lainnya adalah untuk tujuan keselamatan atau pengaruh politik negara-negara pengeluar. Penerima-penerima senjatapi menganggapnya sebagai alat untuk pengelakan kebebasan seperti di Afrika Selatan. Pembelian senjata-senjatapi oleh Pakistan dari Amerika Syarikat untuk menentang India, adalah bukan tujuan Amerika dan di Indonesia, senjata-senjatapi Rusia pada akhirnya telah digunakan untuk menentang komunis — *Parti Komunis Indonesia (PKI).*

Pertukaran senjata-senjatapi yang meningkat ke Dunia Ke 3 adalah satu fenomina antarabangsa sebagai satu strategi negara-negara perindustrian yang maju untuk memasarkan barang-barang mereka tidak kira sama ada ia mengakibatkan ketidak — seimbangan dan keselamatan kawasan yang berkenaan. Tetapi kuasa utama disebalik pakatan ini adalah semata-mata untuk tujuan politik dan strateji sebagai sebahagian daripada perancangan untuk meluaskan lagi pengaruh seterusnya seraya mengekalkan tahap politik dan ekonomi yang diperlukan.

Konflik, walaubagaimana pun tidaklah boleh diasaskan sepenuhnya ke atas penerimaan senjata-senjatapi. Politik penggunaan senjata-senjatapi di masa-masa konflik dan keupayaan untuk menggunakan senjata-senjatapi di dalam mentadbirkan sesuatu tujuan politik adalah menjadi faktor penentuan di dalam banyak perkara.

FAHAMAN STRATEJI AMERIKA SYARIKAT

Keselamatan antarabangsa tidaklah begitu merumitkan dan merbahaya kerana perlumbaan senjata adalah hanya terbatas kepada senjata-senajatapi konvensional dan permainan politik kuasa-kuasa di kawasan-kawasan tertentu di seluruh dunia. Apa yang boleh dikatakan tentang masalah kesetabilan keselamatan, kedamaian dan keharmonian dunia di masa hadapan adalah cara dan jenis strateji yang telah di idamkan dan dipraktikkan oleh Amerika Syarikat untuk sesuatu perang nuklear.

Nampaknya setelah 35 tahun senjata nuklear tidak digunakan telah membawa kepada perhatian dan minat awam yang membahayakan kedua-dua pemusnah yang berpotensi iaitu Amerika Syarikat dan Soviet Union, perdebatan ini telah lari jauh daripada isu-isu moral dan awam. Pendekatan strateji ketenteraan yang lemah dan rasionalistik telah berkembang bukan hanya tidak ditentang tetapi hampir tidak diketahui. Sebagai contoh General Sir John Hackett's 'The Third World War'[10] satu kertas kerja untuk menyusun semula dan menguatkan NATO, telah menggambarkan satu pemandangan yang berakhir dengan serangan nuklear di Birmingham, England yang di ikuti oleh satu serangan balas di Minsk. Ini diikuti pula oleh kekacauan di Soviet Union, pemberontakan dan kejatuhan regim Komunis di Eropah. Pengajaran yang dapat diambil daripada penulisan Sir John Hackett's ialah perlunya *pembekalan semula senjata* secara besar-besaran di NATO dan Jerman. Penyatuan bantuan serta penyelaksanaan daripada serangan mengejut kuasa nuklear Amerika Syarikat adalah satu tindakan politik yang serius yang mungkin membawa kepada kemusnahan ibukota-ibukota utama kuasa-kuasa besar itu.

Sekarang telah ada satu strateji baru pembatasan dan tindakbalas nuklear, mogok, senjata-senjatapi, pilihan-pilihan yang boleh diubahsuai, serangan yang menindas dan keupayan untuk tindakbalas.[11] Kesemua ungkapan ini menindakkan satu keadaan senjata nuklear dan mengkaburkan garis antara pengunaannya dengan yang konvensional.

DOKTRIN 'MAD'

Sejak 15 tahun yang lepas, strateji pengawalan senjata Amerika Syarikat adalah berdasarkan kepada pengekalan doktrin "Mutual Assured Destruction" (MAD) diasaskan oleh Encik Robert Mc Namara dan didirikan oleh Donald Brennan sebagai "Kegilaan Nuklear". Di dalam doktrin ini, pengunaan senjata-senjata nuklear tidak dapat dielakkan membawa kepada pemusnahan ibukota yang terkemuka. Kesetabilan MAD adalah satu unsur yang kuat di atas progrem besar-besaran pertahanan.[12] awam Amerika Syarikat dan "anti-ballistic missiles" (ABM) dan juga melaksanakan "Perjanjian Penyekatan Senjata Strageji" (SALT)[13]. Tetapi sekarang, SALT II sedang dikecam hebat dan ianya tidak akan diubahsuai oleh Kongres Amerika, progrem-progrem MX mengecam untuk menyemarakkan pergerakan dan tindakan-tindakan Soviet Union yang boleh mengakibatkan konsep pengiktirafan yang utama itu, tidak bermakna langsung. Kerajaan Amerika Syarikat sedang membangunkan suatu jenerasi sistem pengantaraan taktik nuklear yang baru, dalam perjanjian ABM sendiri besar kemungkinan akan di tentang di dalam pembaharuan 1982.

