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JURNAL TENTERA DARAT MALAYSIA



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**PENGERUSI JAWATANKUASA DOKTRIN
TENTERA DARAT**
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Markas Latihan Tentera Darat

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JAWATANKUASA DOKTRIN TENTERA DARAT

Sorotan Darat adalah Jurnal rasmi Tentera Darat yang diterbitkan atas arahan Panglima Tentera Darat. Sebanyak dua pengeluaran diterbitkan setiap tahun iaitu setiap enam bulan sekali. Skop untuk penulis merangkumi bidang yang luas dan di antaranya ialah perkara-perkara Peperangan, Latihan, Pengurusan, Sains dan Teknologi dan seumpamanya.

Jurnal ini bertujuan mewujudkan suatu forum bagi perbincangan pelbagai perkara yang boleh menimbulkan minat profesional dalam Angkatan Tentera. Setiap warga Tentera Darat dan sesiapa sahaja yang mengetahui pengetahuan khas atau berminat terhadap hal ehwal ketenteraan adalah dipelawa untuk menyumbangkan artikel. Perkara-perkara konvensional biasanya merupakan nadi penggerak sesebuah jurnal profesional yang dapat menimbulkan pemikiran dan perbincangan yang sihat. Perkara-perkara yang mempunyai darjah keselamatan perlulah mendapat tapisan keselamatan terlebih dahulu mengikut saluran pemerintahan masing-masing. Pengedaran Jurnal Sorotan Darat ini pula diselenggarakan oleh Bahagian Pembangunan Doktrin, Markas Latihan Tentera Darat. Segala artikel, persuratan dan sebarang pertanyaan berkaitan dengannya hendaklah dialamatkan kepada:

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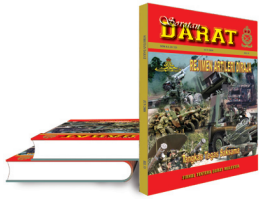
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DARI MEJA EDITOR

DARI MEJA EDITOR

Dengan Nama Allah Yang Maha Pengasih Lagi Maha Penyayang.

Salam Sejahtera,

Syukur Alhamdulillah, penerbitan Jurnal Sorotan Darat ini dapat diteruskan dan menemui para pembaca dengan artikel-artikel yang menjadi penjana minda Warga TD. Sidang Redaksi merakamkan setinggi-tinggi penghargaan kepada para penulis yang telah menghulurkan sumbangan artikel dalam menjayakan penerbitan jurnal ini. Justeru, tanpa komitmen dan sumbangan karyawan daripada Warga TD, maka sudah tentu penerbitan jurnal ini tidak menjadi kenyataan.

Pada edisi kali ini, fokus ke arah latihan berteraskan pendekatan ARTEP telah diberikan keutamaan. Ini dapat dilihat dengan artikel paparan utama berjudul; ***Army Training and Evaluation Programme (ARTEP) : Pemacu Kecemerlangan Rejimen Artileri DiRaja***. Namun demikian, latihan bercirikan *Competency Based Training Assesment* (CBTA) juga terus menjadi agenda penting dalam membangunkan insan yang berkualiti di kalangan Warga TD.

Seiring dengan arus pembangunan *Information and Communication Technology (ICT)* Sidang Redaksi juga membawa tumpuan pembaca terhadap keupayaan *Information Superiority* merentasi sempadan antarabangsa. Ini termasuk keupayaan senjata-senjata canggih dapat dilancarkan jauh daripada sasaran merangkumi Sistem Pertahanan Udara terkini serta kepentingan kebolehan manusia itu sendiri.

Sidang Redaksi sangat mengalu-alukan sumbangan bernas dari penulis baru di kalangan Warga TD mengilhamkan sumbangan artikel-artikel yang bermutu untuk dijadikan panduan. Pendapat, komen dan idea bernas serta maklum balas daripada kalangan pembaca amatlah dialu-alukan untuk meningkatkan kualiti penerbitan Jurnal Sorotan Darat ini. Sekian, terima kasih.

Membaca Inspirasi Pengetahuan.

ARMY TRAINING AND EVALUATION PROGRAMME (ARTEP): PEMACU KECEMERLANGAN REJIMEN ARTILERI DIRAJA

Oleh Lt Kol Zulkarnain bin Abu Bakar

PENDAHULUAN

ARTEP adalah satu program yang amat sinonim dengan Rejimen Artileri DiRaja (RAD). ARTEP merupakan satu program yang sistematik untuk menilai tahap keupayaan operasi sesebuah pasukan melalui siri latihan kolektif yang diadakan di dalam sesebuah pasukan Tentera Darat (TD)¹. Setelah hampir 25 tahun, pelaksanaan ARTEP RAD menjadi bertambah matang dan lebih baik. Bermula dengan unit-unit Artileri Medan, kini ARTEP RAD terus berkembang kepada unit-unit Artileri Pertahanan Udara (PU), Sistem Roket Lancar Berganda (SRLB) dan Artileri Pengesan. Konsep pelaksanaannya juga telah mengalami banyak perubahan dengan mengambil kira jenis persenjataan yang diperoleh dan status operasi sesebuah unit RAD itu sendiri.

Sepanjang pelaksanaannya, ARTEP RAD telah banyak membantu meningkatkan kecemerlangan pasukan RAD dalam memberi bantuan tembakan Artileri terhadap pasukan sahabat sama ada semasa operasi atau latihan. Untuk mengukur kecemerlangan secara kiraan markah amatlah sukar kerana tiada satu kayu pengukur yang tepat dapat digunapakai. Walau bagaimanapun kecemerlangan dan kejayaan pelaksanaan ARTEP RAD dapat diukur dengan menggunakan satu format penilaian standard ke atas kecekapan individu dan kumpulan di dalam mengendalikan sistem persenjataan, kurang berlakunya kemalangan semasa melaksanakan tembakan peluru hidup, kesilapan pengiraan data-data tembakan yang perlu diproses dan kurangnya kerosakan peralatan akibat kesilapan semasa mengendalikan persenjataan oleh operator atau pengguna².

ARTEP adalah satu kaedah yang standard dan dinamik di dalam mengukur kemampuan operasi sesebuah pasukan. Keputusan pencapaian ARTEP yang dinilai seterusnya dijadikan sebagai asas pengukuran kemampuan dan keberkesanan sesebuah pasukan RAD di dalam memberi bantuan tembakan Artileri semasa pertempuran. Standard bermaksud ianya memerlukan satu keputusan yang mematuhi segala keperluan teknikal dan taktikal yang telah ditetapkan. Manakala dinamik pula bermaksud segala *performance*, *condition* dan standard yang telah ditetapkan perlu dikaji dari semasa ke semasa berpandukan perubahan terhadap doktrin, peralatan, bantuan logistik dan organisasi yang dimiliki.

Setelah lebih dua dekad dilaksanakan, ARTEP RAD telah menampakkan kejayaan demi kejayaan walaupun ianya tidak dapat dibuktikan dengan penglibatan unit-unit RAD di dalam operasi sebenar. Kejayaan unit-unit RAD memberi bantuan tembakan semasa operasi di sepanjang tahun 1983 hingga 1988 sehingga menyebabkan Parti Komunis Malaya (PKM) meletakkan senjata membuktikan ARTEP RAD juga adalah penyumbang ke arah kejayaan ini.

Walaupun bagaimanapun, kepelbagaian persenjataan yang dimiliki oleh RAD masa kini memerlukan satu penyemakan semula isi kandungan ARTEP RAD. Penggunaan sistem persenjataan yang lebih canggih di dalam inventori TD memerlukan satu penyesuaian dan penyeragaman dalam aspek pengendalian yang lebih teliti dan tepat. Jumlah anggota pengendali yang semakin sedikit jika dibandingkan di antara sistem yang baru dengan sistem yang lama juga

¹ Arahan Latihan Panglima Tentera Darat 1984

² Laporan Keseluruhan ARTEP RAD Tahun 2000

perlu diambilkira kerana objektif utama di dalam ARTEP RAD adalah untuk menilai kemampuan sesebuah unit RAD dalam memberi bantuan tembakan Artileri dengan berkesan kepada pasukan yang dibantu. Selain daripada itu perubahan doktrin di dalam Tentera Darat juga akan mengubah doktrin RAD yang sedia ada agar ianya selaras dengan keperluan semasa bagi RAD mewujudkan keagungan tembakan di medan pertempuran.

Kini, setelah memasuki era pemodenan, ARTEP RAD sekali lagi dilihat sebagai satu pemangkin ke arah memperkasakan RAD menjadi sebuah pasukan bantuan tempur yang dinamik dan digeruni musuh serta disegani oleh rakan seangkatan. Oleh itu, di samping kepelbagaian persenjataan moden memasuki perkhidmatan TD, penambahan doktrin dan keperluan penstrukturan semula organisasi, anjakan pelaksanaan ARTEP RAD yang lebih teliti dan fokus tetap diteruskan agar objektif ARTEP RAD juga akan seiring dengan evolusi persenjataan yang dibekalkan kepada RAD.

SEJARAH PELAKSANAAN ARTEP RAD

ARTEP adalah manifestasi terhadap Arahan Latihan Panglima Tentera Darat tahun 1984 yang berkehendakkan keupayaan semua unit di dalam TD dinilai berpandukan ARTEP. Sejarah ARTEP RAD bermula pada Disember 1983 apabila Pengarah Artileri mengeluarkan dasar latihan bertujuan untuk menguji kecekapan unit-unit RAD³ atau pada ketika itu lebih dikenali dengan nama Latihan Ujian Rejimen. Kaedah ujian ini dilihat tidak menepati sepenuhnya keperluan yang dikehendaki di dalam Arahan Latihan Panglima Tentera Darat. Bertitik tolak dari situlah, satu usaha untuk menghasilkan buku panduan ARTEP telah dilakukan. PUSARTI (ketika itu Sekolah Artileri) telah berusaha merangka satu kaedah ujian yang diubahsuai berpandukan *Army Training and Evaluation Programme* kepunyaan Tentera Darat Australia. Pada Januari 1984 sebuah buku ARTEP (Sementara) telah dihasilkan untuk digunakan sebagai panduan ujian unit-unit Artileri Bantuan Rapat⁴.

Mulai 18 Oktober hingga 21 Oktober 1984, 3 RAD telah menjadi unit pertama yang diuji berpandukan ARTEP RAD⁵. Selepas itu, pelaksanaan ARTEP RAD telah diperluaskan kepada unit-unit Artileri Bantuan Rapat, Artileri Bantuan Am dan Artileri Pengesan yang telah mencapai status operasi. Manakala sejarah ARTEP bagi unit-unit Artileri PU bermula pada tahun 1993 apabila U Bateri 31 RAD telah diuji menggunakan program tersebut. ARTEP U Bateri 31 RAD telah dilaksanakan di sekitar kawasan Muadzam Shah yang melibatkan empat buah radar Skyguard dan lapan buah meriam 35 mm Oerlikon. Terkini, 33 RAD yang dilengkapi dengan peralatan misil jenis IGLA buatan Rusia telah melaksanakan ARTEP mulai 3 September hingga 14 September 2006 semasa Eksesais *First Strike* di peringkat Tentera Darat.

PELAKSANAAN ARTEP RAD

Pada peringkat awal, ARTEP RAD disusun bertujuan untuk mengenalpasti tahap kecekapan anggota dari aspek teknikal dan kemampuan bertindak semasa aturgerak. Justeru itu, penyusunan buku ARTEP di peringkat ini telah menyediakan lebih kurang 28 ujian untuk menilai prestasi pemegang-pemegang jawatan penting di dalam rejimen. Pendekatan ini telah dapat mengukur tahap kecekapan dan kemahiran anggota berpandukan satu jadual dan kaedah-kaedah yang lebih teratur. Di peringkat ini juga penglibatan pasukan adalah kecil, masa latihan lebih singkat dan tenaga penguji yang terhad diperlukan. Uji semula dilaksanakan sekiranya unit berkenaan gagal mencapai tahap standard yang telah ditetapkan.

- **Format ARTEP RAD.** Pelaksanaan ARTEP RAD merupakan satu bentuk penilaian berkelompok terhadap detasmen, sub unit dan unit⁶. Ia juga melibatkan seseorang individu menyelia dan menyelesaikan tugas setiap individu. Justeru, ARTEP RAD dapat membantu Komander dalam persediaan merancang, melaksana dan menilai semula latihan. Di sini Komander unit dapat mengetahui kelemahan

³ KP/TD/ARTI/0301 bertarikh 09 Dis 82.

⁴ PLPTD – Satu Pengalaman oleh Kol Mohd Aris bin Salim - 1992.

⁵ ibid.

⁶ Manual ARTEP RAD 1984.

unit dan dapat memberi satu ketetapan keutamaan latihan untuk mengatasinya. Sebelum merancang sesuatu ARTEP itu, staf latihan perlu mengetahui taraf kemampuan unit untuk beroperasi agar pelaksanaannya menyeluruh dan mencapai objektif sebenar.

● **Peringkat Pertama.** Pada peringkat ini unit akan menjalani ujian individu bertulis dan amali. Ujian bertulis bertujuan menilai taraf pengetahuan pegawai dan LLP. Ujian ini terbahagi kepada dua bentuk soalan iaitu soalan am dan soalan mengikut ketukangan. Soalan am meliputi perkara umum Artileri yang perlu diketahui oleh semua pegawai dan anggota RAD manakala soalan mengikut ketukangan pula menjurus kepada ketukangan yang dimiliki oleh anggota pasukan. Manakala ujian amali pula bertujuan mengukur kecekapan pegawai dan anggota di dalam menyampaikan perintah dan mengendalikan peralatan. Ujian ini amat penting kerana sekiranya unit gagal di dalam ujian peringkat pertama maka unit dikehendaki melaksanakan ujian semula.

● **Peringkat Kedua.** Setelah lulus dalam ujian peringkat pertama, unit akan melaksanakan ujian peringkat ke dua iaitu ujian atur gerak. Ujian ini bertujuan menguji kemampuan unit melaksanakan operasi berdasarkan keperluan komander dan senario pertempuran yang digambarkan. Pada peringkat ini tim penilai melihat kemampuan elemen-elemen pemerintahan dan pelaksana merancang, mengatur dan seterusnya memberi bantuan kepada unit yang dibantu. Bagi Artileri Medan dan Pengesan, kawasan atur gerak biasanya dilaksanakan di kawasan Lapangasar Gemas, Asahan Melaka dan Kota Belud, Sabah. Ini disebabkan kawasan ini mempunyai kawasan manuver dan seterusnya boleh melaksanakan tembakan peluru hidup. Walau bagaimanapun, ini tidak dapat dilaksanakan bagi rejimen roket dan Artileri PU yang memerlukan satu kawasan atur gerak yang luas.

Justeru, bagi rejimen roket dan unit Artileri PU, ujian atur gerak akan dilaksanakan secara berasingan. Tembakan peluru hidup akan hanya dilaksanakan di Lapangasar Bumi Ke Udara Tg Logok, Johor untuk Artileri PU dan Lapangasar

Tg Hantu, Perak untuk rejimen roket setelah unit selesai melaksanakan atur gerak. Bagi menilai keberkesanan atur gerak yang dilaksanakan oleh unit Artileri PU, satu bantuan simulasi serangan udara akan dikoordinasikan dengan pihak TUDM. Di sini, pihak wasit dan tim penilai akan melihat keupayaan unit memperoleh maklumat serangan udara melalui perisikan udara dan radar-radar yang dimiliki oleh TUDM dan unit Artileri PU, di jarak mana sasaran ditembak dan tindak balas elektronik yang diambil bagi mengatasinya.

Bagi unit Artileri Pengesan, latihan atur gerak dan tembakan Artileri Medan dapat membantu unit pengesan melaksanakan atur gerak dalam senario yang lebih realistik. Ia dapat menilai kemampuan unit pengesan melaksanakan kerja-kerja ukur yang tepat berdasarkan pengesanan ke atas tembakan yang dilakukan oleh pihak musuh. Selain itu, ia dapat mempraktikkan penghantaran data kepada unit-unit Artileri di medan yang jarang sekali dapat dilaksanakan.

Di peringkat awal, kekerapan unit di dalam melaksanakan ARTEP adalah bergantung kepada perkara-perkara berikut; sekali dalam masa dua tahun jika unit berkenaan tidak dibekalkan dengan peralatan baru atau tidak ada pindaan baru kepada struktur organisasi. Jika unit dibekalkan dengan peralatan baru ataupun penstrukturan semula organisasi, maka ARTEP dijalankan setelah unit diberi masa yang mencukupi untuk memahirkan anggota di dalam pengendalian peralatan baru atau organisasi itu. Ujian hanya dilaksanakan kepada kumpulan-kumpulan tertentu dan tidak secara keseluruhannya. Jika keputusan ARTEP yang lepas tidak memuaskan, unit akan diuji semula selepas empat bulan atau satu jangkamasa yang mencukupi untuk unit memperbaiki kelemahannya.

PERKEMBANGAN ARTEP RAD MASA KINI

Pembangunan Tentera Darat telah menjadikan RAD berkembang dengan pesat, daripada lima rejimen Bantuan Rapat dan satu rejimen Artileri

PU kepada tujuh rejimen Bantuan Rapat, dua rejimen Bantuan Am, satu rejimen Artileri Pengesan dan SRLB serta empat rejimen Artileri PU. Perkembangan ini juga telah menjadikan manual ARTEP RAD perlu lebih kontemporari sesuai dengan sistem persenjataan yang dimiliki masa kini.

Usaha mengemaskini manual ARTEP RAD telah berjalan seiring dengan perkembangan ini mengikut tempoh beroperasinya sesebuah rejimen Artileri. Kini terdapat manual ARTEP RAD mengikut kecabangan artileri iaitu Artileri Medan yang merangkumi Bantuan Rapat, Bantuan Am dan Pengesan serta Artileri PU⁷.

Sebelum ini, pelaksanaan ARTEP menjadi tanggungjawab Jabatan Arah Artileri bagi menentukannya dan kini ia telah dipertanggungjawabkan kepada formasi-formasi Artileri seperti Markas Artileri Divisyen dan Markas Grup Artileri PU (GAPU). Selain daripada menilai pasukannya, markas ini juga bertanggungjawab menentukan latihan bagi unit-unit di bawah pemerintahannya yang akan menjalani ARTEP.

Komander Artileri Divisyen (KAD) 3 Divisyen di dalam Direktif Latihan Tahun 2007⁸ telah meletakkan sasaran objektif operasi di dalam latihan individu dan kolektif dengan menjadikan ARTEP sebagai satu *tool* untuk meningkatkan kepakaran teknikal dan taktikal pasukan. Ini dapat dilihat melalui pendekatan latihan yang digunakan dengan melatih untuk mencapai standard ARTEP dan menetapkan satu rejimen Bantuan Rapat, Bantuan Am dan Pengesan melaksanakan ARTEP pada tahun 2007.

Panglima Grup Artileri Pertahanan Udara (GAPU) di dalam Arahan Latihan Panglima GAPU Tahun 2007 hingga 2010 pula telah menggariskan keperluan ARTEP ini di dalam Putaran Latihan (*Training Circle*)⁹. Beliau mengkhususkan ARTEP di peringkat trup dan bateri dilaksanakan dalam waktu perdana rejimen tetapi latihan harus menjurus kepada latihan penugasan dan atur gerak Arti PU

dalam konteks operasi gabungan atau bersama yang akan dikelolakan oleh MK GAPU.

Mamandangkan keperluan untuk menjadikan ARTEP RAD agar menjadi lebih kontemporari maka usaha-usaha untuk mengemaskini manual ARTEP berjalan seiring dengan kehendak operasi semasa. Ini adalah selaras dengan matlamat Sistem Latihan Tentera Darat yang sentiasa mengikut putarannya dari mengenalpasti latihan yang ingin dilaksanakan hingga menilai semula latihan tersebut. Oleh kerana sifat ARTEP itu yang dinamik maka perubahan-perubahan di dalam pelaksanaannya telah banyak membantu agar ARTEP menjadi lebih fleksibel dan menjurus kepada orientasi kerja dan tugas yang sebenar.

PENCAPAIAN-PENCAPAIAN ARTEP

Telah banyak pencapaian ARTEP RAD yang dicapai sama ada secara langsung atau tidak langsung. Pencapaian secara langsung dapat dilihat melalui keputusan-keputusan ARTEP pasukan yang telah dilaksanakan. Melalui keputusan yang dicapai menunjukkan terdapat peningkatan di dalam ujian bertulis dan ujian kemahiran. Ini membuktikan tahap pengetahuan teori anggota terhadap perkara teknikal dan taktikal juga berada di suatu tahap yang baik. Memang tidak dapat dinafikan ada kalanya terdapat penurunan pencapaian di sesetengah pasukan. Ini disebabkan faktor-faktor yang bersifat *fluctuate* dan boleh diperbaiki. Manakala pencapaian secara tidak langsung dapat dilihat dengan kurangnya berlaku kecuai keselamatan terutamanya semasa tembakan peluru hidup, kecederaan semasa mengendalikan peralatan dan kerosakan sistem persenjataan yang minimum berpunca dari kesilapan pengendalian operator.

MASALAH DAN KEKANGAN UNTUK MELAKSANAKAN ARTEP

Sepanjang lebih 25 tahun, pelbagai masalah yang timbul dengan kekangan-kekangan sedia ada yang menjadi hambatan terhadap pelaksanaan ARTEP.

- **Kekurangan Logistik.** Logistik adalah satu elemen yang amat penting untuk menjayakan

⁷ Manual ARTEP RAD - 1992.

⁸ Direktif Latihan Komander Artileri Divisyen Tahun 2007.

⁹ Arahan Panglima GAPU Tahun 2007 hingga 2010.

sesuatu operasi atau latihan. Kekurangan logistik seperti mobiliti, komunikasi, peralatan kapital dan sokongan serta peralatan am dan pelbagai akan menjejaskan kerancakan sesuatu latihan yang dirancang mengikut senario peperangan sebenar. Perkara ini perlu diatasi dengan sebaik mungkin agar ianya dapat mewujudkan realistik kepada latihan di samping memberi gambaran sebenar tentang kejadian yang berlaku. Dalam melaksanakan ARTEP masalah kekurangan logistik di atasi dengan mewujudkan gambaran secara *notional*. Walau bagaimanapun, Tim Penguji akan menyemak keperluan logistik yang dirancang oleh unit berkenaan.

- **Kawasan Latihan Yang Terhad.** Selain ujian tembakan, pasukan juga diuji dengan latihan atur gerak. Ujian ini bertujuan menilai kemampuan pasukan mengatutgerakkan sistem persenjataan mengikut keperluan operasi. Pembangunan kawasan yang pesat telah menjadikan kawasan latihan untuk aturgerak yang sesuai amat terhad. Seringkali pasukan berdepan dengan masalah birokrasi untuk mendapatkan kelulusan bagi menggunakan sesuatu kawasan latihan terutamanya kawasan yang amat bersesuaian dengan kehendak taktikal. Oleh itu, keperluan aturgerak yang telah dirancang perlu diubahsuai mengikut kesesuaian keadaan kawasan latihan yang diperuntukkan.

- **Sumber Manusia.** Sumber manusia adalah satu faktor yang amat penting di dalam menggerakkan sesuatu unit. Sumber manusia yang cukup akan menjadikan pelaksanaan sesuatu ARTEP lebih teratur dan berkesan. Seringkali perkara ini menjadi satu kekangan untuk mendapatkan satu unit yang benar-benar lengkap dengan keanggotaannya berpandukan perjawatan. Pada masa-masa tertentu seringkali anggota terlibat dengan kursus kerjaya, sukan, kerja-kerja rutin, bercuti dan sebagainya. Ini ditambah lagi dengan kekurangan anggota yang sepatutnya wujud berpandukan perjawatan pasukan. Walau bagaimanapun, masalah ini dapat diatasi dengan mewujudkan satu standard peratusan kekuatan pasukan yang perlu dicapai sebelum sesebuah unit itu melaksanakan ARTEP.

- **Bantuan Melalui Sumber-Sumber Lain.** Kebelakangan ini, kebanyakan ARTEP yang dilaksanakan oleh pasukan-pasukan RAD bergabung dengan latihan-latihan di peringkat formasi. Pendekatan ini telah banyak membantu keberkesanan sesuatu ARTEP yang dilaksanakan. Walau bagaimanapun tidak semua rancangan ARTEP RAD yang ditetapkan dapat dilaksanakan sepenuhnya kerana keutamaan memberi bantuan oleh agensi-agensi lain yang terlibat berbeza dengan rancangan ARTEP RAD yang ingin dilaksanakan. Satu perkara yang perlu diambilkira ialah tidak semua bantuan atau latihan bersama yang dipohon selari dengan program ARTEP yang telah dirancang terutamanya yang melibatkan ketiga-tiga perkhidmatan darat, laut dan udara. Sebagai contoh keperluan pesawat yang dipohon hanya boleh diberi berdasarkan laluan penerbangannya dan pihak perancang ARTEP perlu mengubah senario yang kadangkala mendatangkan masalah taktikal. Selain itu, masalah servisibiliti peralatan dan kenderaan serta alatan sokongan sering menjadi kekangan untuk Markas Formasi Artileri merancang ARTEP yang lengkap dan teratur.