TIORI-TIORI DISEBALIK KUASA NUKLEAR

Apakah matalamat kuasa nuklear bagaimanakah caranya kuasa-kuasa itu disalurkan? Bagimana ianya patut digunakan? Inilah soalan-soalan yang timbul semasa pentadbiran Eisenhower. Tiori penghindaran telah dicipta. Diplomasi seharusnya menjadi penghalang utama daripada terjadinya peperangan nuklear. 'Brickmanship' telah dicipta agar ancaman nuklear dapat dibanggakan. Jawapan kepada soalan kedua telah diberikan oleh Albert Wohlstetter. Kuasa-kuasa strateji pada masa ini, pengeboman jarak jauh, akan berpengkalan di Amerika Syarikat, dimana mereka sepatutnya selamat daripada serangan-serangan awal. Ini selanjutnya membawa kepada tiori strateji tidak mudah musnah, dan kemajuan peluru-peluru berpandu jarak jauh pengkalan laut dan darat, untuk membantu kuasa-kuasa pengebom. Untuk soalan ketiga, ianya adalah MAD yang telah timbul akibat daripada krisis peluru berpandu Cuba[14]. Kedua-dua adalah strateji tidak mudah musnah; Washington dan Moscow melalui peluru berpandu antara bangsa (ICBM) semasa sedang bersedia menentang peperangan terhad dengan cara-cara terbuka yang tidak akan membawa kepada kemudaratan penggunaan kuasa nuklear. Ini adalah tiori tetapi pratiknya ia adalah sebaliknya.

Doktrin MAD membawa kepada tidak adanya ancaman mahupun *ketidakgunaan* kuasa-kuasa nuklear strategi, lantaran membangkitkan suatu perjanjian sementara yang efektif,[15] tetapi perkara baru yang membahayakan, di mana kuasa-kuasa nuklear ini akan bertumpu secara senyap dan fizikal, di kaki lima *Kermlin* dan *Pentagon,* yakni kuasa besar akan mempercayai bahawa adanya strateji-strateji rasional bagi menggunakan senjata-senjata nuklear ini yang boleh diterima secara moral dan politik. Membenarkan penggunaan senjata nuklear adalah pemusnahan oleh peperangan akan kawasan-kawasan di mana penyebarannya kuat dan ini adalah suatu tindakan yang bodoh atau lebih dahsyat dari kegilaan.

STRATEJI PEPERANGAN NUKLEAR NEGARA SOVIET

Untuk sekian lamanya, 'Peperangan Dendam' meningkat, persengkataan antara 2 kuasa besar dan penyokong-penyokongnya, di sebelah barat digerakkan oleh keperluan untuk pertahanan 'Dunia Bebas' yang bertentangan dengan pakatan Komunis untuk pemberontakan dunia. Di sebelah timur motifnya adalah untuk menentang monopoli kapitalisma, penjajah dan imperialisma.

Perlumbaan senjatapi telah di ikuti oleh kedua belah pihak dengan tanggapan bahawa risiko kejatuhan ketenteraan di antara kedua-dua sistem itu akan sekurang-kurangnya berlarutan daripada kesan-kesan ideoloji-ideoloji yang lalu. Pihak Soviet memandang peperangan sedemikian bukanlah satu kejadian yang boleh dimaafkan dan sekiranya ia benar-benar berlaku, ia adalah peperangan campuran iaitu pertentangan antara sistem sosial yang berlainan – Komunisma Soviet dan *Kapitalisma* negara-negara barat. Adalah dianggapkan peperangan yang sedemikian akan diikuti oleh sesuatu penentuan matlamat yang akan dan seterusnya menjadi persengketaan nuklear. Seterusnya peperangan ini tidaklah digambarkan semata-mata hanya sebagai serangan nuklear. Objektif dan tujuan telah disusun rapi dan setiap operasi kuasa tentera, bukan hanya kuasa nuklear telah dikordinasikan untuk mencapai objektif tersebut. Selain daripada itu peperangan ini melibatkan pertentangan ekonomi, diplomatik, subversif dan ideoloji. *"Dalam lain perkataan, peperangan adalah semata-mata satu lanjutan politik"*[16]. Ini adalah tesis utama ideologi dan pemikiran ketenteraan Soviet[17]. Peperangan nuklear mahupun ianya peperangan nuklear sedunia, bukanlah suatu pengecualian. Walaubagaimana pun peperangan adalah satu

lanjutan politik. Falsafah ketenteraan Soviet yang setanding dengan polisi keselamatan kebangsaan Amerika Syarikat menggambarkan latarbelakang mereka. Peperangan sepatutnya dimenangi oleh politik, pertimbangan dan penilian strateji ketenteraan. Pertentangan peperanganan dan senjata diperolehi bukan melalui falsafah tetapi strateji.

Selanjutnya persediaan peperangan adalah misi utama strateji Soviet. 'Kerajaan Soviet Union dan Angkatan-angkatan Bersenjata mereka mestilah sentiasa bersiap sedia khususnya untuk menghadapi peperangan dunia. Angkatan bersenjata Soviet negara-negara, Sosialis yang lain mestilah bersedia untuk berperang dalam keadaan-keadaan penggunaan senjata-senjata nuklear oleh kedua-dua belah pihak ..... persediaan dan penentangan peperangan sedemikian mestilah dianggap sebagai satu tanggung-jawab yang utama daripada tiori strateji ketenteraan dan kepimpinan.'[18]

KONFLIK MENYELURUH

Peperangan nuklear dunia telah didefinasikan oleh Soviet dengan lebih terperinci daripada strateji pertukaran nuklear sepertimana yang digambarkan oleh Amerika Syarikat. Ini menampakkan satu konflik yang menyeluruh antara Komunisma dan Kapitalisma yang akan mengakibatkan keseluruhan kawasan negara-negara besar. Selanjutnya pengasingan yang digambarkan oleh Amerika Syarikat di antara strateji dan taktik antara benuanya tidak langsung dapat diterima oleh pemikiran Soviet. Strateji adalah satu kategori yang bersangkut paut dengan tujuan lebih daripada penempatan strateji objektif yang boleh dicapai diatas suatu medan soviet dalam erti kata penggunaan bahasa. Telah diiktiraf bahawa peperangan nuklear dunia akan mengakibatkan satu kemusnahan yang tidak berkesudahan dan selanjutnya akan menwujudkan satu bahaya yang amat sangat. Disebabkan oleh bahaya inilah Soviet lebih mementingkan kedua-dua keperluan untuk persiapannya. Lantaran itu peperangan nuklear bolehlah dikatakan sebagai mempunyai 5 aspek keperluan untuk mengelakan, dan kemungkinan ianya ditentang. Menghalang sebagaimana yang digunakan oleh Soviet untuk membincangkan strateji mereka yang mana ianya adalah suatu tindakan yang kuat dan agresif, suara yang diorientasi dan selalunya digunakan di dalam usaha untuk menghalang dengan membunuh inisiatif dan pengosongan demi untuk mengucarkacirkan serangan musuh. Untuk mengelakkan serangan yang mengejut, adalah dengan memusnahkan senjata nuklear musuh sebelum ianya sempat dilancarkan. Dalam strateji Soviet, menghalang, menyediakan dan mengosongkan adalah konsep yang berkait rapat. Soviet memandang berat peperangan nuklear dan ini adalah diasaskan di atas pendapat pakar-pakar[19]. Pendekata anggapan mereka terhadap peperangan nuklear adalah serangan dan kemenangan.

KONFLIK ANTARABANGSA DAN PERLUMBAAN SENJATAPI

Kemungkinan peperangan nuklear sedang meningkat jikalau kesan-kesan perkembangan teknoloji ketenteraan dan perkembangan pesat teknoloji ini dipertimbangkan, kesimpulan ini tidak dapat dinafikan lagi. Sekiranya ini digunakan untuk objektif politik dan strateji yang tertentu. Tidak pernah sebelum ini manusia menuju kepada kemusnahan. Perlumbaan senjata hari ini adalah satu kerugian yang tidak selari antara kemanusiaan dan kebendaan, ia mengancam untuk menjadikan seluruh dunia ini kem tentera, ini akan menolong kepada kemusnahan dan mencerobohi hak asasi manusia, dan mengakibatkan keganasan serta situasi yang tidak selamat, juga akan menghampakan aspirasi kemanusiaan untuk keadilan dan kemakmuran yang mana ini tidak langsung dikehendaki oleh Tuhan yang menjadikan dunianya[20]. Keadaan yang ada sekarang ini dalam konteks keselamatan antarabangsa yang melibatkan negara *Timur* dan *Barat*

boleh dipusatkan di atas kefahaman dan penerimaan tentang sebab-sebab dan keadaan-keadaan konflik dan peperangan antarabangsa. Faktor-faktor tertentu yang berkait rapat dengan prinsip-prinsip keamanan dan masalahnya adalah kian 'bercangah'. Prinsip-prinsip ini saling berkait antara kefahaman, alasan, pengalaman, falasafah, tiori analisa dan sains menyeluruh[21].