HALATUJU ARTEP RAD

Setelah lebih dua dekad melaksanakan ARTEP, RAD telah mengorak langkah lebih jauh lagi dengan meningkatkan mutu pelaksanaan ARTEP sedia ada. Jika peratus lulus masih di tahap 65% - 70% maka ia perlu dipertingkatkan kepada 80% sesuai dengan asas pengambilan pegawai dan anggota Artileri yang mementingkan tahap kelulusan akademik yang tinggi dan beberapa kriteria lain yang berkaitan. Selain itu peratus kelulusan ini perlu melihat kepada kemampuan sesetengah peralatan yang boleh dikendalikan dengan cara yang lebih mudah dan tidak memerlukan ramai operator.

ARTEP RAD juga perlu melihat kemampuan sebenar unit yang sememangnya tidak memiliki kekuatan sebenar disebabkan faktor kursus kerjaya, cuti, tugas-tugas rutin di pasukan dan lain-lain yang berkaitan. Justeru itu, kekerapan pelaksanaan ARTEP RAD akan dipanjangkan sehingga ke suatu tahap yang sesuai berdasarkan keupayaan pasukan mengatasi masalah yang timbul dan memberi ruang persediaan yang lebih baik.

Kekurangan peluru untuk menembak terus menjadi satu hambatan kepada pelaksanaan ARTEP RAD. Tanpa melaksanakan tembakan peluru hidup, penilaian ARTEP RAD dilihat tidak menggambarkan kecekapan sebenar sesebuah rejimen di dalam memberi bantuan tembakan. Masalah ini dapat diatasi dengan penggunaan simulator. Simulator mampu mewujudkan gambaran sebenar keadaan di medan dan dapat membantu di dalam menilai pasukan melaksanakan bantuan tembakan Artileri. Ia juga dapat mengurangkan perbelanjaan dan penggunaan maksimum simulator dapat membantu mempertingkatkan kemahiran pegawai dan anggota di rejimen. Walau bagaimanapun, latihan tembakan peluru hidup tetap akan dilaksanakan bergantung kepada peruntukan peluru yang diberikan.

Manual ARTEP RAD akan terus disemakaji dan disesuaikan mengikut sistem persenjataan yang ada di dalam inventori RAD mahupun yang bakal diperolehi. Pendedahan dalam aspek merancang, mengendali dan menilai sesuatu ARTEP RAD turut ditekankan semasa kursus-kursus kerjaya yang dilaksanakan di PUSARTI. Semakaji ke atas manual ARTEP RAD yang berkaitan dengan aspek doktrin RAD dan TD turut dirancang dari masa

ke semasa. Sehubungan itu, sebarang keperluan untuk mengubahsuai isi kandungan manual ARTEP RAD akan dibentangkan terlebih dahulu kepada Konvensyen Jurulatih Guneri dan Doktrin RAD untuk kelulusan dan seterusnya dipraktikkan dalam satu jangkamasa tertentu sebelum diluluskan bagi digunapakai di dalam ARTEP RAD.

PENUTUP

Pengalaman melaksanakan ARTEP selama lebih 25 tahun telah banyak memberi pengalaman dan kebaikan terutamanya apabila negara tidak menghadapi ancaman dalaman dan luaran yang serius. Istilah berlatih untuk berperang tidak hanya cukup sekiranya tidak disusuli dengan satu bentuk penilaian yang lebih komprehensif. Dengan adanya ARTEP sebagai satu *tool* yang lengkap, ianya akan dapat menguji sesebuah unit Artileri dan menyediakan satu pasukan yang benar-benar terlatih dan mampu memberi bantuan tembakan Artileri dengan berkesan pada masa yang diperlukan. Sesuai dengan moto Tangkas, Tegas, Saksama adalah diharapkan ARTEP RAD akan terus berkembang demi menzahirkan matlamat tersebut.

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INTERNATIONAL SECURITY SYSTEMIC APPROACH: THE IMPORTANT ISSUES THAT HAVE TO BE GIVEN CONSIDERATION AT EACH LEVEL

By Lt Kol Murtadza bin Hj Nordin

SYNOPSIS

International and national securities are being addressed more seriously in recent times. This article will discuss about how societies are organized and will try to differentiate between Domestic and International Systems. Since both systems are interlinked and interdependent therefore the concept of security is very comprehensive and holistic.

The article will also discuss about the Seamless Web Theory; whereby due to the interdependent of national security, there seems to be an endless web or interconnections at the global level. It makes a security analysis at the regional level; how the region acts as the connecting link between the global and the state and the concept of Regional Security Complexes, state and individual levels. The article also explores the hierarchy of security complexes in Asia, as an example. It concludes that the national security problem cannot be understood without reference to factors at all the four levels of analysis that is international, regional, state and individual levels.

Stephen E. Ambrose

INTRODUCTION

Security is very important to man. International security as well as national security is being addressed more seriously in recent times. Security is everybody's need, which is a basic human requirement such as one's own protection of home, children, and life from being victim of others. We work for the government because our pay is secured with regular monthly payments. Rulers give protection to citizens and the citizens in return give their loyalties, pay taxes and services. In political science, a government is established to provide protection to their citizens.

Societies are organized into two paradigms or milieu, a Domestic System that is incorporated in an International System as shown in Figure 1.

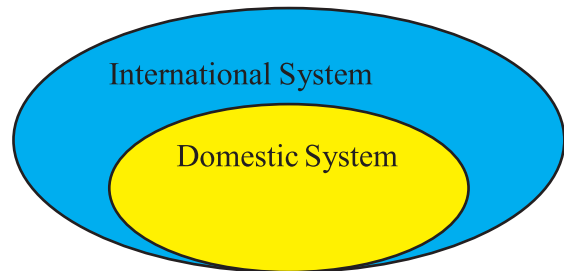


Figure 1.

The major concern of international relations is prevention of war and maintenance of peace. In the third world countries, domestic system is still a problem; e.g. crisis in Sri Lanka, Southern Thailand and The Philippines. This is because their social, legal, economics, and political systems are not stabilized due to weaknesses in government,

unequal distribution of wealth, differences in ethnicity and others. But for developed countries, internal security and domestic problems are settled therefore there are less internal conflicts and greater sense of security. Although there is some secessionist violence in developed nations, it is not prevalent. This is due to the existence of a better system.

What is the difference between Domestic System and International System? International System is state centric where power and national interest are dominant factors in relations among the actors, and that the international system is basically anarchic in structure.¹ In international system, the actors (states) are sovereign but in domestic systems the actors; the citizens are not sovereign. As relatively stated in a domestic system, security is better guaranteed compared to an international system. In other words, there is no world order or no world government to enforce the law and order. As stated by Joseph S. Nye life in such a world tends to be brutish, nasty, and short.²

The fact is that when there is anarchy in an International System, there will be insecurity. Barry Buzan stated that insecurity reflects a combination of threats and vulnerabilities, and the two cannot meaningfully be separated. In order to manage security, states must put all efforts in reducing state vulnerabilities and threats.³

SYSTEMIC APPROACH

International and Domestic Systems are interlinked and interdependent therefore the concept of security is comprehensive and holistic. Since there is interdependence among states, their security is interdependent; therefore their national securities are interdependent. This means security can only be understood by analyzing it in systematic terms. Systematic analysis requires one to be aware of the different geographical levels of the International System and the relations between these different levels. Buzan stated that it is of paramount importance to explore the referent

objects of security on several different levels. He added that he has taken from Waltz the idea of three levels of analysis centered on individuals, states and the international systems which will be referred to respectively as levels 1,2, and 3.⁴ In addition to this, Buzan proposed an analysis of the middle level that is regional levels or sub-systems⁵ which is important and seriously neglected.

SECURITY ANALYSIS AT THE SYSTEMIC LEVEL (GLOBAL LEVEL)

The Seamless Web Theory

Due to the interdependence of national securities, there seems to be an endless web or interconnections at the global level. As stated by K.J. Holsti, the world can be portrayed as a great spider web made up of billions of daily transactions and communications between all points on earth.⁶ This can happen in a variety of ways:

- Superpower/Big Power Security Definition, Concerns, and Rivalry. Normally Superpower/Big Powers would define their security concerns on a global basis and therefore their actions, reactions, strategic defence programs and foreign policies would affect the whole world. An example is the U.S foreign policy which is vested in what is called '**National Interest**'. It is the U.S. national interests that U.S. policy makers are willing to make sacrifices to achieve⁷, for example, the world witnessed U.S. invasion of Afghanistan and Iraq, the war on terrorism and others.
- Global Consequences and Common Fates. Nuclear war between the great powers would affect the whole of humanity. We can see the enormous destructive power of nuclear weapons, which is beyond comprehension. A megaton nuclear explosion can create temperature of 100 million degrees Celsius-four times the temperatures in the centre of the sun.

¹ James E. Dougherty & Robert L. Pfaltzgraff Jr., *Contending Theories of International Relations*, p25.

² Joseph S. Nye Jr., *Understanding International Conflict: An Introduction to Theory and History*, Longman, New York, 1997, p 3.

³ Barry Buzan, *People States & Fear: The National Security Problem in International Relations*, Wheatsheaf Books Ltd, Britain, 1983, p 73.

⁴ Ibid., p 13.

⁵ Ibid., p 105.

⁶ K.J. Holsti, *International Politics: A Framework for Analysis*, Prentice Hall, New Jersey, 1995, p 5.

⁷ Glenn P. Hastedt, *American Foreign Policy: Past, Present, Future*, Prentice Hall, New Jersey, 1988 p 4.

The bomb dropped on Hiroshima in 1945 was relatively small, about the equivalent of 15,000 tons of TNT. Today's missiles can carry 30 times that explosive power. Some scholars say that nuclear war would create so much carbon and dust in the atmosphere it would block plants from their photosynthesis which would mean the end of the world.⁸

- Insecurity of Small States and Spill Over Effects. Examples are insecurities of Israel, Southern Thailand, Taiwan, Sudan, Congo, etc. What caused the Pacific war during WW II? Japan then had always worried about being prevented from obtaining the raw materials it had to import. When the depression of 1930s cut Japan's trade, the Japanese feared that if they did not change their situation, they would face a bleak future. The Japanese tried to create a regional hegemony; which they called the Great East Asia Co-Prosperity Sphere.⁹

The Security of Indifference Theory

Many lesser and small powers do not define their security concerns in global terms; they simply do not have the capabilities. What happened in Burma for example would not have much impact in security terms on Latin America or Europe. Even some wars are limited in nature and the affected area; e.g. Gulf War, the Indo-Pakistan conflict, etc. Thus there are large areas of Security Indifference in the global system. The existence of extensive security indifference defines the limits to the seamless web theory of security.

Evolutionary Change of the Structure of Global International System

Barry Buzan stated that the most common approach to analyzing international anarchy has been the attempts to identify patterns in the structure of fragmentation, and to impute from these conclusions about the security characteristics of the system as a whole. Buzan quoted Kaplan

who identifies six types of system such as balance of power, loose bipolar, tight bipolar, unit veto, universal balance of power, and hierarchic.¹⁰ Despite this effort, they produce no clear conclusion about the security implications of different structures. As we can see the world is now ordered by uni-polar hegemony. Some observers believe the Gulf War marked the beginning of the Pax-Americana in which the world will acquiesce in a benign American hegemony. Some argues that the US may be the only super power but the hegemonic conclusion does not follow. There are many important security, economic, and political goals that the U.S. cannot achieve itself.¹¹ The New World Order does not guarantee that there will be no insecurity!

SECURITY ANALYSIS AT THE REGIONAL LEVEL

The region acts as the connecting link between the global and state levels. It is what Buzan called as nations of regional balances of power, and sub-systems, which is often seriously neglected.¹² Therefore it fills an important gap between the individual state and the seamless web of the whole system as shown in Figure 2.

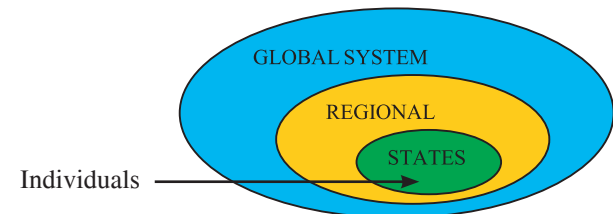


Figure 2.

The regional level of analysis is also important because most small states define their security concerns in terms of their immediate neighbours in their region. This is because:

- States share common borders;
- Immigrations problem;
- Customs – smuggling problem;

⁸ Nye Jr., p 120.

⁹ Ibid., p 90.

¹⁰ Buzan, p 101.

¹¹ Nye Jr., p 189.

¹² Buzan, p 105.

- Natural resources – oil, EEZ, fishing rights, etc;
- Strategic Sea Lane of Communications (SLOC) – Sharing Straits.

Adjacency, historical relations, and friction mean that the majority of security concerns of nations are focused on nearby states. Buzan quoted Poland which was historically insecure, then must not only taken into account its vulnerabilities in terms of limited population, poor resources and indefensible boundaries but also threats posed to it by powerful, expansionist neighbours on either sides; Germany and Russia.¹³ Singapore is another good example; a Chinese dominated state within the Malay dominated neighbours. Israel is another; among the Arab countries. Limited capabilities of most states also mean that security is relevant in regional terms; i.e. states that do not have enough military power are weak economically, politically and socially. But there is an exception to the rule whereby some states that are so powerful and strong directs the global system without connection; e.g. United States.

The Concept of Regional Security Complexes

Buzan stated that, the security implications of the anarchic structure do not spread uniformly throughout the system. Complex patterns of alignment and enmity develop from historical conditions in all types of anarchic systems, more so in those which are highly fragmented. Buzan used the term *security complex* to label the relevant structures at this level of analysis. A security complex is defined as '*a group of states whose primary security concerns link together sufficiently closely that their national securities cannot realistically be considered apart from one another*'. Security complexes tend to be durable, but they are neither permanent nor internally rigid. The links, which tie a security complex together, may be of many types – geographical, political, strategic, historical, economic or cultural. Buzan stated that South Asia as a whole provides a relatively clear example of an important, middle level security complex.¹⁴

The heart of this complex is the rivalry between India and Pakistan, two large states whose insecurities are so deeply intertwined that their national security, particularly in terms of political and military security, cannot be separated; Buzan quoted an example of the unsolved dispute between India and Pakistan over Kashmir. They form the core of a South Asian regional security complex. The rivalry between these two powers affects the security of the states in this region.¹⁵ None of the South Asian states is a strong state, and consequently most of them face substantial security threats arising within their own boundaries. Because of religious, national, and historical patterns, which run across state boundaries, these domestic problems cannot be separated from relations among the states. Other than being one of the world's most inhabited, high population growth, and one of the largest concentrations of poverty, this region is also considered to be one of the most vulnerable regions of the world in terms of natural disasters and environmental degradation, including the growing incidence of floods, drought, cyclones, global warming and sea level rise.¹⁶

There may be a hierarchy of security complexes in a region. For example for Asia as a whole, we may have a super complex where the security interests of the regional great powers such as China, Japan, Russia, and India will determine and influence the security prospects of the whole region. At the sub-regional level we may have three-security complexes-the Southeast Asian, South Asian and the Northeast Asian Security complexes with their own dynamisms and peculiarities. Studying the structures of these security complexes enhances our understanding of the dynamics and nature of the security problem in each system. For example, it is useful to describe the South Asian Security Complex as bipolar in structure and SEA Security Complex as multi-polar. This gives us a picture of the power balance in a particular region. See Figure 3.

¹⁴ Buzan, pp 105-106.

¹⁵ Ibid.

¹⁶ Paul B. Stares (ed.), *The New Security Agenda: A Global Survey*, Japan Center for International Exchange, 1998, pp 273-274.

¹³ Ibid., p 73.

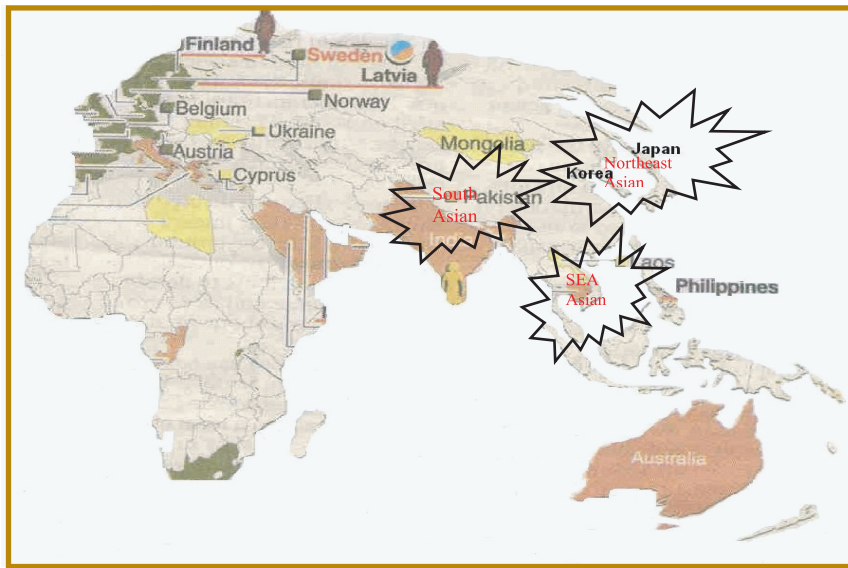


Figure 3: Regional Security Complexes

SECURITY ANALYSIS AT THE STATE LEVEL

At the opposite end of the scale in systemic analysis is the unit, the nation-state. The security of the state is however difficult to define because the state itself is a complex entity. The nation-state consists of three major components each of which may have their own security concerns/dimensions. These components are:

- State boundaries, territories, and institutions.
- The government regimes and political elites.
- The society, the citizenry.

There may be further complications and division within these categories. For example the political elite may be of different camps. The governing regime may be split along party, military, civilian lines, etc. The citizenry may be split along racial, religious, and ideological lines. In most of the world, except for very few states, the three components have not integrated or merged with one another to produce a single identity-especially in the Third World countries. Insufficient national integration can cause problems whether internally or externally. As such, the security of the state remains separated, defined in terms of the three different components and their sub-divisions. Good examples are Indonesia, The Philippines and Thailand.

Another example is security of citizens or the survival of the state. There is inconsistency between individual security (life, property etc) and collective security. In theory the state exists to protect its citizens but in many cases the citizens are sacrificed for the collective survival of the state; thousands of Iraqis killed in the fighting for their nation-states during the Gulf War and the fighting still persists until today. The security of state may also be defined in terms of security of the majority ethnic group versus the security of minority groups which often leads to state oppression for example in Bosnia, Burma and separatist movements like in Sri Lanka, Southern Thailand and Aceh in Indonesia.

The State as a Source of Threat. Barry Buzan stated that the individual citizen faces many threats, which emanate either directly or indirectly from the state. Such threats can be grouped into four general categories:¹⁷

- Those categories arising from domestic law making and enforcement;
- Those arising from direct political action by the state against individuals or group;
- Those arising from struggles over control of the state machinery; and

¹⁷ Buzan, p 25.

- Those arising from the state's external security policies.

In analyzing the security of the state one also has to take note that even stable systems or even systems with a high degree of integration may and will undergo changes over time. Political ideas, ideologies, and systems invariably change. What kind of change is a security threat? As stated by Joseph S. Nye, the demise of Soviet Union is because of the domestic and foreign policy of Gorbachev. He wanted to reform communism. The actions launched by Gorbachev that accelerated the demise of the Soviet Union and sped the end of the Cold War.¹⁸

Threats and Vulnerabilities. In dealing with national security at the state level of analysis the threats and vulnerabilities of external or internal origin must be considered. Buzan stated that vulnerability connects intimately with both weak states and weak powers. Their weakness is relative to the capabilities commanded by other states in the system, particularly the great powers of the day, and frequently stems from the fact that they are relatively small. For threats to

the state can come in variety of types which can be classified by sector as military, political, economic, and ecological.¹⁹ Threats according to K.J. Holsti are those more immediate capabilities in the hands of adversaries that may be used to exploit vulnerabilities. Holsti quoted an example through out the Cold War, we heard of the Soviet threat, not so much in terms of known Soviet intentions to attack, but in the inference that if the Soviets had immense military capabilities, they might at any time be tempted to exploit vulnerabilities.²⁰

INDIVIDUAL LEVELS

Buzan stated that the aspect of individual security which we need to analyze related to what might be called social threats; those arising from physical threats (pain, injury, death), economic threats (seizure or destruction of property, denial of access to work or resources), threats to rights (imprisonment denial of normal civil liberties), and threats to position or status (demotion, public humiliation).²¹ Nye Jr. stated that the explanation at the level of the individual are rarely

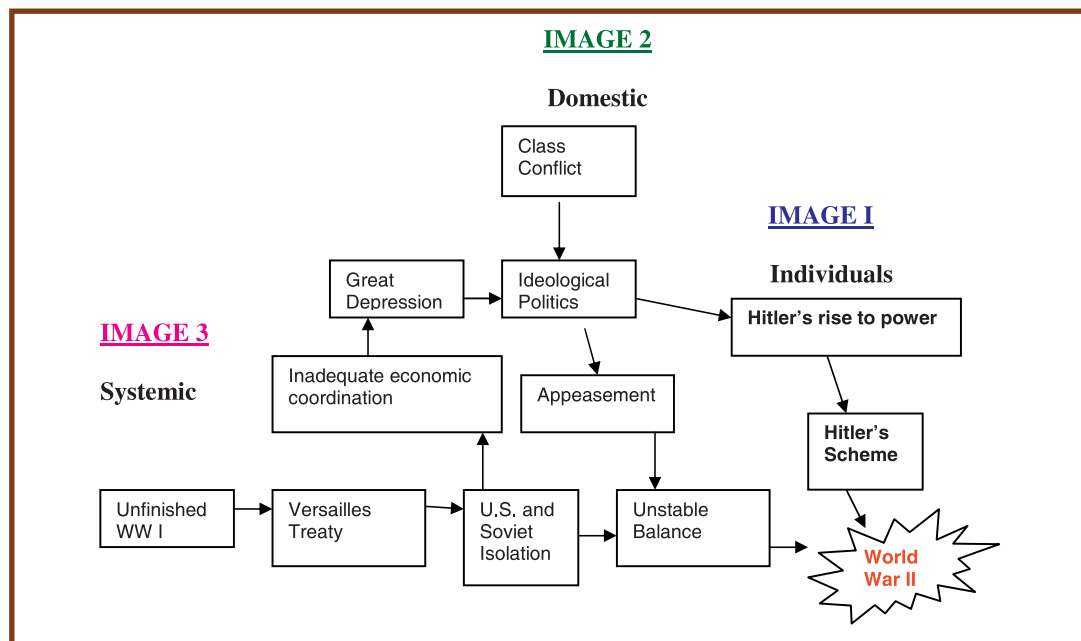


Figure 4. Individuals Contribute to the Causes of World War II²⁴

¹⁸ Gorbachev launched the idea of *perestroika* or 'restructuring, and *glasnost* or 'open discussion and democratisation'. See Nye, Jr., p 117.

¹⁹ Buzan, pp 73-75.

²⁰ K.J. Holsti, p 85.

²¹ Buzan, p 19.

sufficient because the varied nature of international politics imply states rather than individuals. It does not mean that individuals never matter because we have seen in 2003; Iraq's Saddam Hussein was a critical factor in the Gulf War. In 1962 Cuban Missile crisis, John F. Kennedy and Nikita Khrushchev faced the possibility of nuclear war and the ultimate decision was in their hands.²² The current war on terrorism focuses the world on Osama Ben Laden. Some scholars say that an individual was one of the crucial causes of WW II. It was Adolf Hitler's strategy for domination.²³ See Figure 4.

CONCLUSION

The systemic perspective not only gives a clearer view of the sources of threat to national security, but also enables us to take a broader and more contextual view of national security itself. It helps us to identify a number of features. Like levels of maturity, security complexes, and patterns in the distribution of power, which offer potentially important targets for national policy in as much as they represent opportunities to manipulate the system into forming a more conducive environment to enjoy national security.

²² Nye Jr., p 29.

As stated earlier, the national security problem cannot be understood without reference to factors at all the four levels of analysis. Although the term national security suggests a phenomenon on level 2 (state) the connection between that level and the other three levels are too numerous and too strong to deny. The concepts of security bind together individuals, states, and international systems so closely that it demands to be treated in a holistic perspective. Although some sense can be made of individual, national, regional and international (global) security as ideas in their own right, a full understanding of each can only be gained if it is related to the other. Attempts to treat security on any single level invite serious distortions of perspective. Security problem turns out to be a systemic security problem in which individuals, states, regional and the system all play a part.

Lastly, there are some limitations and that the security analysis at the various levels has its own strengths and weaknesses. As an example, it is irrelevant in global terms because of that indifference theory; at regional or sub-systems because of limited capabilities of the particular states but there is an exception to this rule for some states that are strong and powerful. The role of individual is also important especially the individual policymakers who nonetheless influence the trajectory of world events.

²³ Ibid., p 88.

²⁴ Nye Jr., p 89.

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KONSEPSI KESELAMATAN

Oleh Lt Kol Saiful Anwar bin Md Ali (Bersara)

PENDAHULUAN

Apabila memperkatakan tentang keselamatan, maka akan timbul di pemikiran kita apakah ertinya keselamatan dan siapakah yang perlu diselamatkan. Berbagai-bagai definisi yang diberikan oleh para sarjana mengenai keselamatan, namun pada hakikatnya apabila munculnya ancaman, maka keselamatan adalah diperlukan. Keselamatan adalah merupakan suatu perkara yang kompleks, abstrak dan sukar digambarkan. Takrifan mengenainya hanya dapat diberikan mengikut kesesuaian masa dan tempat, tetapi untuk mengenal pasti dengan tepat adalah merupakan suatu perkara yang sukar.

Dalam era Perang Dingin, soal keselamatan boleh dikatakan agak jelas kerana apa jua yang berlaku adalah merupakan persaingan di antara dua blok. Apa yang jelas, tindakan yang diambil oleh satu blok itu dianggap akan mengancam dan mengganggu-gugat blok yang lain. Perpecahan ini juga merebak kepada negara-negara lain, sama ada ia suka ataupun tidak, terpaksa menurut dan menyokong tindakan yang diambil oleh sesuatu blok itu. Setelah tamatnya Perang Dingin, keselamatan dikatakan menjadi lebih kabur dan ianya tidak tertumpu kepada kuasa militari semata-mata, tetapi merangkumi perkara-perkara mengenai ekonomi, politik, sosial dan alam sekitar.

Perubahan bentuk keselamatan ini berubah mengikut Ken Booth adalah kerana faktor-faktor seperti berikut:

- Tamatnya Perang Dingin dan Penurunan Konsep 'Bipolar' serta Kejatuhan Komunisme.
- Kebangkitan Kuasa-kuasa Baru.

- Peranan dan Kepentingan 'Non-State Actors'.
- Perkembangan Konsep Saling Bergantung (Interdependence) dan Perubahan Politik Ekonomi Antarabangsa.
- Krisis Pembangunan di Negara Dunia Ketiga.
- Penambahan Ketara Isu-isu Persekitaran.

Dengan munculnya perubahan-perubahan ini, maka pertubuhan-pertubuhan baru yang ingin memainkan peranan mereka juga muncul kerana melihat masalah-masalah baru yang akan terhasil dan memberi mereka peluang untuk berbuat demikian.

Sungguhpun demikian, sama ada bentuk keselamatan itu dilihat akan bertambah atau berkurangan adalah bergantung kepada bagaimana sesebuah kerajaan dan penduduknya memberi respon terhadap cabaran dan peluang yang mereka hadapi. Bagaimanapun, ianya harus mempunyai asas pemikiran yang lepas sebagai asas dalam menghadapi dan menangani masalah tersebut.

NEGARA SEBAGAI AKTOR UTAMA

Menyentuh tentang keselamatan, tiada suatu kuasa pusat yang berhak untuk menentukan keselamatan sesebuah negara dan adalah menjadi tanggungjawab sesebuah negara itu untuk menentukan keselamatannya sendiri. Ini jelas menunjukkan bahawa, negara adalah merupakan aktor yang utama. Muthiah Alagappa menyokong

pendapat Waltz yang menyatakan *in the absence of a central authority, each state retains the right to judge its grievances and ambitions according to its own dictates or desire and to decide on the use of force*. Namun, jika dilihat dalam keadaan sekarang, Amerika Syarikat (AS) sama ada melalui NATO, PBB atau secara individu telah mencuba sedaya upaya untuk memainkan peranan mereka bagi mengisi kuasa pusat yang telah sedia kosong demi untuk memperoleh kepentingan mereka.

Jelas terbukti apabila tindakan yang diambil untuk melepaskan peluru berpandu ke atas Iraq dibuat dengan sewenang-wenangnya tanpa merujuk kepada mana-mana pihak terlebih dahulu. Ini amat berbeza sekali dengan tindakan yang diambil ke atas Korea Utara dan Bosnia Herzegovina pada masa lampau. Pindaan terhadap piagam PBB juga dibuat mengikut kesesuaian dan kepentingan mereka. Tindakan mereka untuk membuat sesuatu di dalam mengekalkan hegemoninya harus dilihat sebagai satu kuasa mutlak yang kononnya cuba memainkan peranan sebagai *kuasa unipolar*.

Berhubung dengan peranan negara sebagai aktor utama dalam isu keselamatan ini, Latham, Booth dan Alagappa bersetuju dengan pendapat tersebut. Menyentuh tentang peranan aktor-aktor tambahan pula, Latham dan Booth sependapat bahawa, keadaan keselamatan dalam pasca-Perang Dingin telah berubah dan lebih kompleks yang mana aktor-aktor tambahan dapat memainkan peranan mereka dalam menentukan keamanan dan keselamatan. Latham misalnya menyatakan bahawa, *security can thus be viewed as bearing on the mediation, mitigation, or even governance of threats to contending ways of configuring social existence that are inherent in each security sphere*.

Bagaimanapun, Alagappa tidak bersetuju dengan pendapat yang mengatakan aktor-aktor tambahan boleh memainkan peranan dan masih menekankan bahawa negara masih lagi memainkan peranan utama dalam arena antarabangsa mahupun domestik di era pasca-Perang Dingin. Dengan demikian, jelas menunjukkan terdapat dua perbezaan pendapat mengenai peranan aktor-aktor tambahan. Persoalannya adalah, apakah peranan yang dimainkan oleh aktor bukan negara itu tidak penting? Adakah dengan meningkatkan saling

bergantungan ini akan menentukan keselamatan domestik dan serantau sesebuah negara itu? Apakah dengan mengadakan keselamatan secara kolektif akan menjamin keamanan, keselamatan serantau dan sejagat?

KESELAMATAN KOLEKTIF

Walau apapun persoalan yang dikemukakan, apa yang perlu ada ialah *kuasa* yang merupakan *means* kepada sesebuah negara itu untuk mengekalkan kedudukannya atau untuk menambahkan kuasa yang ada padanya. Dalam erti kata lain, kuasa tidak semestinya sama rata. Ada sesetengah pendapat menyatakan bahawa, dengan meningkatkan saling bergantung itu akan mengawal tingkah laku sesebuah negara melalui perjanjian dan kerjasama yang telah dibuat. Barry Buzan menekankan akan kepentingan saling bergantung yang mana menurutnya akan mengurangkan konflik dan memberi agenda yang lebih besar dan luas mengikut kepentingan negara-negara yang terlibat. Menurutny lagi, *interdependence directs our attention to the specific conditions that shape the way states interact with each other* (Buzan 1991:44).

David J. Dunn juga bersetuju dengan Buzan dan menyatakan bahawa *...the recent development of peace research is the extent to which it has tended to redefine the nature of security in an interdependent world*. Ianya juga akan mengelakkan berlakunya ancaman atau dilema keselamatan di antara negara-negara tersebut. Namun, ianya dilihat sebagai bersifat sementara sahaja. Ini adalah kerana, apabila sesebuah negara itu merasakan bahawa mereka telah mempunyai kestabilan dan kuasa yang cukup, reaksi mereka terhadap sesuatu isu akan diambil dengan cara yang berbeza mengikut kehendak dan kepentingannya.

Begitu juga dengan keselamatan kolektif yang dilihat juga sebagai bersifat sementara. Ini terbukti apabila AS dan Soviet Rusia dalam Perang Dunia kedua merupakan sekutu dalam menentang Jerman tetapi telah berpecah apabila tamatnya perang tersebut dan telah mewujudkan Perang Dingin yang memakan masa hampir 45 tahun. Ini adalah kerana masing-masing menganggap bahawa mereka mempunyai kuasa dan keupayaan untuk berbuat demikian.

Realist juga tidak percaya kepada perikatan (*alliance*) boleh membentuk satu kuasa dalam menangani isu-isu berhubung keselamatan. *Self-reliance is the most reliable and efficient strategy if national capabilities are available in sufficient quantity and quality* (Alagappa 1996:7: *Defining Security: A Critical Review and Appraisal of the Debate*). Tambahan pula dengan keadaan keselamatan yang lebih kompleks, ianya adalah satu perkara yang sukar bagi menentukan keselamatan serantau dan sejagat.

Di Asia Tenggara misalnya, pendapat ini telah disokong oleh Prof Dato' Zakaria Hj Ahmad yang mana beliau menyatakan, *...it is possible to say that in fact regional security is not a realistic option since as a 'complex', Southeast Asia is continually subject to both outside interference and intervention as well as the different conceptions that exist within Southeast Asia itself* (Zakaria Hj Ahmad 1995: 37: *Agenda Magazine*).

Alagappa juga menekankan, pendapat neo-realist bahawa:

- Negara merupakan rujukan kepada isu keselamatan.
- Keselamatan nasional merupakan masalah utama bagi negara, isu-isu yang timbul dari aspek anarki dan ketiadaan imbalan pengagihan kuasa menjejaskan keselamatan negara, keselamatan juga merupakan nilai 'zero-sum' dan mempunyai ciri-ciri yang boleh diagih-agihkan.
- Tolong diri sendiri (*self-help*) adalah merupakan prinsip asas yang mempengaruhi tindakan negara untuk memperolehi/mencapai keselamatan.

Beliau juga menekankan tentang rujukan (*referent*) agenda dan pendekatan (*approach*) dalam menangani soal keselamatan. Ketiga-tiga perkara ini haruslah dikaji terlebih dahulu sama ada ianya harus dilihat secara meluas atau sempit. Apakah ianya menguntungkan jika dilihat secara sempit? Bagaimana sesuatu ancaman itu boleh diukur? Adakah negara masih lagi boleh dijadikan rujukan sebagai aktor dan apakah ianya berlaku disebabkan oleh perbezaan budaya? Adakah negara atau

sistem antarabangsa sepatutnya dijadikan rujukan? Banyak lagi persoalan yang boleh ditimbulkan dalam menyentuh mengenai ketiga-tiga perkara tersebut. Namun, pada dasarnya ialah bagaimana sesebuah negara itu memainkan peranannya dalam melihat rujukan, agenda dan pendekatan yang harus diambil kira dalam menyelesaikan sesuatu isu tersebut.

DILEMA KESELAMATAN

Berhubung dengan dilema keselamatan pula, ianya merupakan satu perkara yang tidak dapat dielakkan kerana apabila sesebuah negara itu mengambil sesuatu tindakan misalnya, pembelian peralatan pertahanan yang sofistikated dan kepadanya adalah merupakan suatu keperluan walaupun ianya tidak bertujuan untuk bersaing dengan negara lain, tetapi tindakannya itu telah menimbulkan rasa tidak senang hati kepada pihak yang ketiga dan seterusnya. Mereka akan merasakan ianya sebagai satu ancaman dan akan mengambil tindakan yang sama.

Begitu juga dengan hubungan *bilateral* atau *multilateral* dengan negara lain apatah lagi dengan negara kuasa besar, perasaan yang sama juga akan dirasai. Dilema keselamatan akan terus dirasai dan tidak dapat diselesaikan selagi adanya anarki dan ianya hanya boleh diatasi sekiranya keselamatan relatif boleh dilaksanakan.

Menyentuh tentang keselamatan antarabangsa pula, Barry Buzan telah mempersoalkan sama ada ianya boleh dilakukan atau tidak, kerana ia dilihat begitu kompleks dan merangkumi berbagai-bagai jenis unit daripada individu sendiri, negara dan gabungan seperti perikatan dan blok.

Namun sepertimana yang telah dijelaskan bahawa selagi keselamatan antarabangsa bersifat anarki, maka tiada jaminan yang akan menentukan keamanan dan keselamatan sejagat kecuali dalam keadaan relatif. Peranan dan tempat anarki pada masa kini telah cuba diisi oleh AS yang mempunyai kredibiliti dan kuasa untuk berbuat demikian dengan memainkan peranan secara unipolar. Walau bagaimanapun, dalam menentukan keselamatan serantau dan antarabangsa, apa yang paling utama ialah menentukan keselamatan nasional

sesebuah negara itu sendiri. Ianya berkait rapat dengan ancaman dalaman negara itu sendiri. Booth berpendapat bahawa, *the primary physical threats to the security of most of the latter are internal not external* (Booth 1991: 26).

Manakala Alagappa pula berpendapat bahawa, *it is impossible to speak of national security without speaking about economics*. Ini adalah kerana dalam arena dunia sekarang ini, ekonomi memainkan peranan penting dalam menentukan kekuatan sesebuah negara. Dengan adanya kekuatan ekonomi, perkembangan dan peningkatan kuasa militari dapat dilaksanakan, malah perkembangan teknologi dan usaha-usaha yang lain dapat dilakukan bagi mengekalkan dan menentukan keselamatan nasional mereka.

PENUTUP

Apabila memperkatakan tentang keamanan, ianya akan dikaitkan dengan keselamatan, tetapi apabila memperkatakan tentang keselamatan ianya merupakan satu perkara yang sukar untuk ditafsirkan. Namun secara keseluruhannya dapatlah dikatakan bahawa negara adalah merupakan aktor yang utama di dalam menentukan keselamatan sama ada di peringkat nasional, serantau dan antarabangsa. Apa yang harus ada ialah kuasa pada sesebuah negara itu dan di dalam menentukan perkara tersebut, kekuatan ekonomi dan militari adalah diperlukan. Dalam hal ini, kuasa pada masa kini telah dibahagi dan dipecahkan yang mana kita tidak boleh mengatakan dengan mempunyai kuasa militari sahaja ianya sudah cukup mempunyai 'kuasa'. Negara Jepun misalnya tidak memerlukan kuasa militari untuk mempunyai 'kuasa'. Namun pada hakikatnya, jika sesebuah negara itu merasakan dirinya lemah maka ia sudah

pasti merasa tidak selamat sebaliknya, jika ia merasakan ia kuat, ia akan merasa lebih selamat.

Ekonomi yang kukuh akan mengekal dan meningkatkan tahap kuasa yang sedia ada di dalam menentukan keselamatan. Oleh itu, keselamatan dan ekonomi harus berkait rapat di antara satu sama lain dan digerakkan bersama-sama dalam menempuh order dunia yang dikatakan tidak menentu.

Selain dari itu, kepentingan nasional haruslah dipertahankan dalam menentukan keselamatan negara. Apabila kepentingan nasional diganggu-gugat, maka ianya merupakan suatu ancaman dan secara langsung akan menjejaskan keselamatan negara berkenaan. Persoalan yang timbul ialah bagaimana untuk membahagikan sistem baru terhadap keselamatan dan bagaimana untuk menentukan pengkalan terhadap pertumbuhan ekonomi.

Namun, apa yang perlu ialah bagaimana pendekatan yang diambil oleh sesebuah negara dalam menentukan keselamatan mereka. Ini adalah kerana, setiap negara memandang konsep keselamatan mengikut tafsiran masing-masing dan pendekatan yang diambil juga adalah berpanduan kepada kesesuaian dan kehendak masing-masing. Konsep cegah rintang boleh dianggap sebagai langkah yang berkesan dalam perspektif keselamatan. Bagaimanapun, hanya negara-negara tertentu mampu untuk berbuat demikian.

Pada dasarnya, di dalam menempuh order dunia yang tidak menentu ini, soal keselamatan adalah menjadi tanggungjawab sesebuah negara itu dan tiada suatu kuasa lain yang berhak untuk menentukan apa yang harus dibuat oleh negara berkenaan.

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Lt Kol Saiful Anwar bin Md Ali (Bersara) telah ditauliahkan kedalam Rejimen Askar Melayu DiRaja pada 23 Feb 1985. Beliau pernah memegang berbagai jawatan dalam pasukan, Kor dan Markas Formasi serta jurulatih di ATMA. Memiliki Diploma Lanjutan Pengajian Strategi dan Keselamatan (UKM), Diploma Strategi dan Pertahanan (UM) serta memperolehi Ijazah Sarjana dalam bidang Kajian Dasar dan Keselamatan dari UKM. Beliau kini bertugas sebagai Pensyarah Kanan, Fakulti Sains Pentadbiran & Pengajian Polisi di Universiti Teknologi Mara, Kampus Kota Semarakan Sarawak.

EMOTIONAL INTELLIGENCE: ELEMENT OF EFFECTIVE MILITARY LEADERSHIP

By Mej Inderjit Singh a/l Tara Singh

“Emotional competence is the single most important personal quality that each of us must develop and access to experience a breakthrough. Only through managing our emotions can we access our intellect and our technical competence. An emotionally competent person performs better under pressure.”

Daniel Goldman

INTRODUCTION

Military effectiveness and efficiency relies on the ability of leaders to respond to ongoing pressures, stress and to manage others efficiently. One goal to improve the effectiveness of today's and future military leaders is implementing rigorous standards for selecting, developing, and assessing military leaders. While exceptional leaders share certain qualities like a strong personal ethics and a compelling vision of the future, research has failed to uncover any statistically significant correlation between a leader's effectiveness and Emotional Intelligence (EQ), measured as a set of abilities. Given the increased recognition of the importance of the relationship between leaders and followers in leadership literature, the question arises whether the concept of EQ has significance for leadership effectiveness. Success in the current work environment greatly depends on our ability to understand and effectively manage emotions, in others and ourselves. The knowledge, skills, and abilities influence every aspect of our working lives. These people skills are well defined and discussed within the concepts set forth in the groundbreaking work done by Daniel Goleman on EQ. Research show that 67% of the essential competencies required for effective leadership today are emotional competencies. Emotionally intelligent leaders are more likely to achieve results and are effective in dealing with the complexity involved in leading change and organizational transformation.

Now more than ever EQ is becoming the “*new yardstick*” by which leaders are being evaluated. This is clearly illustrated in the role of leadership in the military, which is becoming increasingly important as defence issues and challenges become more multifaceted. This focus on leader selection and development has prompted an interest in examining the qualities of successful leaders. Recently, interest in the new concept of EQ has flourished as a result of the claims suggesting that EQ can be used to select and develop successful leaders. Study after study, not to mention good old common sense, demonstrates the key to exceptional leadership lies in developing the leadership competencies related to people skills. Strengthening one's interpersonal skills elevates a person's leadership abilities and results dramatically. This article will embrace the fundamentals of EQ and derive the relationship with leadership culminating in effective military leaders.

EMOTIONAL INTELLIGENCE AND LEADERSHIP

Although an extension of the theory of ‘social intelligence’, identified by E.L. Thorndike in 1920, the concept of EQ exploded on the corporate scene in 1995 after the publication of Daniel Goleman's bestseller EQ. Goleman followed with another bestseller in 1998 entitled, *Working with EQ*. Studies have demonstrated that leaders who consistently outperform their peers not only have the technical

skills required, but more importantly, have mastered most of the aspects EQ.

The term EQ often interchanged with the term Emotional Quotient (EQ), became popular after Daniel Goleman published his first book called 'EQ' in 1995. In his best-selling book on EQ, Goleman pointed out that IQ only accounts for 20% of a person's success in life whilst the rest is attributed to other factors including EQ.

Hargreaves's (1998) research work supports the claim that leadership is an emotional practice and a form of emotional labour that involves emotional understanding. As a result, during the last decade, the emergence of the concept of EQ has challenged traditional views of what it takes to be an effective leader. EQ is defined as a person's self-awareness, self-confidence, self-control, commitment and integrity and a person's ability to communicate, influence, initiate change and accept change. Studies have shown that EQ impacts a leader's ability to be effective (Goleman, 1998). According to Goleman, three of the most important aspects of EQ for a leader's ability to make effective decisions are self-awareness, communication and influence, commitment and integrity. Leaders who do not develop their EQ have difficulty in building good relationships with peers, subordinates, superiors and clients. EQ is a combination of competencies. These skills contribute to a person's ability to manage and monitor his or her own emotions, to correctly gauge the emotional state of others and to influence opinions. Goleman describes a model of five dimensions. Each area has its own set of behavioral attributes. These five characteristics will be shown to apply to a leader's ability to make effective decisions as in Figure 1.

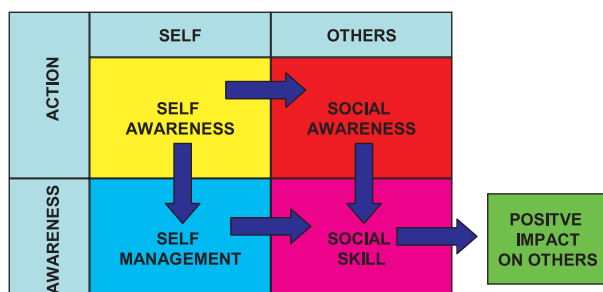


Figure 1: Rerepresentation of Emotional Intelligence

- Self-awareness is the ability to recognize a feeling as it happens, to accurately perform self-assessments and have self-confidence. It is the keystone of EQ (Goleman, 1995).
- Self-management or self-regulation is the ability to keep disruptive emotions and impulses in check (self-control), maintain standards of honesty and integrity (trustworthiness), take responsibility for one's performance (conscientiousness), handle change (adaptability) and be comfortable with novel ideas and approaches (innovation).
- Motivation is the emotional tendency guiding or facilitating the attainment of goals. It consists of achievement drive (meeting a standard of excellence), commitment (alignment of goals with the group or organization), initiative (acting on opportunities) and optimism (persistence reaching goals despite set backs).
- Empathy is the understanding of others by being aware of their needs, perspectives, feelings, concerns, sensing the developmental needs of others.
- Social skills are fundamental to EQ. They include the ability to induce desirable responses in others by using effective diplomacy to persuade (influence), listen openly and send convincing messages (communicate), inspire and guide groups and individuals (leadership); nurture instrumental relationships (building bonds), work with others toward a shared goal (collaboration, cooperation) and create group synergy in pursuing collective goals.

What makes a person a leader is still debated but according to Warren Bennis (1994) all leaders seem to share some common traits. The first is a guiding vision or purpose. A leader has a clear idea of what she or he wants to do professionally and personally and will pursue the goal regardless of the setbacks. The second characteristic is passion or enthusiasm and the ability to communicate that passion to others. Third, is integrity, consisting of three ingredients: self-knowledge, truthfulness, and maturity. Self-knowledge is knowing one's strengths and weaknesses. truthfulness is being honest with yourself and is the key to knowing

yourself. Maturity is the result of the lessons learned through following, while observing others, learning to be dedicated, and working with others. It is being truthful and never servile. The last two traits go hand in hand; curiosity and daring. A leader wants to learn as much as possible and is willing to take risks.

Leaders recognize that what they know is very little in comparison to what they still need to learn. To be more proficient in pursuing and achieving objectives, you should be open to new ideas, insights, and revelations that can lead to better ways to accomplishing goals. This continuous learning process can be exercised, in particular, through engaging yourself in a constant dialogue with your peers, advisers, consultants, team members and all stakeholders. Leading others is not simply a matter of style or following some how-to guides or recipes. Ineffectiveness of leaders seldom results from a lack of know-how or how-to, nor it is typically due to inadequate managerial skills. Leadership is even not about creating a great vision. It is about creating conditions under which all your followers can perform independently and effectively toward a common objective

Understanding and analyzing emotional knowledge is important for leader's instilling idealized influence or a sense of trust and reverence in followers (Barling et al., 2000; George, 2000). Followers may perceive leaders who are adept at understanding their own and others' emotions as role models (Barling et al., 2000). Effective leaders possess the ability to understand emotional information and can use this information to elicit positive emotions in followers. In turn, followers may be more likely to identify with the leader's moral and ethical values (George, 2000).

Leaders who possess the ability to understand followers' needs and expectations may have an advantage in terms of inspiring and motivating followers (Barling et al., 2000). It is important for leaders to understand their followers' emotions in order to inspire them to solve problems (George, 2000). Furthermore, the more skilled at understanding the influence that the leader's emotions can have on followers in problem situations the more likely the leader is to successfully inspire followers to overcome challenges and organizational issues. High emotional understanding individuals

	SELF Personal Competencies	OTHERS Social Competencies
RECOGNITION	Self-Awareness •Emotional Self Awareness •Accurate Self Assessment •Self-Confidence	Social Awareness - Empathy - Service Orientation - Organizational Awareness
REGULATION	Self-Management - Self-control - Trustworthiness - Conscientiousness - Adaptability - Achievement drive - Initiative	Relationship Management - Developing others - Influence - Communication - Conflict management - Leadership - Change catalyst - Building bonds - Teamwork & collaboration

Figure 2: A Framework of Emotional Competencies

possess the ability to anticipate how others will respond in different situations (Mayer et al., 2000b). Accurate appraisal of followers' emotions and understanding why followers feel different emotions in different situations may result in the leader successfully conveying a sense of the organization's vision to followers (George, 2000).

A high emotional understanding leader possesses the ability to understand followers' emotions and to interact with followers in order to achieve their desired goals. A leader's ability to understand the impact behavior can have on the emotions of their followers and the ability to understand that certain situations may elicit particular emotional responses, would be important in situations in which the leader was providing feedback to followers. When a leader possesses the ability to understand the emotions of their followers, they may be more likely to take care when providing criticism (Megerian & Sosik, 1996). Effective leaders possess the ability to distinguish between emotions that are genuine and those that are not genuine and to distinguish between real emotions and expressed emotions (George, 2000). Figure 2 presents the framework of EQ competencies. Twenty competencies nest in four clusters of general EQ abilities. The framework illustrates, for example, that we cannot demonstrate the competencies of trustworthiness and conscientiousness without mastery of the fundamental ability of Self-Management or the Competencies of Influence, Communication, Conflict Management and so on without a handle on Managing Relationships.