'Perjuangan Ideologi adalah sektor yang penting dalam klasfikasi perjuangan. Ini telah ditekankan di dalam perintah CPSU Jawatankuasa pusat bahawa dalam perjuangan ideoloji ini ..... tidak dapat satu pun persefahaman. Soviet Union dan negara-negara demokrasi rakyat, dalam usaha untuk mempertahankan kejayaan sosoalisnya terpaksa mengambil satu tujuan yang cenderung kepada kekalahan secara total pihak musuh, dengan tiadanya perancangan terus menerus, zon dalam dan menuju kepada penekanan musuh dari memberi bantuan kepada rakyat untuk menentang imperilisma[22]. Disebabkan oleh pencanggahan ideoloji ini kuasa-kuasa besar mengambil satu langkah, dalam hal ini perlumbaan senjata nuklear, untuk mengukuhkan kedudukan mereka. Dalam hal ini pernah diplomasi yang berkesan dan hubungan antarabangsa di dalam semua bidang dan aktiviti kemanusiaan, kesannya membawa kepada keselamatan antarabangsa dan keamanan dunia walaupun peperangan nuklear tidak dapat ditentu dan dielakkan.

Satu kajian lanjut telah pun dibuat oleh siswa-siswa Kajian Antarabangsa[23], bahawa perlumbaan senjata adalah berasaskan kepada stimulasi kesefahaman dan persendirian, 'Dari pada pandangan kebajikan dunia amnya perlumbaan senjata membawa kepada proses yang tidak sampai ketahap pencapaian yang telah ditentukan, kemudahan pertahanan yang berlebihan tidak akan pada amnya memberikan lebih keselamatan atau dalam banyak perkara, taraf keselamatan yang sama juga boleh dicapai melalui kos ekonomi atau sosial yang lebih rendah'. Inisiatif sebarang adalah untuk mencapai pendekatan-pendekatan menjadikan situasi itu berlainan daripada keadaan sekeliling dan sebab-sebab melanjutnya membicarakan *'Satu Sistem Pendekatan'.*

* Satu cara menilai.
* Satu cara pemikiran mengenai masalah dunia yang sebenar.
* Satu cara untuk mengubah pendekatan kepada penyelesaian masalah dunia yang sebenar.

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Leftenan Kolonel Hj Abu Zahrin seorang bekas putra Maktab Tentera Diraja, telah ditauliahkan sebagai Leftenan Muda di dalam Rejimen Askar Melayu Diraja pada 6 Disember 1964. Pernah memegang beberapa jawatan penting di yunit-yunit dan di Kementerian Pertahanan. Jawatan akhir beliau ialah selaku Pegawai Memerintah 27 RAMD. Leftenan Kolonel Hj Abu Zahrin jua telah menghadiri kursus Staff di Maktab Turus Angkatan Tentera 'Haigate' pada Tahun 1977 dan berkelulusan Diploma Politik serta Ijazah Sarjana di dalam Sistem Pengurusan, Universiti Lancaster, England.

ARTICLE 51

THE LAW IN RELATION TO THE USE OF FORCE IN INTERSTATE RELATIONS

Leftenan Kolonel K.R. Panikkar[1]

The right to use *force* in *self-defence* has been a traditional right enjoyed by States. With the coming into force of the UN Charter, which proscribes the use of force as an instrument of policy, the right of self-defence has taken on added significance because it is, currently, almost the only right open to States which they can legally invoke for the resort to force. The concept of self-defence and its operation are, however, clouded in controversy. This article attempts to bring to the reader the differing views on the subject and suggests the interpretation which is appropriate for a law-abiding and peace-loving State like Malaysia.

PROLOGUE

Military men have traditionally had a rather sceptical or even scornful view of the role of law in inter-state relations and in the conduct of war. The great Clausewitz, for instance, wrote, 'Attached to force are certain self-imposed, imperceptible limitations hardly worth mentioning, known as international law and custom, but they scarcely weaken it'.[2] Giulio Douhet, the air power theorist, held the view that international law was nothing but international hypocrisy. This tradition tends to dismiss issues of law by saying simply that 'law does not enter into the utilisation of power'.

In reality, however, law has frequently been a significant determinant of State decisions in modern times. Even in the 15th century we find that Henry V's decision to go to war with France was largely influenced by the legality of his claims to the throne of France.[3] Turning to a recent case, President Kennedy sought advice from many quarters in handling the Cuban missile crisis. In the end it was the lawyer's advice which appeared to influence his decision.[4] Malaysia's (and ASEAN's) opposition to Vietnam's invasion and occupation of Kampuchea is based on the premise that Vietnam's action is a gross violation of international law.[5] Far from being something to be scoffed at, many aspects of international law, particularly those concerned with armed conflicts and the use of force, fall within the spectrum of knowledge relevant to the military profession.

One of the most important of these aspects is the concept of SELF-DEFENCE. It would appear that familiarity with and understanding of this concept and its operation has become essential knowledge for military leaders (and other concerned with State policy and defence) especially since the coming into force of the United Nations (UN) Charter on 24 October 1945. The UN Charter represents a very important milestone in the evolution of international law in that it has proscribed war: under Art. 2, para. 4, its signatories have pledged themselves to

> refrain in their international relations from the threat or use of force against the territorial integrity of any State.[6]

The traditional right of States to resort to the *use of force as an instrument of policy* was eroded by the Covenant of the League of Nations (1919) and the Briand-Kellogg Pact (1928); it ceased to have all legal and moral standing by October 1945. Currently there is almost only one situation in which a State may *legally* resort to the use of force : in self-defence. This right is enshrined in Art. 51 of the UN Charter:

> Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a member of the United Nations, ...

Several difficulties are encountered in attempting an interpretation of the right of self-defence and its operation. For one thing, there have been many instances of naked, unabashed aggression and aggrandisement being labelled as exercises in self-defence by their perpetrators. For another, the words 'inherent' and 'armed attack' are capable of being interpreted very differently depending upon the prejudice or impartiality of the expositor.

WEBSTER'S DEFINITION: THE CAROLINE PRINCIPLE

Self-defence is not a new right invented by the UN Charter. Indeed, it has been one of the fundamental rights of individuals and States alike from the time legal notions came into being. Past parctice is highly relevant in law. It is even more so in the present context because the UN Charter refers to the inherency of the right. It is therefore necessary to go a little into the past to form a

clearer notion of the circumstances in which the right may be invoked. The locus classicus on the concept of self-defence is Daniel Webster's 1838 prescription given in connection with the Caroline and McCleod cases (usually known as the Caroline principle).[7] According to this formula, for the right to be exercised, there must be

> A necessity instant, overwhelming, leaving no choice of means and no moment for deliberation;

and 'nothing excessive or unreasonable must be done' in the exercise of the right.

The crucial words in the formula are, 'necessity, instant and overwhelming' and 'nothing excessive or unreasonable must be done'. It is the imminence of the danger which entitles the victim to use force in self-defence. The right to use force ceases when the danger passes. For the response to be 'self-defence', it must match the attack in respect of time. Forcible action taken some time after the attack is over, is not self-defence, but 'reprisal' (which is prohibited under Article 2 (4) of the UN Charter).[8] The force employed in self-defence must be proportional to the threat; it must not exceed what is necessary and sufficient to ward off the attack. In short, the right of self-defence (as defined by Webster) permits the use of proportionate force to meet an imminent danger, to be employed only while the danger persists.

Thus the Caroline principle, which was the basis of customary international law, presupposed an attack for the right of self-defence to be brought into play. And yet Japan chose to call her unprovoked depredations in China in the 1930's as exercises in self-defence. In the Second World War Japan claimed that American economic sanctions against her were so crippling that she had no choice but to attack the US and her allies in self-defence.[9]

ANTICIPATORY SELF-DEFENCE

In customary international law, self-defence was generally understood to include the right of anticipatory action. That is, a State could resort to the exercise of self-defence even before the actual occurrence of an attack, provided the 'intention' to attack was evident. This interpretation was justified on the ground that criminal law permitted taking defensive action against an 'attempted crime', so international law could do no less but permit the exercise of self-defence in response to 'intention'.

State behaviour too conformed to the interpretation that anticipatory self-defence was permitted in the period before 1945. In 1873 a Spanish warship seized the Virginius, a ship flying the US flag, on the high seas on the presumption that it (the Virginius) was carrying men and munitions destined for Cuban rebels.[10] British nationals were among those who were summarily executed by the Spanish authorities, but Britain did not protest the seizure (on the high seas) as such and thereby appeared to concede Spain's right of anticipatory action in self-defence.[11]

Customary law also permitted anticipatory action in self-defence against imminent breaches of neutrality. For instance, if it appeared to State A that State B was about to violate a neutral State C and State A felt that State B's intended action would endanger its security, then State A was justified in taking anticipatory action — such as occupying State C and thwarting B's intention. The Nuremberg War Crimes Tribunal appeared to accept the validity of anticipatory self-defence in cases of actual or imminent breaches of neutrality and referred to the Caroline principle.[12]

SELF-DEFENCE AND UN CHARTER

Now, with the coming into force of the UN Charter, many jurists argue that the law in

respect of self-defence has changed. They point out that Article 51 restricts UN Member States in their right of self-defence to cases of 'armed attack' only. Brownlie, for instance, says that for the use of force to be justified, 'There must be an actual resort to force: anticipatory self-defence is unlawful'.[13] In denying legality to the exercise of anticipatory self-defence, he points out that 'armed attack' is not the same as 'intention to attack'. Estimates of intentions are frequently unreliable and subjective and, consequently, in the majority of cases, any anticipatory action taken may turn out to be in conflict with the *principle of proportionality* which is innate in the notion of self-defence.