WHY EMOTIONAL INTELLIGENCE IS NEEDED IN LEADERSHIP

Emotional Intelligence does not fit the classic historical models of leadership. The latter are usually associated with great figures of military history and conjure up charismatic and sometimes despotic images. However, people often use the same language for leadership today in bold, brave and tough with a strong sense of purpose and resolve. However, this does not fit today's needs, because today's workforce does not accept the autocratic style often adopted by leaders following historical models of leadership. Leadership has had

to evolve to match a growing sense of democracy and independence in the workforce and employees now have far more options and choices than the foot soldiers of yesterday. Leaders now need to manage and lead an "empowered" workforce and go beyond the consultative, co-operative and democratic styles of today. These new demands include:

- Consultation and involvement but leaders still get criticized for not having and communicating a compelling vision and purpose.
- Autonomy and freedom – but leaders are still expected to take full responsibility when things go wrong.
- Opportunities for growth, challenge and glory - but leaders must be on hand to coach and mentor us so that we develop our potentials.
- Inclusion and team spirit – but we still want our leaders to give us individual recognition and acknowledgement.

RELATIONSHIP BETWEEN EFFECTIVE LEADERS AND EMOTIONAL INTELLIGENCE

Leadership is the process of directing the behavior of others toward the accomplishment of some common objectives. "Leadership is influencing people to get things done to a standard and quality above their norm. And doing it willingly." As an element in social interaction, leadership is a complex activity involving: a process of influence actors who are both leaders and followers.

A range of possible outcomes, the achievement of goals, but also the commitment of individuals to such goals, the enhancement of group cohesion and the reinforcement of change of organizational culture.

A research by Cambria Consulting advocated by McCelland,(1996) in US identify the most effective leaders and study what makes them different from the average. Based on this research coupled over a period of 30 years whereby they have interviewed 1000 highly effective senior managers and executives in prominent Fortune 500

companies, federal agencies and the military. Some of the findings of this research have noted several critical aspects of EQ that are highly important to leadership effectiveness, as well as others that can actually be dysfunctional. Generally the relationship exists collaterally between EQ and effective leadership in following areas:

- **Aware Of Their Impact On Others And Use It To Their Knowledge.**

The most effective leaders are sensitive as to how they come across to others. They know that their position in the organization, their strong personalities and even their mere physical appearances have a dramatic impact on others. These leaders are always in charge of their own feelings and how they express them. Effective leaders create the perfect balance.

- **Empathy For Others Besides Making Tough Decisions.**

Effective leaders are able to put themselves in the others' shoes and to understand how and why employees are reacting to organizational events, personal crises and seemingly changes. At the same time, their empathy does not prevent from making tough decisions. They do this by appealing to reason and acknowledging others' feelings, thus enabling people to feel that the decisions make sense. The danger here is that it is easy to over-identify with others or let empathy be confused with sympathy and not make the tough decisions as needed.

- **Intelligent Judges Of People Without Being Judgmental.**

Good leaders are able to size others up quickly in terms of their key strengths and weaknesses and are especially good at recognizing and applying the diverse talents of everyone in the organization. A danger is that they may become judgmental and overly critical about what they perceive to be others' shortcomings. They are likely to dismiss the advice of these people out of hand, making them feel undervalued and disrespected.

- **Passionate About What They Do And Show It.**

Good leaders are passionate, highly optimistic and believe in inevitability of success. They encourage others to believe that the most challenging goals can be met and the most

daunting obstacles overcome. But it does not mean that they are always cheerleaders, as their passion may be expressed as persistence in pursuing an objective or a relentless focus on a valued principle. However there is a fine line between being excited about something and letting too much passion close your mind to other possibilities and ignoring realities that others see.

- **Balance Feeling And Logic In Making Decisions.**

Effective leaders are in touch with their gut instincts about the right thing to do in the absence of supporting data. They also recognize their internal warning signs that something may not be the right thing to do despite the seemingly compelling analysis. They understand that logic and "facts" are not the only things to consider. Nevertheless, they do not just "go with their gut" without checking out their instincts with others. The drawbacks are the temptation to rely largely on their feelings about things and bet that they are correct without further investigation. They are essentially gambling with the resources of the organization, and can lose big.

- **Excellent Communicators.**

Effective leaders are in touch with the pulse of the organization. They are not all great public speakers, nor are they necessarily charismatic, but they do understand the importance of providing timely information about the business and what it means to people. They also know that communication keeps people motivated and connected. Where EQ plays a role is in knowing what messages will connect with others and how to express them. Where leaders get into trouble is providing too much or too little information, delaying important information, and not being candid in their communications to others for fear of upsetting them with "the truth".

- **Create Personal Connections With Their People.**

In today's world of globalization, multiple locations and global operations, employees can feel alienated from their leadership and disconnected from their organization at a personal level. The most effective leaders pay particular attention to this and find ways to make themselves personally visible and approachable.

Most take the time to engage individually and in groups, listening to their ideas, suggestions and concerns, and responding in ways that make people feel heard and respected. The downside of visibility is making too many unannounced visits, which can create a culture of fear and micromanagement. Again, striking the correct balance is the key.

• **Drive For Results With Sensitivity To Others.** Effective leaders drive results and champion beneficial change. They also repeatedly emphasize the importance of continuous or breakthrough improvements and challenge people to rethink old ways of doing things. But good leaders are also patient enough to help others overcome their fears, get people involved before making decisions that affect them, explain the reasons for difficult decisions once they are made and work to maintain high morale while calling on others to do better. However, they are only patient up to a point and do not suffer people who waste their time, fail to deliver, or resist change for very long.

CONCLUSION

EQ has become a vital part of how today's military leaders meet the significant challenges they face. EQ can help leaders in an evermore difficult leadership role, one that fewer and fewer people seem capable of fulfilling. Studies have demonstrated that leaders who consistently outperform their peers not only have the technical skills required, but more importantly, have mastered most of the aspects of EQ. The four main areas

of EQ are: Self-Awareness, Self-Management, Social Awareness, and Relationship Management. Three of the most important aspects of EQ for a leader's ability to make effective decisions are self-awareness, communication and influence and commitment and integrity. Managers who do not develop their EQ have difficulty in building good relationships with peers, subordinates, superiors and clients as in most things, EQ as a leadership requirement should be kept in perspective. The key to effectiveness is balance: a strong mix of cognitive capacity (logical, conceptual and creative thinking), people skills (interpersonal astuteness, influence skills, and communication skills) and the wisdom borne of experience and having to make unprecedented decisions based on a strong set of personal values and personal integrity. Taken together, this is what makes for effective leadership.

The leader in transition need to continually develop their EQ skills as they will still feel somewhat anxious and worried as the transition process unfolds. That can't be prevented. But the emotionally intelligent executive can positively manage the emotions. He can use the information from his emotions to step back and get a rational look at the big picture and take positive action.

Using emotions as a source of information and learning to choose emotions in-the-moment allows rational thinking to prevail. Leaders who exercise these EQ skills are able to think clearly about how they can work within the changes. They are much less likely to make an irrational decision to leave the establishment just when they are needed the most.

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INFORMATION SUPERIORITY IN MILITARY OPERATIONS

By Brig Jen Dato' Mohd Zaki bin Wan Mahmood (Bersara)

Synopsis

Military forces can only survive if they have intelligence. Intelligence is derived from information acquired from many sources. Commanders that have the information and are able to restrict their opponents from having the same opportunity are said to be having information superiority. Such a situation is preferred by all military commanders in peace time and more so in a war setting. Peace time superiority is for strategic defence planning and force level development. In war time it is for operational planning to defeat the enemy. Military forces need to develop their information superiority capabilities by having their own information systems being efficient and secure from enemy interference and manipulation, and having the ability to intercept, interfere and manipulate opponents' information systems. To succeed military forces need their own national industry to help to develop information superiority capabilities and not to rely on any foreign company. Various levels of national and military leadership need to be aware of the importance of information superiority to national defence and the nation's well being.

INTRODUCTION

Information is a necessity to leaders. Their judgments, decisions and planning are made based on information available. To military leaders or commanders, information in the form of intelligence is vital, especially in the face of enemy. Commanders have to make decisions and in combat have to make them quick and accurate, to be followed by effective operational plans. Intelligence has to be current and complete, or else operational plans will not bring victories. In battlefields of the modern days events, incidents, deployments and manoeuvres are taking place rapidly, on own forces as well as on enemy forces. Information on these activities must be available to commanders of own forces and is denied to commanders of the opposite forces. Commanders of military forces would want to have this situation, which is called having information superiority. Information superiority, as the American puts it, "these days America fights not in fog of war, but in a "huge cloud of electrons". Large amount of information beamed to soldiers

on the ground or leaders in America. Much of this electronic data is transmitted by satellites." ¹

Intelligence in the military is derived from information. Normally information is obtained from many sources. The intelligence process will collate and verify information received from one source against information gathered from other sources. Intelligence is so important to military operations and it is needed badly. Military forces mount intelligence operations in peace time and during war time to gather information. Intelligence is needed in peace time to formulate national strategic defence planning, force level development, as well as to plan for an overall national security and for national well-being. In combat the military needs intelligence to formulate operational plans. Survival of nations in peace time and more so in war environment depend on their militaries' ability to have information efficiently and accurately. Nations and militaries nowadays are striving to be superior in information,

¹ The Economist Jan 19th 2008, page 25.

whereby they are adequate with information but others are being denied of any information. The aim of this paper is to discuss ways towards achieving information superiority to support military in strategic and operational planning. The scope of the paper will cover functions of information, information gathering activities and methods of achieving information superiority

FUNCTIONS OF INFORMATION

Information To Intelligence

Without information, no intelligence can be formulated. Information is the sole source for intelligence. Operational decisions and plans are derived from operational appreciations done by staff officers and commanders based on intelligence inputs. Intelligence on enemy forces, ground, weather and friendly forces are key factors evaluated during the appreciation. Lack, inaccurate or late intelligence will result in wrong decision being made, whether tactical or strategic. In combat planning without accurate intelligence will result in poor operational plans, which can be costly to own lives and equipment. The attack phase of operations may be done on wrong objectives, using wrong tactics or inadequate force level. While defence phase of operations may have insufficient force, inadequate and wrongly sited obstacles or main weapons are facing the wrong way. At national level, without reliable intelligence, strategic defence planning will result in poor force development and deployment. With intelligence forces are equipped and deployed accurately. Accurate intelligence will allow various electronic countermeasures to be developed to counter enemy electronic surveillance equipment, radars and weapon control devices. Surveillance and weapon systems too will be accurately sited.

Poor operational plans formulated in combat from poor intelligence will result in uneconomical efforts or worse still will result in combat disaster. Poor intelligence will cause militaries to lose battles and wars. Since information is such an important battle factor, major military efforts of most military forces are spent towards achieving information superiority. For these military forces it has been a priority combat task to collect information and to be information superior. In present day peace time and in modern battlefield, information gathering

effort relies a great deal on information warfare and information operation, as well as on electronic warfare activities. In the function of information gathering, using assets and expertise in information warfare, information operation and electronic warfare, no one military force will share his assets and know-how with others. Each military force will have to acquire these capabilities on its own and with the help of its own local industry, supported by local government institutions of higher learning.

Peace Time Intelligence

Nations need intelligence in peace time. Without intelligence it will not be able to handle its national defence strategic planning, force level development, national security activities and international relation. Nations spend resources to be active and effective in intelligence and counter intelligence activities, in order to be superior in information. Normally peace time information gathering activities of a nation is to establish intelligence on target nations on the following matters.

- Internal situation: economic, social, racial, political, insurrection, terrorism, religious, etc.
- Regional affiliation: political, security, economic exclusive zone, trade, overlapping claim, diplomatic and others.
- International cooperation: economic, social, defence, bilateral and multilateral.
- Defence activity: local, regional, multinational, exercises and operations.
- National defence: capability development, training, doctrine, tactics, readiness state and threat.
- Surveillance, reconnaissance and weapon systems: types, locations, alternative sites, readiness, coverage, effectiveness and specifications.
- Cross border: insurrection, espionage, drug, infiltration, smuggling, intelligence operations and counter intelligence activities.

Having established the above situation on the neighbour then a nation can effectively plan

the relationship posture with the neighbour. The relationship will encompass such matter as defence, security, social, diplomatic, commercial, trade, resource exploration, etc. From technical specifications of surveillance, reconnaissance and weapon systems preparation and development of counter measures and tactics can be done and practised.

War Time Intelligence

In war time intelligence is most vital. Without it a military force is blind and is doomed for disaster. Some intelligence collected during peace time is useable during war time. The advanced preparation and advanced warning collected from peace time intelligence activities make the military forces geared and ready for the on-coming war. Many of the peace time information gathering activities mentioned above are relevant and a matter of a follow-up for war time intelligence requirement. In war time information gathering is aimed at establishing intelligence on the enemy, his order of battle and his electronic order of battle. The intelligence the military will want to gain on the enemy in war time will be as follows:

- Identity of enemy organization, command structure and personality profiles.
- Composition and strength of enemy combat, support, logistic support and reserve forces.
- Location and disposition of combat, support, logistic units, reserves and obstacles.
- Force activities and routines.
- Intentions and plans.
- State of readiness and preparedness of enemy forces.
- Locations, types, status and coverage of patrols, surveillance and reconnaissance systems.
- Types, distribution, locations and status of their weapon systems.

A commander with the above intelligence of the enemy and has a total situational picture of his own troops and the battlefield, and has the ability to black-out intelligence from his opposing force commander, is a commander with information superiority. This situation is the dream of all military commanders.

INFORMATION GATHERING ACTIVITIES

Main Gathering Activities

With the aid of modern technology in present days, major military forces would have excellent capabilities in information warfare. It is an important element towards achieving information superiority. Some of the routine operational activities of the information warfare scope the military forces will be mounting are as follows:

- Command and control warfare.
- Electronic warfare.
- Psychological warfare.
- Intelligence-based warfare.
- Hacker warfare.
- Economic information warfare.
- Net warfare.
- Cyber warfare.

Some of the operations mentioned above are only for peace time and some are only for war time, while some are relevant for both peace and war time. For the purpose of this paper, information warfare is meant to be operations mounted to have access into networks or to interfere functions of networks belonging to opponents.

Intelligence Gathering Facilities

Military forces have utilised advance technology competitively to develop information gathering

tools and platforms. Lines used in communication networks will be tapped and access created to intercept information while being transmitted or obtain information from databases where it is being kept. Radio communication networks will be monitored or put under surveillance and transmissions will be intercepted for information. Information in transmission over radio links is easier to obtain than that over lines. Radio transmission interception is done by electronic warfare receivers that can be mounted in so many forms of vessel or station. Some of the electronic warfare equipment and gadgets are operated from the following stations or platforms:

- Land Based: ground static stations, mobile stations in vehicles and embassies.
- Seaborne: submarines, warships, auxiliary gathering of intelligence ships, trawlers, cargo ships, oil tankers and research vessels.
- Airborne: satellites, aircrafts and unmanned aerial vehicles.

In addition to electronic intercepts of radio waves transmissions and communication lines there are defence attaches, visiting officers and contractors who will be feeding or selling information to the enemy. It is well known that most of information leakages are by own staff members carelessness or selling of information.

ACHIEVING INFORMATION SUPERIORITY

Possible Enemy Activities

- **Information Gathering.** Peace time threats from the enemy on our information system are normally from the activities of the enemy wanting to have knowledge on capabilities, weaknesses and potentials of our systems. Information acquisition on our information systems is normally achieved through the following means:

- ▶ Specification through tender documents.
- ▶ Information from contractors.

- ▶ Own staff carelessness or traitors selling information.
- ▶ Electronic probing on our systems.
- ▶ Product information from foreign supplier.
- ▶ Enemy electronic warfare and information warfare activities.

Seriousness, effectiveness and success each of the methods and precedence of importance to the enemy varies from case to case. We have to be aware of all methods mentioned above and make the necessary preparations to protect information of our systems from getting into the hands of the enemy.

- **Offensive Acts.** The most effective offensive weapon by an enemy is the one that has been embedded into our system. Through the use of sympathetic developer or maintenance contractors the enemy will endeavour to insert embedded information warfare weapons into our systems. The weapons may be for eavesdropping, such as trap door and Trojan horse, or for destruction, such as time bomb. The enemy will continue to improve the effectiveness of their intelligence operations. In the process they will probe to identify weaknesses in our protective measures and develop access routes into our systems. The enemy electronic warfare organisations will mount surveillance and intercept operations on our electromagnetic wave transmissions. They will do research and development based on the successful intercepts to acquire counter measures. While they are increasing their electronic surveillance, intercept activities and counter measure development, they will also improve their own protective and defensive measures to safe guard their systems from being interfered by others.

Own System Security

To have information superiority is to be in a position to protect one's own information from being stolen or interfered, yet one is able to steal, interfere and manipulate information belonging to others. In this world, present or past, no man or

organisation can survive without information. In the present days we rely very much, or dependent on information systems that are developed based on the information and communication technology. "When an entity is described as being information-dependant, more often than not it is actually information system dependant."² The military is very much information system dependant. Each military organisation has a vast amount of information systems. Its priority must be then to protect its own systems so that they are safe from interference or manipulation by opposing forces and interested parties. Normally it is a massive task for the military to protect its information systems. The defensive tasks are based on actual threats, or on perceived threats, as well as on potential capabilities of likely enemy, or not so friendly neighbours.

Our Protective Measures

- **Awareness.** It is most important that key personalities and superior commanders are aware of the importance of information systems to the military and that threats are for ever presence. They must be aware of what serious consequences and damages will result from poor control over own information systems. These people are in positions to support the military to achieve information superiority. Some of the key personalities meant here are the following:

- ▶ **Government Officials.** These are the people that are involved in budget allocation and system procurement. They can support towards information superiority by providing sufficient budget and procurement procedures which are conducive to military security needs.

- ▶ **Military Commanders.** Commanders need information and they are highly dependence on information in peace and in war time and that they must have information superiority over their opposing commanders. From their needs they then can direct for doctrines and information capability development towards information superiority. They will put priority to the needs for information superiority

development, for systems and human resource.

- ▶ **Staff.** Awareness by staff will ensure rules and regulation regarding information security will be abided. The staff will be more professional in their daily work and will be on the look out for breaches of security by peers and intrusions by the enemy. In combat environment staff will apply tactics and procedures that will deter the enemy from attacking our systems.

- ▶ **Local Industry.** The military needs technical support from the local industry, which have research and development capabilities to develop the necessary local products required by the military. The use of local products will provide better guarantee that the systems are not being embedded by hidden chips that damage our systems. Local industry will provide better man power continuity and technology acquisition, which the military will find difficult to achieve.

- **Procurement.** Our procurement agencies have roles to play in providing protection to our information systems. The good practices of these agencies will ensure that procurements are strictly controlled to fan off unscrupulous contractors, who might be working for the enemy. The most suitable time and place to have embedded chips planted into a system will be during its development. It is most easily done if development is at overseas premises. The overseas contractors might do it in support of their militaries, needs of their government's intelligence organisations or being paid by interested parties. We must have procurement procedures that will protect military information systems from being exposed to such an environment. Discussed below are some procurement activities that will protect information systems and help the military towards the information superiority objective.

- ▶ **Direct Negotiation.** Military information system is highly sensitive. It is as sensitive as encryption equipment. Information of its procurement and development must not be made public. An open tender will attract many foreign contractors who are buying tender documents on behalf of their militaries or their

² Christ Westwood, *The Future is not what it used to be: Conflict in the Information Age*, Air Power Study Centre, RAAF Base Fairbairn, Australia, page 22.

intelligence organisations. System specification can only be protected by not having an open tender. A restricted tender or procurement by direct negotiation will ensure document on specification is protected from falling into the hands of the enemy.

► **Local Implementation.** Military information system development will have to be done by the military themselves. If they lack capabilities then it is done jointly with its local industries. Controlled development and integration will help to preserve security on capabilities and provide good information warfare protection. Enhancement and maintenance will be easily done by the military or its local partner.

► **Transfer of Technology.** The military needs an effective training and transfer of technology programme to ensure its information superiority targets are achieved. Military personnel turnover and change in assignments are very rapid and the training is necessary to keep the incoming military personnel informed. The training will also ensure effective information operations, maintenance and system enhancement.

• **Users.** Officers and men who operate the military information systems will have to be the selected ones. They operate as well as they safeguard the system from being attacked by the

enemy. Knowledgeable users will be more protective of the systems and will be jealously guarding them. They will want the systems to be protected by the most effective protective measures and that the measures are enhanced regularly so that the system is efficiently protected. User training will have to be towards having users as experts in information security. The capabilities and expertise of users will surprise the enemy. Sufficient numbers must always be available as reserve, to work in support centres and at R & D department. Efficient human resource development programme for users is for effective protective measures of the information system and for effective information operations.

Information Superiority

• **US Doctrine.** The USA is a great believer in information superiority. They are ahead in being superior in information. It is reflected in the statement made in late 90s by Gen John Shalikashvili, the Chairman of US Joint Chief of Staff. "Replacing nuclear superiority, the overriding US strategic concern, information superiority holds the key to military dominance in future. Those embrace new information technologies will increase their military capabilities. Conversely, failure to understand and adapt could lead today's militaries into obsolescence and will be incapable of effective operations".

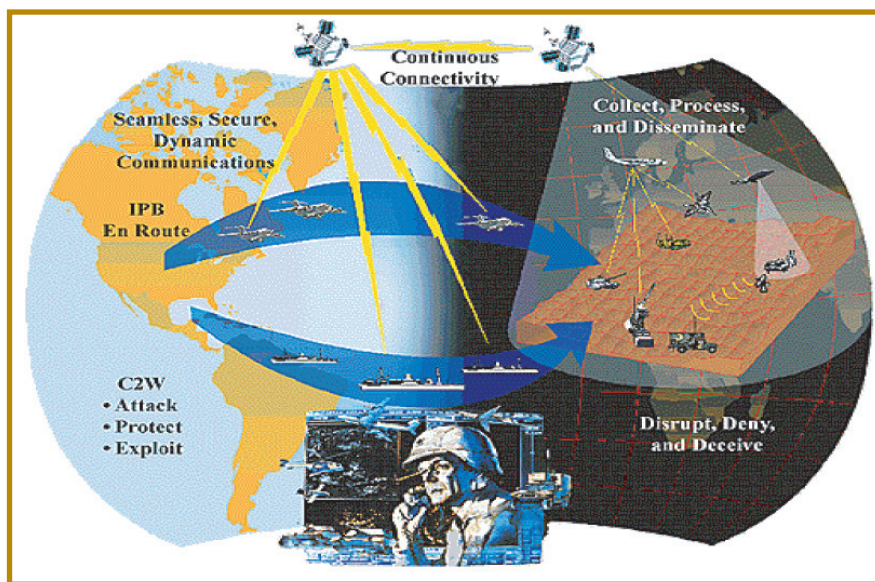


Figure 1. US Army Information Superiority Implementation

- **US Army Information Superiority Vision 2010.** Guided by the above mentioned directive from the Chairman the US Army made its vision 2010 which states that, “we must have information superiority: the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary’s ability to do the same”.³ In a diagrammatic form the vision implementation will be as shown in figure 1. The diagram is self explanatory.

Military commanders of other nations should take note of the above mentioned statements and have a serious thought given to the subject of information superiority and developing such capabilities.

- **Singapore - A Case Study.** Many nations have taken notice of the above statement. Singapore is one of them. Singapore is a nation that has moved forward in developing information superiority. “Singapore is beginning to emerge as a potential information power. Singapore’s national wealth already depends on the integrity of its vast array of information systems. Its national political and business leaders have recognised the potential of information, and are clearly adopting strategies which will make them leaders in information. It is assessed that future super powers could be smaller nations such as Singapore.”⁴

Information Superiority Development

The military will have to develop systems that will support towards acquiring information superiority. Some systems are intended just for information acquisition and others are for information superiority. Discussed below are some of the systems that the military will want to develop:

- **Ground-Based Surveillance.** Ground surveillance radars, military listening outposts and patrols will have to be deployed to acquire information. These are short range capabilities,

which are necessary to provide information on an immediate basis to ground commanders. The military may be supported by civilian informers and collaborators.

- **Maritime Surveillance.** Shore-based maritime surveillance radars will provide a source of information on illegal and security threat activities in the open seas. This system can be supported by maritime surveillance radars on board ships.

- **Airborne Surveillance.** AEWAC and other surveillance aircrafts will be able to provide a better coverage for information. These aircrafts can be supported by unmanned aerial vehicles. The unmanned aerial vehicles are popularly used in Iraq and Afghanistan currently.

- **Electronic Warfare.** Another popular and most efficient information acquisition system is the electronic warfare. Most nations have ground static and mobile stations for radio transmission monitoring and intercept. In some cases the military have airborne EW stations as well as surface and sub-surface EW vessels. In some cases more than 75% of accumulated intelligence is derived from electronic warfare monitoring stations.

- **Information Warfare.** There are two aspects of information warfare or information operation capabilities that need to be developed; the offensive and the defensive. Offensive aspects are those capabilities to be able to impose your will, over the information systems of your enemy. You steal, disrupt or deceive your enemy through the manipulation of his information systems. While having those offensive capabilities you must also have the second aspect, the ability to protect your own information systems from being access and manipulated by others.

- **Network Work Centric Warfare.** The network centric warfare (NCW) or network centric operations (NCO) are the extension of the current military information systems, known as the C3I, C4I or C4ISR. This is a normal progression or advancement of military defence systems, concept, doctrine and tactics. The military information system has to grow

³ US Army Vision 2010 Overview document from US Army website.