Moreover, if 'armed attack' is taken to include hostile intent, then preventive war could find a legal excuse. He points out that preparations for attack by a putative aggressor can be countered with preparations to resist. Self-defence comes in only when 'force' has actually been employed.

However, another school of jurists argues that Article 51 does not deprive Member States of the right of anticipatory self-defence. They point out that the said Article refers to the right as an 'inherent' right. What is inherent is inalienable, incapable of being surrendered or deprived of. Since customary law allowed the exercise of the right not only in the face of actual attack but also against 'threatened' aggression when the danger seemed imminent, the 'inherency' of the right recognised by the Charter must mean the continuation of the previously enjoyed right (i.e. anticipatory self-defence).[14]

These differing interpretations make it impossible to arrive at a clear-cut definition of the right of 'self-defence'. Those who support the view that anticipatory self-defence is still permitted, point out that Israel's 1967 pre-emptive strike on Egypt was an exercise of the right of anticipatory self-defence. It is argued that President Nasser showed his 'intention' to attack when he ordered the UN Peacekeeping Force out of the Gaza Strip and followed it up with closing the Straits of Tiran to Israeli shipping. On the other hand, those who deny the right of anticipatory self-defence point out that Israel itself did not claim that its pre-emptive strike was taken in self-defence.

Even the explanation of the concept 'armed attack' is clouded in controversy. An armed attack is generally understood to imply an attack by organized military, naval, or air forces of a State. But the notion has a wider significance. Attacks by 'militia', 'security forces', 'police forces', 'armed bands', or 'volunteers' may also constitute 'armed attack'. On the other hand, internal disorders and revolutions are not considered 'armed attack'.[15] The use of bacteriological, biological and chemical weapons would however justify forcible action in self-defence.[16] So would a naval blockade.[17]

SPECIFIC CASES

The limits of the right of self-defence can be better understood by considering the specific conditions in which forcible measures of self-defence would be justified.

Britain's recent use of force to repossess the Falklands and its dependencies was undoubtedly a clear case of the exercise of the right of self-defence. These territories had been in continuous British possession[18] since 1833 and the inhabitants had freely expressed their wish to remain British. Under the circumstances the Argentine invasion of the islands was such a flagrant breach of international law that even the Soviet Union desisted from vetoing the resolution demanding the withdrawal of Argentine forces from the island. On the other hand, Israel's claiming to act in self-defence when it attacked the Iraqui nuclear power station and,

later, when it invaded Lebanon and besieged Beirut was, in the opinion of the present writer, a blatant misuse of the concept.

A State's territory and territorial waters with their superjacent airspace are sacrosanct. If these are violated, forcible measures of self-defence would be justified. Ship, aircraft and other agencies such as orbiting satellites of a State also enjoy the right of self-defence. If these are attacked on or over the high seas, in outer space or within a res nullius, the exercise of the right of self-defence would be in order.[19] Forcible measures are NOT justified as long as the activities of the offending State do not violate one's territorial integrity, its air space and territorial waters.

The political independence and territorial integrity of a State may be jeopardised by subversive activities or economic pressures initiated and sustained by another State. Yet, to invoke the right of self-defence and use force to neutralise such indirect aggression would not be justified in law. In Brownlie's view, indirect aggression does not constitute 'armed attack'.[20] To hold a State responsible for alleged aggression, *there must be positive proof of actual control of the subversive elements by that State.*

But if a revolution is aided and abetted by an outside power and there is irrefutable evidence of such aid as well as proof of external control of the rebels, the action of the external power may be considered a case of 'armed attack'. In Vietnam there was incontrovertible evidence of North Vietnamese aid and control of the Vietcong rebels in the South. The bombing of North Vietnam by the US could therefore be considered a case of the legitimate exercise of the right of self-defence, the US being an ally of the South Vietnamese government.

The right of self-defence allows a State the use of force to terminate acts of trespass such as sporadic incursions by armed bands by land or sea. The defensive measures taken in such cases should be confined to the territory, territorial waters and superjacent air space of the defending State. Intruding ships and aircraft are to be ordered to leave on an approved course. Only if such orders are ignored may force proportionate to the risk represented by the ship or aircraft be used. Violent measures may, however, be taken in some cases such as deliberate and deep penetration of airspaces by aircraft.[21] The shooting down of a U-2 aircraft over the Soviet Union in 1962 was a legitimate act of self-defence. On the other hand the shooting down of two Libyan aircraft by US carrier-based aircraft close to the Libyan coast in 1981 was, probably, calculated to intimidate Colonel Gadafy.