⁴ Westwood, *The Future Is Not What It Used To Be: Conflict in the Information Age*, Air Power Studies Centre, RAAF Base Fairbairn, Australia, page 30.

in sophistication, application and utilisation, to be abreast with and fully gain from the current and rapid advancing information and communication technology. A military force that “fail to understand and adapt the technology could lead into obsolescence and will be incapable of effective operations”, said by Gen Shalikashvili, the Chairman of the US Joint Chief of Staff.

The current C4I systems, which are information systems that have command and control elements, will have to be enhanced to be NCW/NCO, with the integration of other information systems, such as surveillance, reconnaissance and electronic warfare systems. If so wished and if it is practical, weapon systems and other combat platforms may be integrated into the NCW/NCO.

Challenges

There are challenges in the development of information superiority. These challenges have to be understood and overcome in order to progress smoothly and achieve the intended targets of information superiority. Discussed below are some of the challenges the military will face in the development of the information superiority.

- **Understanding.** Awareness by all relevant leaders, in the politics, the military service, the public service and the industry, of the importance of information to the military and that the military must strive to have information superiority, are the key to information superiority development. One must accept the fact that all information systems are vulnerable, but each system has its own level of vulnerability. Knowing the vulnerability of own systems then you will be able to know what protective measures to acquire. The best time to plan for protective measure is at the development stage. Firstly, systems must be developed by trusted local industry which will not sell information to foreigners, or have systems embedded with illegal chips. Protective measures must be planned and developed at the beginning of the system development and to be done also by trusted local industry. Our leaders must also know that knowing the vulnerability of opponent's systems then will enable you to develop

weapons to manipulate enemy information systems. Having that ability then you may have the enemy on their knees before they even fire the first shot at you. On the other hand, senior staff officers and commanders must understand threats to information systems, their origins and defences available. With that understanding they will not then accept anything less than the best information systems to be in service.

- **Organisational.** With those above-mentioned understanding then you can expect the organisation to support in system procurement, establishment and human resource as well as its development concept. The organisation will provide the best personnel for the information superiority assignments, especially those to be doing the offensive tasks. Personnel to do well in the offensive roles are those that have qualification, dedication and innovation.

- **Strategy.** The military will have to diligently and continuously develop strategies, doctrines and tactics towards achieving information superiority and ability to maintain the achieved standard by having the appropriate technological support within as well as from the industry. Workable strategies, doctrines and tactics will provide deterrence to potential attackers. You will have the ability to identify attackers and pursue them with counter attacks onto attackers' systems. With your strategies, tactics and training your offensive information operations will be successful.

- **Response.** Military organisations need to develop emergency response procedures and regularly review them to be current with technology and threats. Response to any intrusion or disturbance must be immediate to halt the penetration and quickly mount a counter attack. The response organisation and procedures must be efficient and effective. The supporting forensic analysis ability must be current with technology and responsive to any intrusion incidence.

- **Capability Development.** Human resource development and operational ability development will be continuous efforts. Development activities will require organisational

support. The structure and finance have to be conducive for those developments to be successful. Military rank and promotion structure, as well as job assignment duration will not allow for appropriate human resource and ability development. Trained personnel do not stay in their jobs long enough to be efficient and effective. In the field of capability development the military will need local industry support. Professionals in industry stay in their jobs for longer durations.

- **Defensive and Protective Capabilities.**

Defensive capabilities to be developed will require technological know-how. Basic tertiary education can be the base for technical capability, but to be professional in the defensive roles, post graduate programmes will be most suitable, especially in the fields of cryptography and communication security. The manpower retention problem has to be rectified to be successful in capability building.

- **Offensive and Aggressiveness.** Acquisition of offensive weapons and tools is an everlasting challenge. If you buy them, in no time they are obsolete. To replace with latest versions may not be possible owing to lack of fund and procurement tedious procedures. You will have to develop on your own, or with the support of local industry. Enhancement will be an automatic process as soon as technology is available.

Contributors To Information Superiority

For the military to achieve information superiority there must be support from various sectors. Each of the players mentioned below has roles to play:

- **Government.** The main player towards acquisition of the information superiority is the government itself. A government that understands the importance of information to the military will accord the necessary support, such as providing adequate budget for the programme. The military needs an initial development (DE) budget allocation for the programme to start and subsequent DE allocations for the expansion and enhancement. Annual operating estimates (OE) budget has to be sufficient to enable the military to

have an effective maintenance and enhancement programme.

- **Military.** The military itself must have capabilities and expertise in information system planning and development. Qualified and experienced manpower will have to be assigned to the task of information superiority development programme. The military will need to have human resource development plan to ensure that there will never be short of qualified and experienced personnel for the job.

- **Local Industry.** The programme needs the support of local industry. Involvement of foreign industry must be avoided totally to ensure the information superiority programme meets success. Local industry will have security vetted personnel who are qualified and experience to work on the programme to guarantee the programme will be a success. A consortium of local industry getting involved is most appropriate. Each with its own specialisation and expertise will share the responsibility to support the military achieving its information superiority objective. The members of the consortium must be reliable, trustworthy and committed towards local defence industry development and national defence.

- **Institutions of higher learning.** Government owned national institutions of higher learning have some roles to play. They can contribute by providing facilities and personnel for research and development in the subjects of computer and information towards achieving information superiority. The institutions can spend research efforts to acquire the offensive and defensive capabilities. The institutions too will be the source for qualified manpower required by the military and the industry.

Secure Information Systems

The military aspiring to have information superiority will need to have its own secure information systems that can not be access illegally, manipulated or interfered by others. With all the supports and awareness mentioned above the

military now will be in a better position to implement its own secure information systems. These systems will include all the information and communication technology networks, such as network centric warfare, network centric operations, C3I, C4I, C4ISR, executive information systems as well as logistics and administrative systems. To have information systems which are secure the military will have to consider implementing some elements in support of that objective. These elements are discussed below:

- **Intranet.** Military information systems are preferably to be based on intra network concept. Networks which are not connected to internet, the public network, will be more difficult for intruders to join the network to perform their mischievous acts.
- **Non-Integrated.** Administrative and logistic systems, with information of lower security classification, where possible, are not integrated to command and control and other operational systems that carry information of higher security classification. Each of the systems is left on its own to be used by specified users. Users of more than one system will have more than one computer terminals at his disposal, or one computer terminal, but with a switch that will allow him to have options to access to a variety of networks. Information from one system may still be shared to users of other systems, but by the use a proxy server. It will extract information from the provider system and have it ready to be accessed by outside users.
- **Intruder Detection and Protection.** Each information system will have intruder detection capability that will detect and warn system owner of intrusion or attempt of intrusion. The facility must be able to perform intruder protection as well.
- **Emergency Response.** The military must develop emergency response procedures and review them regularly. The procedures will provide an immediate response, which is efficient and effective. There will also be a forensic ability that is current with technology.
- **Defence in Depth.** Some defence in depth capabilities will ensure better security. It is

achieved by having the following concept for information systems development:

- ▶ Separate systems for information flow and command and control functions.
- ▶ Information kept in distributed databases.
- ▶ Information pulled from databases, not pushed to users.
- ▶ Multi layered defensive measures.
- **System Design Concept.** To ensure security, the following factors will have to be considered in designing information systems:
 - ▶ Joint development with local companies.
 - ▶ Robustness.
 - ▶ Resiliency.
 - ▶ Overlaps.
 - ▶ Duplication.
 - ▶ Isolation.
 - ▶ No work around patches.

INFORMATION SUPERIORITY OPERATIONS

Each commander, at strategic as well as at combat (tactical or operational) level, must have at his disposal units and assets to mount information superiority operations at all times. These assets must be of the state-of-the-art and supported by experienced and qualified personnel in order to be effective. These operations are of two types. They are as follows:

- **Defensive Operations.** A commander must have capabilities to test and evaluate his own radio, radars and other transmissions as well as his line networks are safe from enemy interferences. These security assessments are done regularly and any loop holes are rectified immediately.
- **Offensive Operations.** He must also be given the resources to mount offensive electronic warfare operations onto enemy radio, radar and

missile control devices and offensive information warfare operations onto enemy information networks.

His operational planning will be accurate and effective, resulting in least loss of life and victory is achieved.

CONCLUSION

The information superiority concept is the military response to information age. With the current trend of increasing utilisation of information and communication technology in the functions of command and control and the management of information in the military, government services and the commercial world, the military must take the initiative to acquire the capability of information superiority. Or else it will not be able to perform its functions in the modern times. The capability will put the military in a commanding position to impose its will onto others, within or outside the country, and to be most relevance to top government leaders.

The objective of information superiority for commanders in battle is to acquire combat power from being superior in information. Being superior in information is having the ability to operate your own information and combat systems freely without any interference or disturbance from the enemy, whereas the enemy does not have the same ability owing to your actions. His information systems are being controlled by us. By having information superiority a military commander will have more information that can be converted into intelligence.

For commanders to have information superiority they must be given resources to mount information superiority operations. To achieve information superiority, operations are mounted to affect the adversary in information, information-based processes, information systems and computer-based networks. While doing those activities onto others they have the ability to defend their own information, information-based processes, information systems and computer-based networks.

The military objective of acquiring information superiority can only be achieved through the involvement of local industry. The most effective and the best way of achieving the best result are not to get foreign industry involved, but only the local industry. Joint development between the military and its own local industry will bring the best from the two sectors. The development will be evolving from enhancing existing systems to full superiority. Strong defences are developed to protect your own information systems and offensive operational capability is available and ready to attack systems belonging to others. We must always remember that our systems are potentially priority targets for the enemy information warfare, information operations and electronic warfare activities.

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WALAUPUN ASPEK KETENTERAAN DIPENTINGKAN DALAM ISLAM TETAPI KEAMANAN ADALAH ASAS UTAMA DALAM AJARAN ISLAM

Oleh Lt Kol Mohd Radzi bin Abd. Hamid

“... terdapat individu-individu, kumpulan-kumpulan dan masyarakat yang bersifat ganas dan agresif dan tidak membenarkan orang lain hidup dalam keadaan aman dan selamat. Mereka sering melampaui batas-batas moral dan etika dan mencerooboh hak-hak orang lain tanpa sebarang alasan. Individu dan masyarakat yang sedemikian haruslah dihalangi agar individu dan masyarakat yang lain dapat hidup aman.”

(AlFazlur Rahman)

PENDAHULUAN

Perbalahan dan pergaduhan di kalangan manusia telah berlaku sejak zaman Nabi Adam A.S iaitu pergaduhan yang berlaku antara anak baginda Habil dan Qabir. Walau bagaimanapun evolusi pergaduhan ataupun peperangan yang berlaku semakin lama semakin ganas, sengit, canggih dan semakin tidak terkawal. Berdasarkan fakta sejarah tidak terdapat satu kaum pun yang tidak pernah bermusuhan sesama sendiri. Peperangan juga pernah berlaku di kalangan bangsa Greek, Yunan, Athen, Babylon, Farsi, India, Mesir, China, Yahudi dan Islam.

Peperangan terhadap agama yang paling kejam dan ganas telah berlaku dalam agama Yahudi. Fakta kekejaman dan keganasan tersebut dinyatakan dalam kitab El-Ishak yang ke 13 yang mengatakan *‘Bunuhlah penduduk bandar itu habis-habisan dan binasakan segala apa yang ada padanya termasuk binatang-binatangnya. Bakarlah segala barang-barang yang terdapat di dalam bandar itu. Semua barang-barang dalam bandar kepunyaan ‘Rabb’ kecuali dibakar itu. Jadikan ia padang jarak padang tekukur buat selama-lamanya’*.

Pada awal tahun 2004, seluruh negara digemparkan dengan berita perjuangan Kumpulan Jemaah Islamiah Malaysia ala pejuang mujahidin. Menurut pihak polis kumpulan ini dikaitkan dengan

pelbagai kes jenayah. Ahli-ahlinya di katakan mendapat latihan ketenteraan di Afghanistan. Benarkah kumpulan ini wujud di Malaysia? Sekiranya kumpulan ini wujud, kita akan dapat menelaah apakah objektif utama Kumpulan Mujahiden Malaysia. Antaranya ialah membela Islam ala perjuangan Mujahidin Afghanistan yang diperjuangkan atas dasar jihad. Persolan seterusnya, adakah kumpulan seperti ini perlu pada sebuah negara yang mempunyai organisasi ketenteraan yang majoriti anggota dan pemimpinnya ialah beragama Islam? Adakah perjuangan seperti itu boleh dipanggil jihad. Runtuhnya Pusat Perdagangan Dunia di New York menjadikan persoalan jihad menjadi lebih rumit untuk dikupas pada mata golongan yang tidak mempunyai pendidikan Islam. Pada hemat golongan ini jihad mungkin bersifat kejam, ganas dan tidak berperikemanusiaan. Walau bagaimanapun, adakah tindakan meletupkan Pusat Perdagangan Dunia, New York ataupun menyerang Amerika Syarikat merupakan satu perjuangan yang boleh ditafsirkan sebagai jihad. Perkara ini memerlukan satu kupasan yang lebih mendalam, menyeluruh dan tidak bersifat emosi.

Kertas kerja ini akan mengupas isu tindakan ketenteraan dari perspektif Islam. Perbincangan ini akan meliputi beberapa perkara penting seperti keperluan jentera ketenteraan, keamanan, jihad dan sikap mulia umat Islam.

KETENTERAAN MENGIKUT AL-QURAN DAN HUBUNGANNYA DENGAN JIHAD

Istilah ketenteraan dibina dari dua perkara iaitu tentera dan peperangan. Dengan adanya tentera dan peperangan, istilah ketenteraan dapatlah difahami sebagai hasil gabungan faktor manusia dengan faktor teknik (teknologi). Di dalam Al-Quran penggunaan tentera dinyatakan dalam kalimah '*jund*' atau '*junud*'. Terdapat beberapa ayat di dalam Al-Quran yang menyebut tentang kalimah '*jund*'. Contohnya dalam Surah Yasin ayat 75 yang bermaksud:

*Berhala-berhala (patung-patung) itu tidak dapat menolong mereka pada hal mereka menjadi tentera (yang disiapkan untuk) menjaganya.*¹

Manakala jihad berasal dari perkataan "al-Juhd" yang bererti keberatan.² Ulama Islam meletakkan jihad sebagai salah satu kewajipan yang berterusan di kalangan umat Islam sehinggalah ke hari kiamat. Jihad diwajibkan untuk mempertahankan agama Allah dan untuk menjamin keselamatan umat Islam daripada sebarang bentuk permusuhan di dalam bentuk akidah, keselamatan diri, nyawa, harta benda mahupun kehormatan umat Islam. Walaupun Allah berkuasa untuk menolong umat-umatnya namun Allah tidak terus berbuat demikian kerana hendak menguji umat-umatnya.

Inilah sebabnya umat Islam diwajibkan berjihad dan diwajibkan melaksanakan '*amr bil ma' ruf*' dan '*nahyu anil munkar*'.³ Jika umat Islam tidak melaksanakannya mereka akan mendapat dosa dan diseksa oleh Allah di akhirat kelak. Perkara ini dinyatakan oleh Allah di dalam firmanNya di dalam surah Muhammad ayat 31 yang bermaksud:

"Dan sesungguhnya kami akan benar-benar menguji kamu mengetahui orang-orang yang berjihad dan bersabar di antara kamu, dan agar kami menyatakan (baik buruknya) hal ehwalmu".

¹ H.Mahmud Yunus, *Tafsir Quran Karim*, Pustaka Al-Azhar, Kuala Lumpur, 1987, ms 653.

² Harun Din, *Manusia dan Jin*, Dorong UBS Sdn .Bhd, Kuala Lumpur, 1985, ms 331.

³ Sa'id Hawwa, *Jihad Pada Jalan Allah*, Dewan Pustaka Hajar, Kuala Lumpur, 1988, ms 11.

Ini bermakna Islam mewajibkan perang bagi menyempurnakan jihad terhadap Allah dan bukannya bagi tujuan yang lain seperti penjajahan tanah air, politik, ekonomi, kebendaan, membalas dendam dan lain-lain lagi. Tegasnya perang dan jihad tidak boleh dikenakan terhadap orang-orang kafir selagi tidak wujud perseteruannya yang nyata terhadap Islam. Menurut Forsyth (2006), Jihad memiliki syarat dan peraturan yang amat khusus. Antaranya ialah jihad mesti diisytihar oleh ulama yang diterima, tidak boleh menyerang dan membunuh insan yang tidak ganas dan tidak melakukan sebarang tindakan untuk mencederakan umat, di larang membunuh wanita dan kanak-kanak, dan dilarang untuk menahan dan menyeksa tawanan, tidak mati dengan cara membunuh diri, dan tidak mengetahui bila dan di mana akan mati⁴. Bagaimana pula dengan pengebom berani mati yang dikatakan berjihad seperti di Iraq, London, Thailand dan Afghanistan? Forsyth menggelar perjuangan kumpulan ini sebagai '*New Jihadis*' yang mencipta perjuangan sendiri dan kemudiannya mencari ayat Al-Quran dan Sunnah bagi menjustifikasikan perjuangan mereka yang lebih banyak membunuh orang Islam dari Kristian dan Jews. Ini dengan jelas membuktikan kepada kita bahawa peperangan dibenarkan di dalam Islam tetapi ianya tidak boleh digunakan dengan sewenang-wenang hingga melampaui batas.

Di dalam agama Islam istilah jihad mempunyai pengertian yang lebih umum daripada istilah peperangan tetapi peperangan merupakan sebahagian daripada jihad kepada Allah dan ianya merupakan pengorbanan yang besar dan sangat mulia di sisi Allah. Sebab itulah di dalam Islam, setiap individu muslim mestilah pada umumnya merelakan dirinya untuk berjihad ke jalan Allah dan khususnya apabila diperintahkan berjihad bagi menegakkan kalimah Allah.

Jihad boleh dibahagikan kepada dua iaitu jihad dalaman dan jihad luaran. Jihad dalaman ialah jihad terhadap diri sendiri yang meliputi jihad terhadap nafsu dan menentang syaitan. Manakala jihad luaran pula merupakan jihad diri terhadap orang-orang kafir, munafik, zalim, rosak dan fasiq. Jihad luaran juga meliputi jihad di dalam mempertahankan negara, jiwa, masyarakat, harta benda, kehormatan dan akidah umat Islam seluruhnya.

⁴ Forsyth, F. *The Afghan*, Corgi Books, 2006, m.s 46-48.

Dalam sejarah Islam, perintah Allah yang membenarkan umat Islam berjihad (berperang) berlaku setahun selepas penghijrahan Nabi Muhammad S.A.W. dari Mekah ke Madinah. Iaitu apabila keadaan perseteruan, ancaman dan keganasan orang-orang kafir Quraisy terhadap umat Islam semakin memuncak sehingga Nabi Muhammad S.A.W. sendiri hendak dibunuh oleh orang-orang kafir Quraisy. Ini dengan jelas menunjukkan kepada kita bahawa jihad diperlukan untuk memelihara agama dan maruah umat Islam.

Hanya orang yang benar-benar muslim sahaja yang bersedia untuk berjuang dengan bersungguh-sungguh walaupun dengan berkorban nyawa dan harta benda untuk keredaan Allah.⁵ Di sini letaknya kepentingan jihad di dalam Islam. Jika manusia tidak berani hingga ke tahap ini maka sudah tentu dunia ini akan dipenuhi dengan kezaliman, kemaksiatan, penindasan, dan huru-hara. Oleh itu hanya jihad yang menjadi alternatif dan jalan penyelesaian bagi menegakkan keamanan dan ketertiban di muka bumi ini.

Jihad yang diizinkan oleh Allah di dalam Islam bukan hanya bertahan apabila menghadapi serangan musuh, malah mengambil langkah awal untuk menahan dan menghalang serangan serta tindakan musuh. Tegasnya jihad bukanlah hanya bertahan apabila diserang sebaliknya perlu menyerang musuh terlebih dahulu, apabila sudah jelas wujudnya ancaman musuh terhadap agama Islam. Di antara lain tujuan-tujuan jihad ialah:

- Untuk memelihara masyarakat Islam.
- Untuk memelihara ideologi yang menjadi asas kepada tertegak sistem hak.
- Untuk menghancurkan semua kuasa yang batil yang mengancam kejayaan yang telah dicapai oleh revolusi Islam dan menghalang pelaksanaan Islam itu seterusnya.
- Untuk menolak dan menghancurkan semua halangan yang menyekat proses perubahan sosial dan kebajikan manusia.⁶

⁵ Al-Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur 1990, m.s 17.

⁶ Naeem Siddiqi, *Muhammad Pembina Umat*, Pustaka Salam, Kuala Lumpur, 1989, m.s 180.

ISLAM MENGUTAMAKAN KEAMANAN

Keamanan adalah asas dan dasar kepada kehidupan di dalam Islam sementara peperangan hanyalah satu perkara keperluan iaitu apabila tiada lagi jalan penyelesaian atau pilihan lain.⁷ Walaupun peperangan dibenarkan di dalam Islam tetapi ianya merupakan jalan terakhir dan sekiranya masih ada lagi peluang untuk mengelakkannya daripada berlaku, maka ianya hendaklah dielakkan.

Itulah sebabnya apabila umat Islam mencapai kemenangan di dalam peperangan yang pertama iaitu peperangan Badar ada pendapat yang mengatakan Islam itu lahir di hari Nabi Muhammad S.A.W dibangkitkan dan negara Islam pula lahir pada hari orang-orang Islam menang di Badar.⁸ Peperangan Badar menjadi titik tolak kepada perkembangan Islam kemudiannya. Selepas peperangan Badar orang-orang kafir telah mula mengiktiraf dan memandang mulia kepada Agama Islam. Agama Islam diturunkan oleh Allah untuk membawa kedamaian, ketenangan dan kesejahteraan kepada manusia sejagat agar manusia dapat hidup di dalam keadaan yang aman di atas muka bumi ini. Ini dapat dilihat dengan jelas daripada firman Allah di dalam surah Al- Maidah ayat 15-16 yang bermaksud:

Sesungguhnya telah datang kepadamu cahaya dari Allah dan kitab yang menerangkan. Dengan kitab itulah Allah menunjuki orang-orang yang mengikuti keredaannya ke jalan-jalan keselamatan dan (dengan kitab pula) Allah mengeluarkan orang-orang itu dari gelap gelita kepada cahaya yang terang benderang dengan seizinnya dan menunjuki mereka ke jalan yang lurus (siratul mustaqim).⁹

Jalan yang lurus merupakan jalan kehidupan yang membolehkan manusia membangunkan semula kekuasaan dan kebolehannya mengikut kehendaknya sendiri untuk kebaikan seluruh manusia dan bukannya untuk kepentingan peribadi.

⁷ Al-Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur, 1990, m.s 3.

⁸ Mahmood Shit Kattab, *Al Badar Al Kubra*, Pustaka Ikhwani, Kuala Lumpur 1986, m.s 14.

⁹ H. Mahmud Yunus, *Tafsir Quran Karim*, Pustaka Al-Azhar, Kuala Lumpur, 1987, m. s 149.

Tegasnya ianya merupakan jalan kehidupan yang membolehkan individu dan masyarakat menyelesaikan masalah kerohanian, moral, ekonomi, politik dan antara negara dengan cara yang seimbang, licin dan adil.

Oleh yang demikian Nabi Muhammad S.A.W menyebar ajaran Islam melalui cara yang terbuka dan mementingkan penerimaan yang ikhlas dan bukannya dengan cara paksaan. Di samping itu juga Nabi Muhammad dan pengikut-pengikutnya tidak cepat melatah dan bertindak balas terhadap orang-orang kafir Quraisy yang sentiasa mengganggu, menzalimi dan menindas umat Islam. Menyedari akan hakikat betapa keamanan itu penting untuk memudahkan usaha-usaha penyebaran Islam secara berkesan maka Nabi Muhammad S.A.W telah bersetuju untuk memeterai perjanjian Hudaibiah dengan kaum kafir Quraisy pada tahun keenam hijrah.

Meskipun beberapa fasal perjanjian itu ditafsirkan sebagai merugikan umat Islam oleh sesetengah pihak seperti fasal yang menyebut Nabi Muhammad S.A.W dikehendaki menyerahkan orang-orang kafir Quraisy Mekah dan kaum Muslimin tidak dibenarkan menunaikan haji di Mekah pada tahun itu tetapi sejarah Islam membuktikan bagaimana umat Islam di Madinah telah telah berjaya meneguhkan pembinaan kekuatan mereka dalam bidang politik, ekonomi dan sosial di dalam era keamanan hasil perjanjian ini sehinggalah umat Islam akhirnya berjaya menakluk Mekah di tahun kelapan Hijrah.¹⁰

ISLAM MENGUTAMAKAN KEDAMAIAN

Perkataan Islam bermaksud damai dan penyerahan, dan kepatuhan kepada perintah Allah yang merupakan pencipta, pemilik dan penguasa seluruh alam.¹¹ Sesiapa yang mendapatkan petunjuk ke arah jalan yang benar dari Allah dengan cara sukarela ia akan dikurniakan kedamaian dan kegembiraan oleh Allah. Mereka juga akan mendapat keselamatan daripada niat, fikiran dan tindakan yang salah dan akibat-akibat daripadanya

kerana di dalam setiap pertimbangan mereka akan memilih jalan yang selamat melalui hidayah Allah. Ini dinyatakan oleh Allah di dalam firmanNya di dalam surah Al-Hasyr ayat 23 yang bererti:

*Dialah Allah tiada tuhan selain Dia, Raja Yang Maha Suci, Yang Maha Sejahtera, Yang Mengurniakan Keamanan, Yang Maha Memelihara, Yang Maha Perkasa, Yang Maha Kuasa, yang Memiliki Segala Keagungan, Maha Suci Allah dari apa yang mereka persekutukan.*¹²

Musuh-musuh Islam telah menentang dan menghalang Nabi Muhammad S.A.W daripada menyeru manusia ke jalan kedamaian dan kegembiraan melalui risalah-risalah yang di sampaikan. Musuh-musuh Islam telah melakukan berbagai kezaliman dan peneksaan terhadap Nabi Muhammad S.A.W dan pengikut-pengikutnya tetapi semua ini tidak langsung melemahkan Nabi Muhammad S.A.W dan pengikut-pengikutnya untuk terus mengembang dan mengamalkan ajaran Islam.

Sebagai menjunjung perintah Allah untuk mengajak manusia ke arah kebenaran, Nabi Muhammad S.A.W umpamanya telah mengirim perutusan kepada kerajaan-kerajaan jiran negara Islam Madinah, mengajak mereka menerima Islam. Sebagai contoh dikemukakan surat yang di kirimkan oleh Nabi Muhammad S.A.W kepada Kaisar Rom Heraklius yang berbunyi:

Dengan nama Allah yang Maha Pengasih lagi Maha Penyayang. Dari Muhammad Rasullulah untuk Heraklius Kaisar Rom. Semoga keselamatan dilimpahkan bagi orang-orang yang mengikuti jalan petunjuk. Sesungguhnya aku mengajakmu kepada Islam. Islamlah kamu nescaya kamu akan selamat dan Allah pun akan memberi pahala dua kali ganda, apabila kamu berpaling maka kamu akan menanggung dosa-dosa kaumu. Wahai ahli kitab marilah kita berpegang kepada satu kalimah kesepakatan yang tidak diperselisihkan antara kami dan kalian, iaitu kita tunduk menyembah kecuali kepada Allah dan kita tidak akan menyekutukan Dia dengan

¹⁰ Jahid Sidek, *Strategi Menjawab Sejarah Islam*, Nurin Enterprise, Kuala Lumpur, 1987, m.s 141.

¹¹ Harun Din, *Manusia dan Islam*, Dorong UBS Sdn. Bhd., Kuala Lumpur, 1985, m.s 26

¹² H. mahmud Yunus, *Tafsir Quran Karim*, Pustaka Al-Azhar, Kuala Lumpur, 1987, m.s 820.

*sesuatu pun dan tidak pula sebahagian kita menjadikan tuhan kepada sebahagian yang lain selain Allah. Jika mereka berpaling katakanlah kepada mereka saksikanlah bahawa kami adalah orang-orang yang menyerahkan diri kepada Allah.*¹³

Diriwayatkan Heraklius hampir menerima Islam selepas membaca surat ini, namun begitu telah dihalang oleh paderi Kristian kerajaannya ketika itu. Beliau akhirnya membatalkan niatnya kerana bimbang akan kehilangan takhtanya. Demikianlah dapat kita saksikan bagaimana secara bijaksana nabi Muhammad S.A.W mengajak seorang pemimpin kerajaan kafir supaya memeluk Islam secara damai sehingga berjaya melembutkan jiwa seorang raja yang dikatakan begitu keras pendiriannya.

Sejarah juga telah membuktikan Islam itu berkembang melalui proses kedamaian dan bukannya melalui ketenteraan apabila jumlah penganut Islam meningkat dari masa ke semasa meskipun di saat empayar Islam yang akhir (empayar Othmaniah) kehilangan kuasa ketenteraan selepas berakhirnya abad ke 18.

ISLAM MENGHORMATI DAN MEMULIAKAN NYAWA MANUSIA

Islam amat menghormati dan memuliakan nyawa manusia dan telah melakukan segala perkara yang mungkin untuk menyelamatkan dan mempertahankan nyawa tersebut.¹⁴ Ini dijelaskan oleh Allah di dalam firmanNya di dalam surah Al- An' Aam ayat 151 yang bermaksud:

Katakanlah, marilah kubacakan apa yang atas kamu, oleh tuhanmu iaitu; Jangan kamu mempersekutukan sesuatu yang Dia, berbuat baiklah terhadap kedua orang ibu bapa dan janganlah kamu membunuh anak-anak kamu kerana takut kemiskinan. Kami akan memberi rezeki kepada kamu dan kepada mereka dan janganlah kamu dekati perbuatan-perbuatan yang keji, baik nampak di antaranya

*mahu pun yang tersembunyi dan janganlah kamu membunuh jiwa yang diharamkan Allah (membunuhnya) melainkan dengan sesuatu sebab yang benar. Kemudian yang diperintahkan oleh Tuhan mu kepada mu supaya kamu memahami (nya).*¹⁵

Selagi seseorang itu menghormati hak orang lain untuk kehidupan, tiada sesiapa pun yang dibenarkan untuk mengambil nyawanya. Nyawa manusia perlu dipelihara kesuciannya bagi menjamin keselamatan kehidupan manusia. Tindakan pengeboman Pusat Perdagangan Dunia New York adalah bertentangan dengan ayat ini kerana ianya melibatkan nyawa orang awam yang tidak berdosa. Ianya menjadi lebih bertentangan lagi sekiranya ada orang Islam di dalam bangunan tersebut. Ini bermakna kedamaian dan keamanan merupakan sesuatu yang amat dipentingkan di dalam Islam bagi memberi peluang kepada manusia untuk hidup dengan aman, selamat dan sejahtera.

Sungguhpun Allah membenarkan umat Islam berperang dan berjihad (dilancarkan apabila perlu sahaja) tetapi pada masa yang sama juga Allah telah menetapkan batas-batas yang perlu dipatuhi oleh umat Islam di dalam peperangan. Ketegasan ini dapat dilihat dengan jelas dari firman Allah di dalam surah Al-Baqarah ayat 190-193 yang bererti:

Dan perangilah di jalan Allah orang-orang yang memerangi kamu, tetapi janganlah kamu melampaui batas, kerana sesungguhnya Allah tidak menyukai orang-orang yang melampaui batas. Dan bunuhlah mereka di mana kamu menjumpai mereka. Dan usirlah mereka dari tempat mereka telah mengusir kamu (Mekah); dan fitnah itu lebih merbahaya dari pembunuhan, dan janganlah kamu memerangi mereka di Masjidil Haram kecuali jika mereka memerangi kamu di tempat itu. Jika mereka memerangi kamu di tempat itu, maka bunuhlah mereka. Demikianlah balasan bagi orang-orang kafir. Kemudian jika mereka berhenti (dari memusuhi kamu) maka sesungguhnya Allah Maha Pengampun Lagi Maha Penyayang. Dan perangilah mereka sehingga tiada lagi fitnah

¹³ Muhammad Al Maliki, Al Hassani , *Detik-Detik Penting Dalam Kehidupan Rasullulah*, Pustaka Nasional, Singapura, 1979 m.s 34

¹⁴ Al Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur, 1991 M.s 8.

¹⁵ H.Mahmood Yunus, *Tafsir Quran Karim*, Pustaka Al-Azhar; Kuala Lumpur, 1987, m.s.204.

*dan (sehingga) agama itu hanya untuk Allah sahaja. Jika mereka berhenti (dari memusuhi kamu) maka tiada permusuhan lagi, kecuali terhadap orang-orang yang zalim.*¹⁶

Allah telah menetapkan had-had di dalam peperangan sebagai satu lagi bukti bahawa Islam amat memuliakan dan menghormati nyawa manusia. Kerana di kalangan ramai musuh-musuh Islam itu ada terdapat musuh-musuh Islam yang tidak aktif seperti kanak-kanak, orang-orang perempuan, orang-orang tua, orang-orang yang sakit dan sebagainya di mana mereka ini memerlukan pertolongan dan janganlah dianiaya.

Berdasarkan kepada prinsip-prinsip inilah kita dapati jumlah mereka yang terbunuh di dalam semua peperangan hanyalah seramai 255 orang di pihak Islam dan 759 di pihak musuh dalam tempoh 10 tahun kegiatan ketenteraan Nabi Muhammad S.A.W di Madinah.¹⁷ Manakala jumlah orang-orang tawanan di dalam kesemua peperangan ialah 6,564 orang dan daripada sejumlah itu seramai 6,374 orang telah dibebaskan manakala selebihnya telah menganut Islam dengan kerelaan mereka sendiri.

Nabi Muhammad S.A.W juga telah menghalang pembunuhan beberapa orang kafir Quraisy di dalam perang Badar kerana mereka menyertai musuh bukan dengan kerelaan hati mereka di antaranya seperti Abbas bin Abdul Mutalib dan Abu Bakhtari bin Hisyam. Malah semasa penaklukan semula kota Mekah Nabi Muhammad S.A.W telah mengampunkan kesemua mereka yang telah bertindak kejam terhadap baginda dan pengikut-pengikutnya selama 15 hingga 20 tahun yang lalu.¹⁸

Dalam haji perpisahan Nabi Muhammad S.A.W telah bersabda kepada sahabat-sahabatnya *'Nyawa dan harta kamu adalah suci sehingga kamu menemui Tuhan kamu kerana hari dan bulan ini adalah suci. Kamu pasti akan menemui Allah dan Dia akan menyoal akan amalan-amalan kamu. Selagi mana pengikutnya tidak menumpahkan*

darah yang di haramkan oleh Allah selagi itulah imannya akan terus bertambah. Di hari kiamat kelak perkara pertama yang akan diadili oleh Allah terhadap manusia ialah tuntutan darah'.¹⁹

Menumpahkan darah-darah manusia tergolong di dalam dosa-dosa besar. Penghormatan dan kemuliaan terhadap nyawa ini amat jelas menunjukkan bahawa Islam amat mengutamakan perdamaian dan keamanan di dalam kehidupan manusia. Tidak kira siapapun yang terlibat sama ada Osama Ben Laden ataupun Saddam Hussein dan atas dasar apapun alasan mereka tetapi pengeboman Pusat Perdagangan Dunia New York adalah secara terang bertentangan dengan ajaran Islam. Orang yang bertanggungjawab dalam pembunuhan akan disoal oleh Allah di hari kiamat ataupun perhitungan tuntutan darah.

Ketika di zaman persekolahan, saya teruja dengan perjuangan sekelompok orang Islam yang dikatakan berjuang atas prinsip jihad di Kashmir dan Srinagar. Pada sebelah petangnya, saya dan rakan-rakan bermain perang dan bergaya seperti pejuang jihad di Kashmir dan Srinagar. Kesemua kami pada petang itu mati syahid. Allah S.W.T maha kaya lagi maha mengetahui. Pada tahun 1998, saya diberi peluang untuk menyiapkan tesis sarjana 'staff college' India dan saya memilih tiga lokasi sebagai kawasan kajian iaitu Kashmir, Srinagar dan Leh. Selama menjalankan kajian tesis sehingga siap di ketiga-tiga lokasi berkenaan, saya dapati golongan yang saya sanjung ketika zaman persekolahan tidak mempunyai sekelumit alasanpun untuk mengatakan perjuangan mereka adalah jihad. Ini kerana masyarakat Islam di Khasmir, dan Srinagar bebas untuk mengamalkan ajaran Islam pada bila-bila masa dan di mana sahaja. Azan berkemundang di setiap lembah pada setiap waktu. Perjuangan golongan tersebut yang mengganggu mereka untuk hidup lebih aman. Bahkan tidak keterlaluan jika saya katakan kehidupan masyarakat Islam di Khasmir dan Srinagar lebih mencerminkan Islam, jika dibandingkan dengan kita. Cubalah berdiri selama satu jam di hadapan pasaraya Kotaraya, Kuala Lumpur dan perhatikan sekeliling. Adakah anda melihat sebarang tanda keislaman dan adakah anda dapat mendengar bunyi azan?

¹⁶ H. Mahmud Yunus, *Tafsir Quran Karim*, Al-Azhar, Kuala Lumpur, 1987 M.S. 39 - 40

¹⁷ Naeem Siddiqi, *Muhammad Pembina Umat*, Pustaka Salam, Kuala Lumpur 1989 m.s. 187

¹⁸ Ibid, m.s. 188

¹⁹ Al-Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur, 1990, M.s 8

TIADA PAKSAAN DI DALAM ISLAM

Allah tidak pernah memaksa sesiapa pun untuk mengikuti ajaran Islam dan menikmati kebaikan dan kedamaian.²⁰ Nabi Muhammad S.A.W hanya menjalankan tugasnya untuk menyampaikan ajaran Islam kepada manusia dan terpulanglah kepada manusia itu sendiri sama ada hendak menerimanya atau sebaliknya. Sesiapa yang menuruti ajaran Islam akan dipimpin ke jalan yang benar, bahagia dan damai manakala bagi yang memilih jalan yang lain akan sesat di dalam kegelapan dan kejahilan. Ini dinyatakan oleh Allah di dalam surah Ibrahim ayat 4 yang bermaksud:

*Kami tidak mengutuskan seorang rasul pun melainkan dengan bahasa kaumnya supaya ia dapat memberi penjelasan yang terang kepada mereka. Maka Allah menyesatkan sesiapa yang Dia kehendaki dan Dialah Tuhan Yang Maha Kuasa lagi Maha Bijaksana.*²¹

Penerimaan atau penolakan terhadap Islam adalah berdasarkan kepada keputusan seseorang manusia itu sendiri tanpa dipaksa oleh sesiapa. Oleh yang demikian seseorang hanya akan menganut agama Islam apabila ia telah benar-benar yakin kepada kebenaran agama Islam. Tiadalah gunanya memaksa seseorang manusia itu supaya menerima Islam kerana keyakinan adalah soal hati seseorang dan tiada sebarang paksaan atau kekuatan yang dapat menjadikan seseorang itu menerima sesuatu yang tidak diyakini kebenarannya.²²

Selepas penerangan dan penjelasan yang disampaikan terpulanglah kepada mereka sama ada hendak beriman atau pun tidak tanpa ada sebarang unsur-unsur paksaan di dalam agama.²³ Akan tetapi rasa takut kepada hukuman dan balasan di akhirat kelak yang membuatkan seolah-olah seseorang itu menerima sesuatu agama itu demi untuk

menyelamatkan dirinya tidaklah boleh dianggapkan bahawa seseorang itu benar-benar beriman.

Keimanan seseorang tidak akan sempurna sehinggalah ia menerimanya dengan hati yang terbuka dan penuh kerelaan. Paksaan akan memusnahkan seluruh konsep bertanggungjawab, diberi kebebasan dan ganjaran di akhirat. Oleh kerana itu Islam tidak menyarankan unsur-unsur paksaan dan ugutan di dalam penyebarannya kerana tindakan yang sedemikian akan memusnahkan tujuan utama falsafah hidupnya, iaitu kebahagiaan manusia bergantung kepada pilihan mereka sendiri.²⁴ Allah telah berfirman di dalam surah Al – Baqarah ayat 256 yang bererti:

Tiada paksaan untuk (memasuki) agama Islam. Sesungguhnya telah jelas jalan yang benar dari jalan yang salah. Kerana itu barang sesiapa yang ingkar kepada taghut dan beriman kepada Allah, maka sesungguhnya ia telah berpegang kepada buhul tali yang amat kuat yang tidak akan putus. Dan Allah Maha Mendengar lagi Maha Mengetahui.

Ayat di atas dengan jelas menunjukkan kepada kita bahawa walaupun Islam mengutamakan kedamaian dan keamanan hidup namun ianya tidak pula sampai ke peringkat di mana ianya dipaksa ke atas manusia untuk mengikutinya. Sebaliknya manusia diberikan kebebasan yang seluas-luasnya untuk membuat pilihan yang mereka sukai.

TINDAKAN KETENTERAAN YANG DIBENARKAN

Meskipun Islam mengutamakan kedamaian, keamanan dan amat menghormati nyawa manusia namun ini tidak pula bermakna umat Islam hanya perlu bersabar dan berdiam diri untuk menunggu pertolongan daripada Allah apabila menghadapi ancaman daripada musuh. Konsep jihad itu sendiri jika difahami dengan sebenar-benarnya akan dapat memandu kita ke arah tindakan yang betul. Iaitu musuh-musuh Islam yang didapati mengancam keselamatan umat Islam perlu diperangi terlebih dahulu sebelum mereka diperangi oleh musuh

²⁰ ibid. m.s 5.

²¹ H. Mahmud Yunus, *Tafsir Quran Karim*, Pustaka Al-Azhar, Kuala Lumpur, 1987, m.s 359-360.

²² Al- Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur, 1990, m.s 21.

²³ Harun Din, *Manusia dan Islam*, Dorong UBS Sdn Bhd . Kuala Lumpur, 1985, m.s 385

²⁴ Al-Fazlur Rahman, *Muhammad Panglima Tentera*, HIZBI, Kuala Lumpur, 1990, m.s 22.

apabila permusuhan telah jelas kelihatan. Di dalam keadaan seumpama inilah Allah telah mengizinkan umatnya supaya berperang menentang musuh-musuh Islam.

Walaupun demikian peperangan yang dibenarkan oleh Allah itu mempunyai had-had dan peraturan-peraturan yang tertentu yang telah ditetapkan oleh Allah. Peperangan yang dibenarkan ialah perjuangan yang dilancarkan dengan sebab-sebab yang diizinkan Allah dan antaranya ialah seperti berikut:

- **Menghalang keganasan dan mengekalkan keamanan.** Manusia yang ganas, agresif dan tidak membenarkan orang lain hidup dengan aman dan damai perlu dihapuskan dari muka bumi ini. Mereka ini sering mencero bohi nyawa dan harta benda orang lain untuk kepentingan mereka sendiri. Oleh yang demikian tindakan manusia yang seumpama ini perlu dihalang bagi membolehkan manusia yang lain dapat hidup di dalam keadaan yang aman dan damai. Contohnya penyeksaan kaum kafir Mekah ke atas Bilal bin Rabah di mana ibunya telah disula, ayahnya dibutakan mata, saudara mara dan dirinya sendiri telah diseksa dengan api.²⁵ Malah untuk menghalang golongan manusia yang seumpama ini daripada terus bermaharajalela Islam mewajibkan mereka ini diperangi bagi mengekal keamanan dan ketertiban hidup agar manusia dapat mengamalkan ajaran agama mereka tanpa sebarang perasaan takut dan gelisah.
- **Mempertahan dan melindungi diri.** Di awal-awal penyebaran Islam Nabi Muhammad S.A.W telah menyebarkan secara senyap-senyap di kalangan sahabat handai dan saudara maranya yang terdekat. Lama-kelamaan apabila ajarannya telah diterima ramai dan pengikut-pengikutnya telah bertambah ramai. Baginda telah mula menyebarkannya secara terbuka tetapi dengan perasaan penuh kasih sayang di antara satu sama lain.

Walau bagaimanapun apabila kaum kafir Quraisy mendapati ajaran Nabi Muhammad

S.A.W telah mula disebarkan secara terbuka ini, mereka telah mula merasa bimbang dan seterusnya telah memulakan penentangan. Apabila penentangan mereka tidak diendahkan oleh Nabi Muhammad S.A.W dan pengikut-pengikutnya, maka penentangan tersebut telah ditingkatkan hingga semakin lama semakin zalim dan ganas. Orang-orang kafir Quraisy Mekah telah mengikat perjanjian untuk mengenakan pemulauan ekonomi dan sosial terhadap Rasulullah S.A.W dan sahabat-sahabatnya serta juga suku kaum bani Abdul Manaf yang sentiasa membela Rasulullah S.A.W.²⁶

Apabila orang-orang kafir Quraisy mendapati beberapa orang Islam dari Mekah telah berpindah ke Madinah, mereka telah meningkatkan permusuhan dan akhirnya telah membuat persediaan membunuh Nabi Muhammad S.A.W.²⁷ Walau bagaimanapun Allah telah menyelamatkan baginda dan telah memerintahkan baginda dan pengikut-pengikutnya berhijrah ke Madinah. Baginda dan pengikut-pengikutnya telah menanggung penderitaan akibat daripada perbuatan orang-orang kafir Quraisy selama 13 tahun, sehingga mereka terpaksa meninggalkan harta benda, rumah tangga, kaum keluarga, Kaabah bagi mencari perlindungan di Madinah, semata-mata untuk mempertahankan agama mereka dan mengamalkannya dengan bebas. Di Madinah orang kafir Quraisy terus melancarkan pencerobohan dan serangan terhadap umat dan agama Islam. Oleh yang demikian peperangan telah dibenarkan di dalam Islam sebagai langkah untuk mempertahankan dan melindungi diri daripada diseksa dan dimusnahkan.

Perjuangan (peperangan) untuk menghapuskan kuasa-kuasa yang bersifat penindas dan peruntuh adalah amat perlu kerana sekiranya kemungkaran tidak dihancurkan dengan kekerasan tetapi dibiarkan berleluasa melakukan kejahatan maka semua

²⁵ Harun Din, *Manusia dan Islam*, Dorong UBS Sdn Bhd, Kuala Lumpur, 1985, m.s 371

²⁶ Harun Din, *Manusia dan Islam*, Dorong UBS Sdn Bhd, Kuala Lumpur, 1985, m.s 371.

²⁷ Ahmad Ibrahim, *Piagam Madinah (Pandangan dan Ulasan)*, Gelanggang Kreatif, Kuala Lumpur, 1085. M.s 9.

kebaikan, kemuliaan dan ketakwaan kepada Allah akan turut musnah.²⁸

Untuk menghadapi ancaman, serangan dan pencerobohan daripada golongan kafir Quraisy ini, Nabi Muhammad S.A.W. dan pengikut-pengikutnya terpaksa mempertahankan Islam dan pengikut-pengikutnya dengan menyerang dan membalas serangan daripada musuh-musuh Islam bagi tujuan mempertahankan diri, agama dan tanah air mereka. Kebenaran berperang buat pertama kalinya diberikan oleh Allah kepada Nabi Muhammad S.A.W dan pengikut-pengikutnya terdapat di dalam surah Al- Hajj ayat 39-40 yang bererti:

Telah diizinkan berperang bagi orang-orang yang diperangi kerana sesungguhnya mereka telah dianiaya. Dan sesungguhnya Allah benar-benar Maha Kuasa menolong mereka itu, (laitu) orang-orang telah diusir dari kampung halaman mereka tanpa alasan yang benar, kecuali mereka berkata: Tuhan kami hanyalah Allah. Dan sekiranya Allah tiada menolak (keganasan) sebahagian manusia dengan sebahagian yang lain, tentulah telah dirobohkan biara-biara Nasrani, gereja-gereja, rumah ibadat orang-orang Yahudi dan masjid-masjid yang di dalamnya banyak disebut nama Allah. Sesungguhnya Allah pasti menolong (agamanya). Sesungguhnya Allah benar-benar Maha Kuat lagi Maha Kuasa.

Beralaskan faktor inilah Nabi Muhammad S.A.W memerangi kaum Yahudi Bani Quraizhah di dalam perang Bani Quraizhah di tahun kelima hijrah. Ini adalah kerana kaum ini telah mengkhianati perjanjian damai dengan Nabi Muhammad S.A.W di Madinah dengan menyertai tentera musyrikin di dalam peperangan Kandak. Tindakan kaum ini secara terang-terangan terlibat untuk menghancurkan negara Islam dan sekiranya kaum ini tidak diperangi besar kemungkinan mereka akan bertindak ganas terhadap negara Islam pada masa hadapan, maka Nabi Muhammad S.A.W

bertindak menyerang perkampungan kaum itu. Mereka dikalahkan secara keseluruhan dimana kaum lelaki dan kaum wanita dijadikan hamba sahaya.²⁹

● **Menolong golongan orang yang ditindas dan dizalimi.** Allah juga membenarkan umat Islam berperang bagi menolong orang-orang yang lemah, kanak-kanak, orang-orang perempuan, orang-orang tua, orang-orang yang sakit yang dizalimi dan ditindas. Ini jelas dapat di lihat dari firman Allah di dalam surah An-Nisaak ayat 75 yang bermaksud:

Mengapa kamu tidak berperang di jalan Allah dan (membela) orang-orang yang lemah baik laki-laki, wanita-wanita mahupun anak-anak yang semuanya berdoa : ya Tuhan kami, keluarkanlah kami dari negeri ini (Mekah) yang zalim penduduknya dan berilah kami pelindung dari sisi engkau dan berilah kami penolong dari sisi engkau.

Tanggungjawab agama dan moral bagi orang-orang Islam bukan sahaja terbatas kepada menjaga keselamatan kumpulan mereka sahaja malah mereka juga bertanggungjawab menolong manusia yang lemah dan memerlukan pertolongan walau di mana sahaja mereka berada. Melalui peperangan sahaja penindasan akan dapat diberhentikan dan kebenaran akan dapat diwujudkan. Dengan ini juga manusia akan bebas untuk mencari keadilan dan menikmati kebebasan berekonomi, beragama dan berpolitik tanpa sebarang unsur-unsur paksaan dan ketakutan. Islam mengajar manusia supaya menegakkan keadilan di mana –mana sahaja. Keadilan yang dituntut adalah keadilan makhluk baik di kalangan kaum muslimin mahupun di antara kaum muslimin dengan orang-orang kafir.