A trespassing ship in territorial waters may also be dealt with violently if it is engaged in attack or carrying aid to rebels. But the right of self-defence does not extend to the high seas in time of peace. Whatever legality which existed for seizure on the high seas lapsed when the 1958 UN Conference on the Law of the Sea denied the right of such seizure except on suspicion of piracy, engaging in slave trade or flying a foreign flag.[22] Seizures may however be made on the high seas under the right of 'hot pursuit', but the pursuit must have begun in the territorial waters.[23]

Foreign forces on State territory without consent and which resist attempts to move may be forcibly dealt with. However, forcible measures to protect the lives and, or, property of nationals on foreign territory is a dubious form of self-defence. The Israeli raid on Entebbe airport to rescue the hostages is better justified in customary law than as an exercise of self-defence.[24]

Imminent or actual breaches of neutrality of a State may compel another State to take forcible measures to remove the effects of such breaches. On this ground, President

Nixon's ordering a large-scale incursion into Cambodia in 1972 to try to neutralise the effects of Vietcong violations of the neutrality of Cambodia was justified in law.

A use of force only remotely connected with self-defence is intervention by one State in the affairs of another State on humanitarian grounds. Lauterpacht states that intervention is legally permissible 'when a State renders itself guilty of cruelties against and persecution of its nationals in such a way as to deny their fundamental human rights and to shock the conscience of mankind'.[25] Waltzer justifies India's intervention in East Pakistan in 1971 on this ground.[26] The 1979 Tanzanian intervention in Uganda which toppled Idi Amin furnishes another example. The use of force on 'humanitarian grounds' is not expressly condemned by the Charter, but it is inappropriate to claim it as an exercise in self-defence. It would be justified if taken under the authority of Article 39[27] of the Charter, not under Article 51.

Necessity to use force in self-defence may arise in some cases of natural catastrophe. If Ethiopia were to divert or dam up the upper reaches of the Nile to cause the river to dry up downstream in Sudan and Egypt to an extent that widespread famine occurred in these latter States, they (Sudan and Egypt) would be justified in treating Ethiopia's action as 'aggression' and resorting to forcible measures of self-defence in Ethiopia. Similar problems could arise between India, Pakistan and Bangladesh.

EXERCISE OF SELF-DEFENCE AT SEA

The operation of international law is more directly applicable to the exercise of sea power than to air or land forces because navies operate in the international environment of the sea. O'Connell, who treats 'self-defence' in relation to navies at some length,[28] points out that the law has changed since 1945 (with the coming into force of the UN Charter) and argues, on the basis of Articles 2(4) and 51, that self-defence operations can no longer enjoy the privileges allowed under classical international law. The thrust of his argument is that the UN Charter does not permit anticipatory action in self-defence.

In naval parlance, 'hostile act' is used instead of 'armed attack' and 'hostile act' is distinguished from 'hostile intent'. O'Connell considers that determination of 'hostile intent' is subject to many types and degrees of error and may therefore be faulty and unreliable. He advises that one must wait for the discharge of a weapon by the adversary before taking action in self-defence.

But other jurists disagree with O'Connell. They argue that with the advent of long-range supersonic missiles, it has become exceedingly difficult to distinguish between 'hostile intent' and 'hostile act'. This lesson has been brought home by the sinking in October 1967 of the Israeli destroyer Eilat by Styx missiles fired from an Egyptian patrol boat. Under the present state of technology, the pointing of guns and the locking of fire-control radar may constitute 'hostile act'. So use of force at this point would be justified. Considering that the initial blow may turn out to be fatal (as happened to the Eilat), if one were to wait for the discharge of a weapon by the adversary, one might not be around to exercise self-defence. So, argues the second school, for the right to be meaningful, it must still include the option to take anticipatory action.

The problem that may arise in resorting to anticipatory self-defence is that it may start a war which was not otherwise intended by the adversary because the reading of his intention was wrong. So perhaps O'Connell's advice, that the discharge of a weapon must have occurred before taking forcible measures of self-defence, is the one to be adopted for a peace-loving state like Malaysia.