● **Menentang pembuat kerosakan.** Umat Islam diperintahkan untuk memerangi pembuat-pembuat kerosakan dan agar tidak gentar di dalam menghadapi musuh-musuh Islam kerana Allah telah berjanji akhirnya kejahatan

²⁸ Naeem Siddiqi, *Muhammad Pembina Umat*, Pustaka salam, Kulala Lumpur, 1989, m.s 183.

²⁹ Muhammad Alwi Al Maliki Al Hasani, *Detik-Detik Penting Dalam Kehidupan Rasullulah*, Pustaka Nasional, Singapura, 1979, m.s. 41.

akan kecundang dan yang benar pasti akan mencapai kemenangan. Allah telah berfirman di dalam surah An-Nisa' ayat 76 yang bererti:

Orang-orang beriman berperang di jalan Allah dan orang-orang kafir berperang di jalan Thaghut, sebab itu perangilah kawan-kawan syaitan itu, kerana sesungguhnya tipu daya syaitan itu adalah lemah.

Musuh-musuh yang mencero bohi kesucian agama dan melampaui batas juga perlu dihancurkan. Sesiapa sahaja yang menghalang perjuangan Islam dan menghancurkan Islam dengan kekerasan perlu ditentang dengan kekerasan tanpa perlu menunggu musuh menyerang terlebih dahulu tetapi mereka mesti dikalahkan di mana-mana sahaja yang boleh. Sekalipun pertumpahan darah bukanlah sesuatu yang baik, tetapi usaha-usaha yang menghalang pergerakan Islam adalah lebih buruk, jadi untuk memelihara agama Islam memilih untuk melakukan keburukan yang lebih kecil dengan mengangkat senjata bagi mengalahkan penghalang pergerakan Islam merupakan suatu kemestian.

PENUTUP

Umat Islam berjuang di jalan keamanan, keadilan dan apabila ianya tidak dapat dicapai melalui jalan biasa maka mereka harus berperang untuk mempertahankan prinsip-prinsip asas Islam. Tanpa peperangan adalah mustahil umat Islam akan dapat menikmati kehidupan yang aman dan tenteram malah kemungkinan besar nyawa dan harta benda mereka akan turut terancam.

Meskipun demikian sebelum sesuatu tindakan ketenteraan diambil terhadap musuh Islam mereka hendaklah diberi pilihan sama ada hendak menerima Islam sebagai agama mereka, membayar cukai untuk menjaga kepentingan mereka atau berperang. Di dalam sejarah Islam Nabi Muhammad S.A.W tidak pernah memerangi musuh tanpa terlebih dahulu mengemukakan tiga perkara tersebut. Ini dapat dilihat daripada hadis Rasullullah S.A.W yang diriwayatkan oleh muslim yang bermaksud:

Apabila kamu berhadapan dengan musuhmu dari orang-orang musyrikin maka serulah mereka kepada salah satu dari perkara, jika

sekiranya salah satu dari perkara-perkara itu mereka terima maka selesaikanlah dan layani mereka dengan baik, Islam atau cukai atau peperangan.

Walau bagaimanapun di dalam peperangan tersebut sebaik-baik sahaja kebaikan sudah dapat diperoleh, maka kesemua bentuk peperangan hendaklah dihentikan dengan serta merta. Ini adalah kerana keamanan adalah dasar Islam manakala tindakan ketenteraan hanyalah sebagai alat penegak keamanan, kebaikan dan ketertiban. Ini dapat dilihat dengan jelas daripada firman di dalam surah Al-Baqarah ayat 194 bererti:

(Oleh itu) barang siapa menyerang (mencero bohi) kamu, maka seranglah ia yang seimbang dengan serangannya terhadap kamu.

Kesimpulannya peperangan adalah satu keperluan di dalam usaha untuk mengawal dan mempertahankan negara yang di atasnya didirikan sistem keadilan dan kebaikan. Oleh kerana musuh-musuh Islam ingin memusnahkannya maka satu-satunya jalan untuk mempertahankan agama dan umat Islam ialah melalui tindakan ketenteraan. Ini dapat dilihat daripada firman Allah di dalam surah Al-Baqarah ayat 193 yang bermaksud:

Perangilah mereka itu sehingga tiada lagi fitnah dan (sehingga) agama itu hanya untuk Allah belaka. Jika mereka berhenti (dari memusuhi kamu) maka tiada permusuhan (lagi) kecuali terhadap orang-orang yang zalim.

Dengan ini jelaslah bahawa Islam amat mengutamakan keamanan dan mahukan semua manusia hidup di dalam keadaan berbaik-baik dan saling menghormati di antara satu sama lain. Akan tetapi bukanlah bererti bahawa di dalam menjaga kedamaian dan kerukunan hidup Islam terpaksa menggadaikan maruahnyanya dengan sentiasa bersikap negatif walaupun dimusuhi dan dicero bohi oleh musuh diperangi dan di usir dari tanah air. Islam amat tegas di dalam soal ini dan telah mewajibkan umatnya untuk mempertahankan maruah Islam walaupun dengan terpaksa melakukan peperangan.

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Lt Kol Mohd Radzi bin Abd. Hamid ditauliahkan oleh Seri Paduka Baginda Yang Dipertuan Agong sebagai Leftenan Muda di dalam Rejimen Askar Melayu DiRaja pada tahun 1986. Beliau telah berkhidmat di dalam Angkatan Tentera Malaysia selama 22 tahun dan memegang pelbagai jawatan. Mempunyai kelulusan dalam Diploma Lanjutan Pengajian Strategi dan Keselamatan (UKM), dan Sarjana Sains Pengurusan Strategi (Wellington). Beliau kini sedang mengikuti pengajian secara sambilan dalam bidang Sarjana Komunikasi di UPM. Antara artikel-artikel yang pernah disiarkan oleh Sorotan Darat ialah Membina Tradisi Berilmu di dalam Angkatan Tentera Malaysia, Rampasan Kuasa: Angkatan Tentera Malaysia sebagai Institusi Berkecuali dan Changing Perceptions of Security: From Military to Ecological.

PERSONALITY TESTING AND PROFILING APPLICATIONS IN THE MILITARY

By Lt (Dr) Teoh Hsien-Jin

SYNOPSIS

Advances in psychological research have shown that knowledge of personality theory has many applications to the military. Personality theory involves knowledge about the way humans beings think, and can potentially be used to predict their behaviour in various applied settings ranging from human resource to health to organisational behaviour. This article presents a concise overview of the use of personality theory, personality testing and profiling, in terms of its applications to the military. The article is relevant to those in command and leadership positions who seek other methods of managing personnel, and maximising their abilities.

INTRODUCTION

Mention the word psychological testing, and the first thing that springs to mind is testing for “madness”. However, if one were to take a more professional approach to the subject, and discusses with those working within the Human Resources field, a very different view emerges. Psychological testing is seen as an important tool that helps to improve the efficiency of organisations, and also assists with decision making. Not surprisingly, many armies have been using various forms of psychological testing ever since the first tools were developed. Both in preparation for war, and also during warfare, the lessons gained from understanding a human being’s mental processes and personality, have helped military leaders understand the soldiers they lead, and also the armies they oppose.

In this review of the subject, the author’s goal is to present a concise description of how psychological testing and profiling, could have applications to the armed forces. The article begins with an explanation of what personality, psychological testing and profiling are. The review then moves on to how various armies have used psychological testing and profiling in recruitment,

motivation, and the training of leaders. Finally the focus is on several examples non-conventional applications.

WHAT IS PERSONALITY?

Personality can be described as the pattern of thought, emotion and behaviour that defines an individual’s personal style and influences his interactions with the environment (Teoh, 2004). This means that what the person does on a regular basis, in terms of how he thinks and behaves is what personality is all about. It is about regularity and patterns of behaviour which are fairly stable and predictable. Naturally, the way someone behaves will determine society’s reactions to him. If the way he behaves is fairly consistent, then people will develop a certain impression of him and be able to describe him in a particular way. This impression is what we commonly call the person’s personality. It is important to remember that the key point here is a “pattern” of behaviours, and not a single behaviour. Describing a person’s personality is a bit more complex than what is usually thought of. Thus, it is not really appropriate to give a person a single “label” that is supposed to represent all their behaviours.

WHAT IS PSYCHOLOGICAL TESTING?

Psychological testing is the term used to describe the assessment of a human being's mental processes, emotions, and behaviours. Thus, a variety of psychological tests are available that evaluate such subjects as mental illness, mental health, group functioning, leadership, intelligence, social functioning or emotional intelligence, and learning abilities.

WHAT IS PROFILING?

Research psychologists have studied personality from different angles and have come up with various clusters of personality, commonly known as personality traits. As a result, they have developed personality tests using their results. The results of the personality tests provide a picture of the person's behaviour. This picture of behaviour is known as "*profiling*".

To develop personality tests, a theory of personality is first devised. To do this, a list of different behaviours are drawn up to represent the different sorts of personalities. Following this, large numbers of people are questioned on all aspects of their behaviours. The responses collected from these people are then statistically analysed using a statistical procedure known as *factor analysis*. The outcome of the analysis produces many groups of personality traits which are combined together as questions to form personality tests. The following are some examples of commonly used personality tests for profiling:

Cattell 16 Personality Factors

The Cattell 16 Personality Factor profile (Cattell et al., 1994) describes sixteen types of personality traits. The sixteen traits are listed below along with a description of what is derived from either extreme of the personality axis. Table 1 shows that for each trait, there are two extremes. Neither extreme is positive or negative, they merely describe different aspects of behaviour.

<i>Trait</i>	<i>Left Extreme</i>	<i>Right Extreme</i>
Warmth	Reserved, Impersonal, Distant	Warm, Outgoing, Attentive to others
Reasoning	Concrete	Abstract
Emotional stability	Reactive, Emotionality Changeability	Emotionally stable, Adaptive, Mature
Dominance	Deferential, Cooperative, Avoids conflict	Dominant, Forceful, Assertive
Liveliness	Serious, Restrained, Careful	Lively, Animated, Spontaneous
Rule- Consciousness	Expedient, Nonconforming	Rule-Conscious, Dutiful
Social Boldness	Shy, Threat-Sensitive, Timid	Socially Bold, Venturesome, Thick- skinned
Sensitivity	Utilitarian, Objective, Unsentimental	Sensitive, Aesthetic, Sentimental
Vigilance	Trusting, Unsuspecting, Accepting	Vigilant, Suspicious, Skeptical, Wary
Abstractness	Grounded, Practical, Solution- Orientated	Abstracted, Imaginative, Idea- Orientated
Privateness	Forthright, Genuine, Artless	Private, Discreet, Non-Disclosing
Apprehension	Self-Assured, Unworried, Complacent	Apprehensive, Self-doubting, Worried
Openness to Change	Traditional, Attached to Familiar	Open to Changes, Experimenting
Self-Reliance	Group-Orientated, Affiliative	Self-Reliant, Solitary, Individualistic
Perfectionism	Tolerates Disorder, Unexacting, Flexible	Perfectionist, Organised, Self- Disciplines
Tension	Relaxed, Placid, Patient	Tense, High energy, Impatient, Driven

Table 1. - Characteristics of 16 PF Personality Traits

In a recent version of the Cattell 16 Personality Factors profile, the 16 personality traits could be grouped into 5 broad traits. These traits were called Extraversion, Anxiety, Tough-Mindedness, Independence and Self-Control. Extraversion behaviours involved liking to socialise with people. Anxious behaviours were evident when a person was overly concerned with social situations. Tough-Minded behaviours involved being resolute and unempathic. Independent behaviours involved persuasive and wilful. Finally, Self-Control behaviours involved being able to inhibit urges and resist temptation.

Eysenck's Personality Factors

Eysenck (1951) developed a general method of describing personality. In his description, two major traits were identified. These were introversion and extroversion. As a continuum, introversion-extroversion refers to the degree to which a person focuses his attention towards himself, or outward towards the external world. The introverted person is shy, prefers to work alone, tends to withdraw into himself especially in times of stress and conflict. The extroverted person is sociable, prefers occupations that permit him to work directly with other people and in times of stress he or she seeks company. Eysenck also proposed a third dimension to this continuum, namely neuroticism. Neuroticism is an aspect of emotional behaviours which include moodiness, anxiousness, being temperamental, and maladjusted. According to Eysenck, people can have varying degrees of each of these characteristics.

5 Factor Model

Using statistical methods, Costa & McCrae (1992) found that there were 5 broad traits which

all behaviours could be classified into. They labelled these traits Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. Descriptions of each of these traits are described in Table 2.

The personality tests that have been described so far are inventories made-up of questionnaires that a person can complete using paper and pencil. Sometimes, other non-paper and pencil methods are used. For example, a variety of scenarios can be presented and the person being assessed is required to make up a story about each scene. The basic themes that come to the person's mind are noted. Evaluation of the person's personality is based on the assumption that people interpret ambiguous pictures according to their prior experiences, and these usually refer to plots or themes that reflect personal fantasies. An example of this sort of test would be the Rorschach Inkblot test.

In all cases, personality tests should only be used by persons with formal training in psychology, who have been specifically trained on their courses to administer and interpret these tests. This is an important requirement as personality tests can be abused and the results misinterpreted. As the information that is obtained from these tests concerns the individual, it is important that accurate information is presented by an informed professional psychologist (i.e., clinical psychologist, educational psychologist, organisational psychologist).

PSYCHOLOGICAL TESTING IN RECRUITMENT

The task of the Recruitment Officer is to find the right person for the right job. A personality

Trait	Description
Neuroticism	Anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability.
Extraversion	Warmth, gregariousness, assertiveness, active, excitement-seeking, positive emotion.
Openness	Fantasy, aesthetics, feelings, actions, ideas, values.
Agreeableness	Trust, straightforwardness, altruism, compliance, modesty, tender-mindedness.
Conscientiousness	Competence, order, dutifulness, achievement striving, self-discipline, deliberation.

Table 2.- Characteristics of 5 Factor Model Personality Traits

profile would thus go a long way towards simplifying the process. If the job involves streamlining the accounting process in terms of payroll and logistical budgets. The requirement would be for someone who is organised, meticulous, yet willing to take risks when needed. Furthermore, the person would need to be a team player as he would be working with a group of others who would also be trying to bid for tenders, and also from a large variety of service units. Finally, new proposals need to be made daily and the person needs to be fairly sociable and easy to get along with as socialising with civilian contractors is a job requirement. The personality profile that would be required thus needs to include traits such as concrete reasoning, emotionally stable, lively, socially bold, vigilant, solution-orientated, self-assured, open to change, organised and self-reliant.

From another angle, perhaps the officer's assignment is to assist a cavalry troop with thinking of ways to get the troop to work more efficiently as a team. In this instance, the officer would begin by considering the different sorts of personality traits in the troop members. Having done so, the task would then be to work out, via examining their profiles, how they react to one another. With this information, the officer could then explain how certain soldiers behave in particular ways towards others. Thus, the louder, more aggressive members might have to be taught and encouraged to be more considerate towards the more introverted soldiers. Vice-versa, the more introverted soldiers could be taught to be more assertive. In the case of job delegation, personality traits might indicate that the more introverted and pedantic soldiers may be better at planning and sorting out the administrative aspects of the job, whereas the more extroverted and outgoing individuals may be much better at executing tasks and delegating orders.

An important aspect of selection of personnel is to find out if they are likely to complete basic training. In addition to physical and academic aptitude measures, psychological personality screening tools are regularly used. Studies indicate that recruits generally differ slightly from civilians in terms of psychological adjustment, and that higher scores on the depressive personality indicators would be more likely to predict drop-outs in basic training courses (Holden & Scholtz, 2002).

The earliest use of Psychologists to test the suitability of men for service began in the US Army in 1940. During the war, a total of 1,992,950 men, comprising 30% of all rejections, were rejected on psychiatric grounds for such disorders as schizophrenia, psychopathic personalities and psychosis. Psychiatric disability was the largest single cause of eventual discharge from the US Army in World War II (Cowdrey, 1994). Today, specialised tools such as the Minnesota Multiphasic Inventory are used to ascertain if a candidate possesses personality traits that are likely to develop antisocial behaviours, mental illnesses, or otherwise become a hindrance to the working of a team (Butcher & Williams, 1992).

PSYCHOLOGICAL TESTING IN LEADERSHIP SELECTION

All military units rely on leaders to provide the guidance and have the perseverance to succeed on missions. A leader is usually someone who is selected by his superiors and earns the respect of his subordinates.

There are many different views on what leaders are, but to have been chosen, the leader would have certain common behaviours. These include:

- Self-discipline
- Willingness to sacrifice
- Physical and moral courage
- Physical fitness
- Personal presence
- Knowledge of subordinates
- Constant informing of subordinates

(Ridgway, 1996)

To earn the respect of subordinates, there are various traits that the leader must have that the personnel would notice and value. Amongst these army values are Loyalty, Duty, Respect,

Selfless Service, Honour, Integrity and Personal Courage (Center for Army Leadership, 2004). Translated into simple operation terminology, one might summarise some of these concepts into the following attitudes:

- If they are to follow you, they must feel that you are worthy of their trust.
- If they doubt your abilities, they are unlikely to do what you want.
- Have a sense of direction and a concern for the future of the unit.
- It is not enough to dream, it is just as important to be able to communicate your ideas in ways that encourage people to support you.

Selection of potential leaders to manage personnel and make sure that projects are consistently completed is a challenging task for the management team in the army.

Research on leadership traits indicates that there are some personality, or behavioural, characteristics that most leaders appear to have. Amongst the commonly identified personality characteristics of leaders include:

- Having a theoretical orientation
- Social Extroversion
- Altruism
- Social Boldness
- Liveliness
- Emotional Stability
- Utilitarian
- Reasoning
- Dominance
- Group-Oriented

(Heist & Yonge, 1968)

Selecting personnel who would potentially become efficient officers is a crucial aspect of developing the command structure within the military. Psychological tests have been regularly used in many armies, such as the Canadian Armed Forces. Assessments instruments regularly indicate that amongst the many important psychological traits that an officer would need to possess are surgency (i.e., the tendency to enjoy positions of leadership), and internal locus of control (i.e., to see positive rewards as being under one's personal control). Studies over a period of time indicate that personal reports of these traits, along with instructor reports, would appear to predict better candidate ability on Basic Officer Training Courses (Bradley, Nicol, Charbonneau & Meyer, 2002).

Transformational leadership is the ability to work within an ever changing environment, and to not only exhibit confidence and direction, but to also instill motivation and commitment within the personnel to achieve the organizational objectives. Studies on combat teams within the Singapore Armed Forces indicate that team leaders with transformational leadership abilities tended to be those who were more extroverted, less agreeable and had less neurotic personality traits (Lim & Ployhart, 2004). More importantly, the study indicated that these findings tended to be more applicable when the leaders were working under maximum stress, rather than typical daily contexts.

PERSONALITY AND MOTIVATION

"Everyone can be motivated. It is just a matter of knowing how!" The simplistic approach to motivation is to use force, or offer a monetary incentive. However, certain people are not moved by these methods, and it helps to take a closer look at these people. This is where personality profiling may be helpful. In this section, we try to understand the different types of personnel that we might encounter, and how we might use knowledge of their personality to develop some of the motivation tools to encourage them.

To assist us with this task, let us refer to one theory of personality, which is the 5 Personality Factors (Costa & McCrae, 1992), to develop some strategies to communicate with and motivate people

of different personality types. To carry out this task, we would refer to Tables 3 to 7. Each table shows a pair of personality traits that represent either

extreme of the 5-Personality Factors, and suggest the kinds of ways of communicating with people with differing types of personality traits.

<i>Neurotic</i>	<i>Emotionally Stable</i>
- Assure that there is someone to back them up. - Convince that the task is easy enough to achieve. - Instructions must be as clear as possible so that they will know exactly what they are required to do. - Give them advance warnings, to avoid them being taken by surprise. - Tell them that the task is similar to something that they have done previously before.	- Allow them some opportunity to make decisions. - Tell them how this task would benefit to them personally. - Clear and systematic instructions, so that they understand the task. - Show them that you yourself can carry out the task calmly, otherwise they get irritated. - Inform them about how their contribution fits into the overall success of the mission.

Table 3. - Methods for Communicating with Neurotic and Emotionally Stable People

<i>Open Minded</i>	<i>Closed Minded</i>
- Tell them what a challenge the task is, and the long term plans. - Put them in positions where they are allowed to think and develop new things. - Praise and acknowledge their creative or special contributions to the project. - Allow them to be part of the decision making process to hear their ideas.	- Listen before you argue, or else they will shout back louder. - Give them a chance to work independently, and allow advance warning for changes. - Tell them how carrying out this task will benefit them personally. - Do not change goals once you have decided on them. Decide on one way to do things and stick to it.

Table 4. - Methods for Communicating with Open Minded and Closed Minded People

<i>Extroverted</i>	<i>Introverted</i>
- Tell them what they will get out of it, and how they will be famous and well known. It helps boost their “egos”. - Give them positions that will allow them to demonstrate what they know and to talk a lot. - Praise them openly in front of everyone and say how great their contribution is. - Tell them how interesting and challenging the task will be. - The more you show you are enthusiastic, the more the person will be enthusiastic.	- Do not overwhelm them with too many instructions. Give them the instructions in small amounts. - Show that you care about how they feel. - Give them tasks that would not require them to interact with too many people. - Allow them to work independently, or in small teams. - Give them advance warning before starting a task. - Be calm when you are explaining the task, if you are too impulsive and excitable, it agitates the introverted person.

Table 5. - Methods for Communicating with Extroverted and Introverted People

Agreeable	Disagreeable
• Give them tasks that allow them to show that their actions improve the welfare and lives of others. • Tell them how the task will benefit them and other people. • Make them feel wanted. • Give them tasks that require confidentiality and trust. • Get the others to notice and acknowledge their efforts.	• Listen before you argue, or else they will argue back harder. • Allow advance warning for changes. • If they have done something wrong, be tactful and diplomatic with your observations. • Do not allow them to lose face. • Tell them how this will benefit them personally. • Acknowledge their personal contribution and use “big” words.

Table 6. Methods for Communicating with Agreeable and Disagreeable People

Conscientious	Non-Conscientious
• Be clear about the objectives and the task boundaries. • Allow them to keep to their deadlines. • Give them tasks that require them to be systematic and have careful planning. • Acknowledge them for being consistent and organised.	• Show them how the project will benefit them. • Create a structure and routine to guide them. • Tell them how quickly the task can be completed. • Tell them that they will be working with people who know about the task and will be able to assist them.

Table 7.- Methods for Communicating with Conscientious and Non-Conscientious People

PSYCHOLOGICAL PROFILING IN ESCAPE AND EVACUATION

Many studies have been carried out on the effects of imprisonment in prisoners-of-war (POW), however very few studies examine whether personality would affect whether a soldier would be likely to end up as a potential prisoner of war. A study was carried out on 75 UK Royal Air Force aircrew officers who were undergoing winter survival training which included an escape and evasion element (Leach, 2002). The exercise involved a situation where an aircraft had crashed behind enemy lines and entailed an overnight escape and evasion situation. The result of the study suggested that length of military service and age were not considerations of whether the air crew were captured and whether they tried to escape. However those who were more likely to be captured had higher levels of personality traits that included paranoia and hysteria.

PERSONALITY AND COMMANDER DECISION-MAKING

In battle, a commander's personal preferences and personality may affect his decision-making performance. Research that has been based on simulations suggests that the commander's personality affects action time delay, decision accuracy and effectiveness modifications (McKenzie, Petty & Catanzaro, 2003). In the study the simulation involved a hypothetical United Nations peacekeeping and humanitarian assistance force that was required to pass through a sector that had been mined by hostile forces to deliver food and medical supplies within 12 hours. The commander must decide on a route that involves minimum time cost and least casualties. A “good” commander would have personality traits that would include high stability, low anxiety, high independence, high charisma and high knowledge. Whereas a “bad” commander would have personality traits

that would include low “stability”, high “anxiety”, low “independence”, low “charisma” and low knowledge. The results generally indicated that a “good” commander sustained lower casualties and completed the mission in less time, as compared with a “bad” commander.

A WORD OF CAUTION

Whilst the field of understanding one's subordinates, colleagues and adversaries using personality theory sounds exciting, it is to be used with caution. The military should never get to the stage where it solely relies on the results of personality questionnaires for the assessment of a human being. In all cases, additional information is always required to verify what is being perceived of an individual's personality. Useful additional information would include interviews, observations and reports from other people who are familiar with the individual in question. In the real world,

scientific data collected from the field must always be verified by other sources on the ground.

CONCLUSION

“The Duke of Wellington (1769-1851) once said that he had spent half his military career wondering what was on the other side of the hill” (Kennedy, 1983). Today, the other side of the hill can be seen, however the war being fought involves terrorism and perhaps even an invasion from cyberspace. Thus, the focus of commanders may even more so be on the minds of their opponents, be they political or military. Today more so than in the past, where the enemy may be closer than we realise, there is an even greater need for stringent selection, training and proficient teamwork. Combat readiness can be achieved through knowing the minds of men, and keeping personnel motivated. To this end, personality theory has applications to a multitude of military scenarios.