Let us see how the principle of self-defence will apply by considering the hypothetical case of an unexplained force of warships or aircraft approaching Malaysia via the high seas or the superjacent air space. Much will depend on the political tensions existing at the time as well as the size, composition and belligerent character of the approaching force. In peace-time, warships of other nations (including those of potential enemies) may enter and pass through our territorial waters provided they give 'notification of passage'.[29] But there is no right of overflight in the territorial sea. Submarines are required to remain on the surface while transiting territorial seas. As the situation here is described as 'unexplained', obviously there has been no notification of passage. If it also happens in a time of tension, it would be of paramount importance to ascertain the 'intention' of the approaching force as early as possible. If the approach of the force occurs after hostilities have broken out between Malaysia and the State to which the intruding force belongs, it would be engaged on or above the high seas. There is no question of waiting until the territorial sea or its superjacent air space is violated.

If, however, the first shot has not yet been fired, it is a question of inducing the approaching force to reveal its intention before it nears the territorial sea or the air space above. Perhaps this could be done by sending out aircraft to reconnoiter and probe its intentions. If these aircraft draw fire, then 'hostile intent' is revealed. The force could then be engaged on the high seas or in its superjacent air space.

CONCLUSION

In conclusion, it remains to be emphasized that it is always prudent to let the putative aggressor fire the first shot. Necessity and proportionality are the innate essence of the right of self-defence. Anticipatory self-defence is generally frowned upon in view of the specific reference to 'armed attack' in Article 51 of the UN Charter. Reprisal is not the same as self-defence. Reprisals are prohibited under the UN Charter.

NOTES

1. *The writer read 'International Law in relation to war and the use of force' in the Faculty of Laws, King's College, University of London as a part of his M.A. (War Studies) at that college.*
2. *Clausewitz, On War (Princeton 1977), p. 75.*
3. *Shakespeare, Henry V, Act 1, Scene 2. King. 'May I with right and conscience make this claim?'*
4. *Chayes, A., The Cuban Missile Crisis (O.U.P.) 1974 Ch. 1.*
5. *Violation of Art. 2 para. 4 of the UN Charter.*
6. *Despite this injunction there have been, regrettably, numerous wars since 1945. Since resorting to war and declaring war are clearly illegal, wars are nowadays referred to as 'limited wars' or 'armed conflicts'. Sukarno used the euphemism 'confrontation' to camouflage his war against Malaysia.*
7. *For details, see Jennings, 'Caroline and McCleod Cases', American Journal of International Law, 1938, p. 82.*
8. *In recent years the Israeli government has been repeatedly condemned in the UN for its acts of reprisal against neighbouring Arab States.*
9. *Some jurists have supported the claim that American economic sanctions were so injurious to Japan that they amounted to an 'attack' and Japan was justified in reacting the way she did, in 'self-defence'.*
   (Dissentient judgement of Justice Pal, Tokyo Trials)
10. *Cuba was then a Spanish possession.*
11. *Britain, however, protested the executions. The US Government did not accept the legality of the seizure on the ground that it was made on the high seas in time of peace. For details, see Colombos, C.J., International Law of the Sea (6th ed.), (Longmans, London, 1972), pp. 314-5.*
12. *Brownlie, I., International Law and the Use of Force by States (O.U.P. London, 1963), p. 311.*
13. *Ibid., p. 433.*
14. *Thomas and Thomas, Non-Intervention (Southern*

Methodist University Press, Dallas, 1956), pp. 123-4.

15. Brownlie, op. cit., p. 278.
16. Ibid., p. 362.
17. Ibid., p. 362. It was because a naval 'blockade' would be considered an act of war that, in the Cuban Missile Crisis of 1962, President Kennedy decided to employ a 'quarantine' of Cuba. Article 52 of the Charter provided the legal basis for the 'quarantine'. (See, Chayes, A., op. cit., p. 16)
18. The fact of first possession goes a long way in asserting territorial claims. Once in occupation, the use of force to repel attempts by other parties to seize the territory could be justified as acting in self-defence. Hence the scramble by littoral states to occupy islets and reefs in their respective exclusive economic zones.
19. Brownlie, op. cit., p. 433.
20. Ibid., p. 435. Bowett, on the other hand, argues that the use of force in self-defence against the State promoting subversion would be justified in law. (See his Self-Defence in International Law. Manchestar University Press, 1958).
21. Ibid., pp. 373-4.
22. Ibid., pp. 307-8. During the period of the Algerian insurgency French warships regularly searched or seized on the high seas vessels suspected of aiding the Algerian liberation movement. The legality of this action was not accepted by the international community.
23. The right of 'hot-pursuit' is a customary right, independent of the right of self-defence. Ibid., p. 302.
24. Ibid., p. 433.
25. Cited by Brownlie, Ibid., p. 342.
26. Waltzer, M. Just and Unjust Wars (Allen Lane, London 1978) pp., 105–7.
27. Determination by the UN Security Council of the existence of a threat to the peace, followed by recommendations or appropriate measures.
28. O'Connell, D.P. The Influence of Law on Sea Power, (Manchester University Press, 1975).
29. The 1958 Geneva Convention on the Territorial Sea.