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OPERASI PENGGEMPURAN UDARA DALAM OPERASI PASUKAN KHUSUS

Oleh Lt Kol Mazlan bin Md Sahalan

PENDAHULUAN

Dalam pasca peperangan moden yang menggunakan berbagai-bagai opsyen untuk menggerakkan terup ke dalam kawasan yang dikuasai musuh atau di belakang musuh, pergerakan dengan pantas perlulah difikirkan. Ini terutamanya kepada atur gerak anggota-anggota dari 21 Gerup Gerak Khas (21 GGK) dalam menyusupkan timnya dalam sebarang penugasan mendapatkan maklumat, sabotaj atau keperluan memusnahkan kepentingan strategik dan penarikan keluar dengan pantas. Selain dari itu, teknik ini juga boleh digunakan dalam misi penculikan atau pembunuhan orang kenamaan dan menyelamatkan kawasan penting dalam masa yang terhad untuk menyusupan kumpulan besar terutama untuk anggota Rejimen

Komando yang mana menjurus kepada sebahagian peranan dan tugas 21 GGK. Teknik menyusupan dan penarikan pantas ini banyak mendapat kejayaan sejak diimplimentasikan selepas Perang Dunia Ke-2 apabila pesawat helikopter diperkenalkan. Teknik ini juga memberikan banyak kejayaan kepada 21 GGK sejak ditubuhkan pada tahun 1965 hingga ke hari ini dan berkemungkinan akan menjadi lebih efektif dan efisien pada masa yang akan datang dengan mengambil kira jumlah dan jenis pesawat, komponen serta kepentingannya. Ini juga berdasarkan kepada keadaan bentuk muka bumi yang terdapat di negara kawasan Asia Tenggara yang berbukit bukau, berpayau dan diselangi dengan hutan rimba di samping pembangunan 'hutan batu' yang pesat yang mana kaedah ini amat sesuai digunakan.



TUJUAN

Artikel ini bertujuan untuk memberikan pendedahan kepada salah satu opsyen penyusupan dan penarikan pantas yang telah dilaksanakan oleh unit dari 21 GGK sejak di tubuhkan dan telah memberikan banyak kejayaan dalam sejarah penubuhannya.

LATAR BELAKANG

Teknik ini perlu diberi perhatian yang serius lebih-lebih lagi dengan wujudnya Pasukan Udara Tentera Darat (PUTD) dengan kombinasi bersama Tentera Udara DiRaja Malaysia (TUDM). Selain itu, hal ini juga selaras dengan teknik dan taktik yang sentiasa berubah mengikut arus teknologi yang menjurus kepada keadaan bentuk muka bumi negara ini dan kawasan persekitarannya. Artikel ini akan memberikan pandangan mengenai satu lagi teknik sebagai opsyen yang perlu dibangunkan secara lebih meluas dalam konteks pertahanan ke hadapan. Berdasarkan kepada artikel ini, persoalan yang timbul adalah mampukah Angkatan Tentera Malaysia (ATM) terutamanya pasukan Tentera Darat (TD) dapat merealisasikan '*Operasi Penggempuran Udara Dalam Operasi Pasukan Khusus*' secara efektif dengan aset yang ada pada hari ini atau yang akan diperolehi pada masa hadapan. Persoalan ini akan dihuraikan dalam artikel ini dengan menjurus kepada latar belakang dan disusuli dengan sejarah kejayaannya. Artikel

ini juga merangkumi huraian rancangan umum dan diakhiri dengan kepentingannya pada masa hadapan terutamanya dalam pengaturgerakan anggota Gerak Khas.

DEFINISI

Bagi memahami artikel ini, beberapa definisi akan diperjelas berdasarkan kepada '*Air Assault Operations Field Manual No. 90-4 Headquarters Department Of The Army Washington, DC, March 1987*', iaitu '*Army aviation and infantry units can be fully integrated with other members of the combined arms team to form powerful and flexible air assault task forces that can project combat power throughout the entire depth, width and breadth of the modern battlefield with little regard for terrain barriers. The unique versatility and strength of an air assault task force is achieved by combining the capabilities of modern rotary-wing aircraft – speed, agility and fire power – with those of the infantry and other combat arms to form tactically tailored air assault task forces that can be deployed in low-, mid- and high-intensity environments*'. Merujuk kepada Strategi Ilmu Peperangan dalam kamus '*Military Science*', oleh Jay M. Shafritz, Todd J.A. Shafritz dan David B. Robertson mereka menamakan operasi ini sebagai '*Airmobile Operation*' iaitu '*An operation in which combat forces and their equipment manoeuvre about battlefield in helicopters under the control of a ground commander to engage in ground combat*'



in four phases such as the loading phase, the air movement phase, the landing phase and ground operations phase'. 'Airmobile Task Force' pula ialah 'A grouping of aviation and ground units under one commander for the purpose of carrying out a specific operation'.

Kesemua penjelasan ini membawa maksud kepada penggunaan pesawat helikopter sebagai salah satu kaedah yang bersesuaian dalam melaksanakan operasi bersama yang mengabungkan jentera terbang (helikopter), kuasa tembakan dan manusia. Dalam konteks operasi pasukan khusus pula, ini digabungkan dengan jentera terbang (helikopter) yang anjal dengan manusia yang dilatih secara khusus.

SEJARAH

Operasi Penggempuran Udara yang menggunakan helikopter adalah salah satu kaedah operasi yang telah dilaksanakan selepas Perang Dunia Ke-2 di mana melibatkan pengangkutan tentera darat dengan menggunakan pesawat helikopter seperti Perang Kemerdekaan Algeria, Perang Korea dan Darurat Pertama dan Kedua di Malaysia. Walaupun pada masa itu pesawat helikopter yang terlibat adalah dari ketumbukan tentera udara, namun Operasi Penggempuran Udara digunakan dengan meluas dalam Perang Vietnam oleh tentera Amerika Syarikat dengan menubuhkan kalvari udara (*Air Calvary*) dalam tugas penggempuran dan seterusnya pengangkutan terup ke lokasi strategik. Pada masa ini penggunaan pelbagai jenis helikopter digunakan seperti helikopter ringan untuk pemerhatian udara, helikopter sederhana untuk pengangkut terup dan tempur serta helikopter berat untuk membawa anggota, keperluan logistik dan senjata berat. Oleh kerana banyak kebaikan dan kejayaan dalam menggunakan kaedah ini semasa Perang Vietnam, maka kaedah ini telah dijadikan salah satu pilihan dalam beberapa konflik termasuk *Operation Eagle Claw*, *Rescue in Grenada*, Panama, *Son Tay Raid* di Vietnam, Perang Teluk 1991, Operasi Barras di Seirra Leone, Perang Afghanistan sama ada semasa penglibatan Soviet Union atau Amerika Syarikat dan Perang Iraq pada 2001 hingga ke hari ini. Penggunaan helikopter dalam Operasi Penggempuran Udara juga digunakan secara

meluas oleh Pasukan Bangsa-Bangsa Bersatu dalam operasi yang dilaksanakan oleh terup yang terlibat di seluruh dunia. Rata-rata operasi yang menggunakan helikopter adalah sama, tetapi hanya peningkatan dengan keupayaan pesawat dan persenjataan saja yang membezakan operasi ini pada masa dahulu dan hari ini.

Helikopter pula mempunyai ciri-ciri tertentu seperti kepantasan, bersifat berubah dengan cepat atau anjal dan mempunyai kuasa tembakan. Keunikan dan kepelbagaiannya memberi kelebihan kepada pesawat ini serta unit yang terlibat. Pesawat ini boleh membawa terup tempur dan memberi kuasa tembakan secara pantas ke medan tempur di mana misi pasukan darat diperlukan. Ketua terup dan skuadron perlu mempelajari teknik untuk mengintegrasikan dan mempelbagaikan aset operasi bersama ini selaras dengan keperluan operasi taktikal mereka.

ATURGERAK PASUKAN KHUSUS

Penglibatan Pasukan Khusus Malaysia dari 21 GGK dalam Operasi Penggempuran Udara telah dilaksanakan sejak awal penubuhannya. Penggunaan helikopter telah diimplimentasikan bermula dari Insurgensi Pertama, Konfrantasi, Insurgensi Kedua dan seterusnya dipertingkatkan penggunaannya sehingga ke hari ini. Penggunaannya secara meluas dalam operasi penyusupan, penghantaran bantuan makanan atau bantuan logistik, mengeluarkan anggota yang cedera, pelaksanaan Pos Pemerhati Udara dan pelbagai jenis bantuan lain. Walaupun pelaksanaannya adalah terhad dan hanya melibatkan kekuatan hingga ke satu terup saja namun kaedah ini telah mendapat kejayaan yang besar sehinggalah pengganas komunis meletakkan senjata pada penghujung tahun 1989. Beberapa gerakan yang telah melibatkan anggota dari unit 21 GGK melalui kaedah ini adalah seperti Operasi Selamat Sawadi, Doyai Musnah dan Gonzales pada zaman 70-an dan 80-an. Semasa peristiwa 13 Mei 1969, anggota Gera Khas telah menyusup masuk ke dalam Bandaraya Kuala Lumpur seperti di Kampung Baru dan kawasan Chow Kit dengan menggunakan kaedah *abseiling* untuk mengeledah kedudukan perusuh. Selain itu, beberapa operasi lain yang dilaksanakan adalah seperti membantu

dalam membuat penyekatan (cut off) ke atas pergerakan pengganas dan operasi menyelamatkan serta mencari (SAR).

Pada hari ini, penggunaan helikopter diperluas lagi dengan menggunakan platformnya untuk Operasi Sniper (*Air Sniping*), Pos Pemerhati Udara (*Air OP*), *Roll Duck*, Operasi Menentang Keganasan (*Counter Terrorist Operation*), operasi sulit yang melibatkan pencolekan atau membunuh orang kenamaan, menyelamatkan kawasan pendaratan kumpulan besar dalam masa yang terhad dan juga lain-lain penugasan 21 GKG.

RANCANGAN UMUM

Apabila salah satu rejimen dari 21 GKG menugaskan tim, terup atau skuadronnya di dalam sesuatu misi, perancangan penyusupan dan penarikan melalui udara perlu dibuat dengan lebih teliti sebelum diimplimentasikan. Disebabkan terdapat banyak pelan kontigensi serta perancangan perlu dilaksanakan secara terperinci dan menyeluruh di mana melibatkan ketua-ketua unit terlibat dan wakil dari pasukan udara. Apabila seseorang ketua membuat pelan aturgerak, pelan melalui udara adalah sama seperti pelan dalam melaksanakan rondaan. Semua fasa rancangan, pelan ketua terup atau ketua skuadron (di sini dirujuk sebagai ketua pelaksana darat) dan pasukan udara mestilah

dikoordinasi secara teliti oleh Komander Pasukan Gerakan Udara (ketua penerbangan pesawat udara) semasa sesuatu misi dilaksanakan.

Pelan Gerakan Udara untuk operasi ini mestilah memberi kelebihan dan sokongan kepada pergerakan pasukan darat. Secara dasarnya, seorang ketua mestilah merancang secara berperingkat dan merancang secara turutan terbalik iaitu yang kemudiannya didahulukan dan ia dinamakan Rancangan Pelan Secara Turutan Terbalik (*Backward Plan*). Langkah pertama ialah merancang Pelan Taktikal di atas tanah (misi sebenar), kemudian merancang Pelan Mendarat (tindakan semasa di zon pendaratan dan di tempat berkumpul), merancang Pelan Operasi Gerak Udara (perjalanan udara), merancang Pelan Menaiki Pesawat (tindakan semasa zon ambil/angkut dan semasa pendaratan silang) dan Pelan Pembahagian Tugas (tugas gerak untuk organisasi semasa di zon PZ (*Pick Up Zone*)).

Ketua Pasukan Darat akan membayangkan dan merancang setiap fasa operasi bermula semasa mula bergerak dari titik pengambilan (*Pick up Zone*) ke masa penyusupan di zon pendaratan (*Landing Zone*) sehingga unit kembali dengan selamat ke kawasan pasukan sahabat. Sebagaimana di dalam mana-mana misi taktikal, seseorang ketua mestilah menganggarkan masa bermula dengan





Salah satu formasi operasi pengempuran udara

menganalisa misi dalam satu penilaian terhadap faktor *METT-T (Mission, Enemy, Troops, Time Available)*. Apabila seseorang ketua memahami misinya, dia akan meneliti faktor-faktor yang memberi kesan kepada kejayaan untuk mencapai misi pengempuran melalui udara.

FAKTOR YANG PERLU DI AMBIL KIRA

Kemampuan pertahanan udara musuh dan jenis-jenis senjata musuh adalah faktor-faktor kritikal yang penting perlu diambil kira. Faktor lain yang perlu diambil kira adalah, adakah musuh boleh memintas operasi ini dengan pasukan udara mereka, adakah mereka dapat mengesan misi ini dengan satelit, adakah mereka menggunakan pesawat sayap kaku atau pesawat pejuang dan bagaimana pula dengan kepantasan pihak musuh bertindak kepada penyusupan, bagaimana mobiliti musuh, apakah kemampuan alat peperangan elektronik musuh, keberkesanan musuh di dalam perhubungan komunikasi dengan pasukan sahabat mereka apabila perhubungannya diganggu, dan adakah pasukan jurutera musuh dapat membuat halangan terhadap zon *LZs (Landing Zones)* dan *PZs (Pick Up Zones)* yang boleh mengehadkan kemampuan operasi gerakan melalui udara.

Seorang komander pesawat perlu menganalisis keadaan tanah melalui *OCOKA (Observation and Fields Of Fire, Cover and Concealment, Obstacles and Movement, Key Terrain, Evanues Of Approach)*. Beliau perlu memilih laluan penerbangan yang memudahkan navigasi pesawat terutamanya pada waktu malam atau semasa keadaan cuaca buruk di

samping mengenalpasti sesuatu kawasan di mana pihak musuh membuat pemerhatian terhadap laluan penerbangan pesawat.

Beliau seterusnya akan memilih tempat dan tanah terbaik untuk tujuan penyamaran pergerakan udara serta tempat terbaik untuk perlindungan dari pemerhatian berdasarkan kepada faktor alam semulajadi dan kawasan berkemungkinan untuk menjadi tempat perlindungan dan penyamaran untuk anggota pasukan khas apabila mereka mendarat.

Walaupun penerbangan yang dilaksanakan dalam operasi ini boleh melepasi halangan semasa gerakan udara, seorang komander mesti mengambil kira halangan-halangan yang boleh memberi kesan kepada cara pergerakan anggota atas tanah. Untuk mengenal pasti sama ada ini merupakan tanah penting atau tidak, bergantung kepada jenis misi yang dilaksanakan. Selalunya *PZs (Pick Up Zones)* dan *LZs (Landing Zones)* dianggap sebagai tanah penting. Ia juga dianggap tanah penting seperti kawasan yang diduduki/dikuasai ataupun kawasan cadangan bagi kawasan hadapan untuk lokasi ulang bekul peluru dan ulang bekul minyak serta kedudukan artileri pertahanan udara musuh.

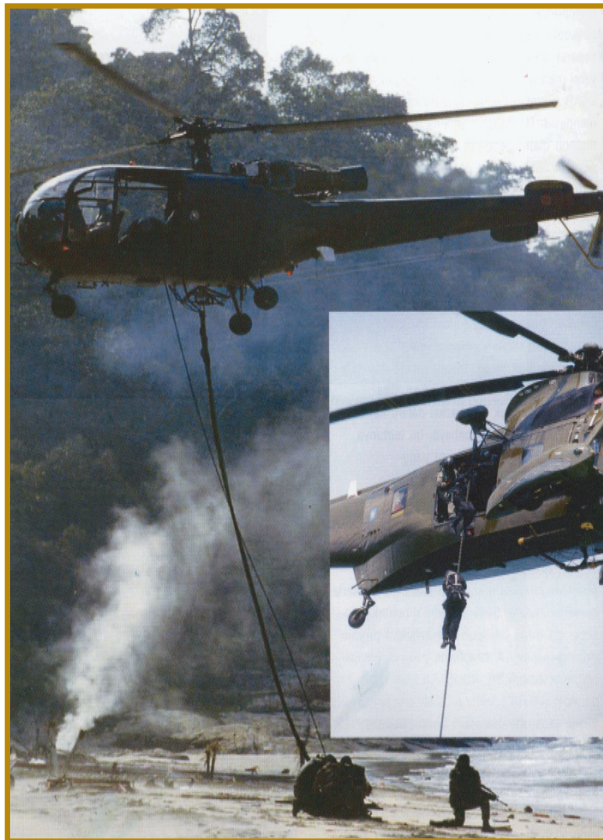
Arah pendekatan untuk laluan udara ini mestilah mempunyai faktor-faktor yang telah disebut seperti di atas. Arah pendekatan laluan udara yang selamat mestilah dapat memberikan mobiliti yang baik kepada pesawat agar setiap halangan dapat dikurangkan ketika melakukan penerbangan. Hal ini meliputi perkara-perkara seperti, tiada laluan yang mengecil, terdapat tanah yang dapat melindungi gerakan udara, memberi kemampuan yang terhad kepada sistem persenjataan pertahanan udara musuh dari digunakan dan tempat-tempat yang mempunyai tanda penting yang mudah dikesan oleh pihak musuh dari udara.

Cuaca dan jarak penglihatan juga memberi kesan kepada misi gerakan udara. Ciri-ciri seperti tanah, kabus, awan rendah, hujan lebat dan penggunaan asap yang meluas, akan membuatkan sesuatu gerakan udara menjadi terhad kepada para juruterbang. Cahaya dan sinaran bulan serta sudut penjuru kedudukan bulan akan memberi kesan kepada kemampuan juruterbang apabila penerbangan itu dilakukan dengan menggunakan

Alat Pandang Malam (NVG). Angin lintang boleh menyebabkan pergerakan menjadi terhad dalam pendekatan arah laluan untuk pesawat mendarat atau berlepas, salji dan habuk juga boleh menyebabkan penumpang pitam. Kepanasan melampau dan suhu tinggi juga memberi kesan kepada kemampuan pesawat.

KEPENTINGAN OPERASI PENGGEPUK UDARA KEPADA PASUKAN KHUSUS PADA MASA AKAN DATANG

Operasi penggepukan udara boleh memainkan peranan yang lebih luas dalam membantu anggota pasukan Gerakhas dalam sebarang operasi pada masa hadapan. Ini bukan sahaja merupakan operasi bantuan tetapi melibatkan sesuatu operasi secara menyeluruh. Dengan adanya kaedah terkini dalam penyusupan anggota seperti 'abseiling, SPIE Rig (Small Patrol Insertion and Extraction Rigging), Hover Jump, Water Jump atau Roll Duck atau penarikan keluar dengan kaedah SPIE Rig atau Hovering', operasi



Atur gerak Tim dalam menyelamatkan tebusan di laut

sniper udara (*Air Sniping*) dan pemerhati udara (*Air Observation Post*), skop peranannya adalah menjadi lebih besar. Ini terutamanya dengan keadaan bentuk muka bumi di rantau Asia Tenggara. Penggunaan pesawat helikopter dapat membantu pasukan Gerakhas untuk mengatugerakkan anggotanya ke kawasan tanggungjawab dengan lebih efektif dan efisien dalam sesuatu operasi.

Dalam salah satu doktrin Gerakhas, *SERE* (*Survival, Escape, Resistance and Evasion*) adalah salah satu perancangan penarikan keluar dan penggunaan helikopter dalam membantu operasi ini tidak boleh diabaikan. Operasi ini perlu mempunyai satu koordinasi secara terperinci di antara komander darat dan udara. Operasi ini tidak boleh dirancang dan membuat latihan dalam jangka masa yang singkat untuk melaksanakannya. Dalam merialisasikan keperluan ini, krew pesawat juga perlu mempunyai pengetahuan mengenai operasi pasukan khusus. Oleh yang demikian, mereka perlu sekurang-kurangnya menghadiri seminar, perbincangan, latihan atau menulis Perintah Tetap Latihan Bersama.

Oleh sebab yang sedemikian, adalah menjadi satu keperluan semasa dan masa hadapan terutamanya dalam memberikan opsyen tambahan dalam perancangan operasi terutama kepada pasukan Gerakhas. *Operasi Penggepukan Udara* ini boleh diperluaskan dan dikemaskinikan lagi prosedurnya untuk meningkatkan persefahaman selaras dengan adanya pesawat-pesawat terkini dan canggih.

RANCANGAN LUAR JANGKAAN

Komander Pasukan Khusus bertanggungjawab di dalam latihan dan operasi perlu peka terhadap sebarang perubahan rancangan yang di luar jangkaan. Sebahagian daripada rancangan tersebut adalah seperti berikut:

- LZ (*Landing Zone*) atau PZ (*Pick Up Zone*) yang berbahaya.
- Pesawat mendarat di LZ (*Landing Zone*) yang salah.
- Pesawat tidak sampai tepat pada masa.
- Nombor pesawat yang salah mendarat.

- Pesawat menunjukkan peralatan komunikasi yang salah (tiada radio dan *handset*)
- Elemen darat tidak dapat berkomunikasi dengan pesawat yang akan tiba.
- Pesawat terhempas di LZ (*Landing Zone*).
- Pesawat mendarat di tempat yang salah.
- Perhubungan terputus semasa misi dijalankan.



Atur gerak Tim dalam menyelamatkan tebusan

- Pesawat melepasi kawasan sasaran untuk SEAD (*Suppression of Enemy Air Defence*) dan CAS (*Close Air Support*).
- Pelan yang tidak rapi.
- Tentera keluar dari pesawat dalam kedudukan yang salah.
- Pelan MEDEVAC (*Medical Evacuation*) daripada LZ (*Landing Zone*) dan PZ (*Pick Up Zone*).
- Pelan pesawat perlindungan.
- Pelan cuaca (terutamanya jika cuaca bertukar buruk semasa rancangan kemasukan dan keluar).

Walau bagaimanapun kajian semula Perintah Tetap Latihan/Operasi boleh meningkatkan ketelitian perancangan operasi ini.

PENUTUP

Operasi Penggempuran Udara Dalam Operasi Pasukan Khusus amat penting pada masa ini dan masa hadapan. Opsyen ini perlu dipertingkatkan lagi agar ia tidak terhad kepada suatu tugas tertentu sahaja. Pasukan Gera Khas sendiri perlu meneruskan usaha dalam memantapkan aspek latihan dan operasi supaya pasukan darat dan udara dapat merealisasikan penggunaannya secara lebih efisien dari segi kekuatan anggota dan aset-aset. Perlu diingatkan bahawa operasi yang menggunakan kaedah ini amatlah kritikal dari segi perancangannya dan kaedah ini perlu mempunyai persefahaman di antara semua pihak yang terlibat. Artikel ini diharap akan dapat dijadikan panduan. Perhatian serta kajian semula Perintah Tetap Latihan/Operasi Bersama perlu dilaksanakan dari masa ke semasa berdasarkan kepada keperluan semasa selain dari kemampuan pesawat dan anggota.

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Lt Kol Mazlan bin Md Sahalan telah ditauliahkan ke dalam Kor Gerak Khas pada 31 Disember 1979. Beliau pernah mengikuti Kursus Asas Sniper dan Kursus Anti Keganasan Miritim pada tahun 1981 di PULPAK Kem Sg Udang, Kursus Sniper Instructor di New Zealand pada tahun 1982, Kursus *Special Forces Qualification, Static Line Jump Master, Pathfinder, Air Assault, Psychological Warfare, Military Free Fall* di Amerika Syarikat pada tahun 1990 dan Law Of Armed Conflict. Lt Kol Mazlan pernah berkhidmat di bawah misi PBB sebagai Pegawai Staff 2 Operasi dan Ketua Sektor di *United Nation Transaction East Timor* (UNTAET) pada tahun 1999 hingga 2000. Pada 2003 hingga 2005 beliau telah menjawat jawatan Ketua Jurulatih di Pusat Latihan Peperangan Khusus TD (PULPAK). Pada tahun 2005-2007 beliau menjawat jawatan sebagai Pegawai Memerintah Garison Kem Iskandar Mersing dan sekarang bertugas sebagai Pegawai Staff 1 Anti Keganasan di Markas 21 GKK.

CRUISE MISSILES: A THREAT TO THE MALAYSIAN AIR DEFENCE ARTILLERY

By Mej Tan Soo Chooi

INTRODUCTION

A cruise missile (CM) is basically a small, pilot-less airplane. Cruise missiles have wings, much like airplanes and are powered by engines. It normally can fly up to a range of 800 to 1,600 Km at a speed of 880Km/h (subsonic) depending on the configuration. A cruise missile's job in life is to deliver high-explosive bombs to a precise location, 'the target'. The missile is destroyed when the bomb explodes.

Unlike a ballistic missile, which places enormous stress on its warhead as it accelerates and as it re-enters the Earth's atmosphere, a cruise missile flies much like an aircraft. Its warhead can therefore be based upon munitions originally designed for manned aircraft, making the development of Chemical and Biological (CW and BW) payloads for cruise missiles a comparatively simple matter.

Because of the cruise missiles' characteristics, the *Tomahawk* (TLAM-D) for example carries a submunitions dispenser that allows it to deliver bomblets on three different targets, before diving into a fourth.

HISTORY OF CRUISE MISSILES

The concept of a cruise missile was first mooted by a French artillery officer, Rene Lorin, before the First World War. Efforts to develop a viable weapon began in Germany in 1915, in the United States (US) a year later and in the UK at about the same time. Development intensified following the United State entry into the war and by 1918 the US Navy had developed the *Sperry Aerial Torpedo*, an N-9 biplane with gyroscopic guidance and a range of up to 70 miles.

Work on unmanned flying bombs continued during the 1920s. As early as 1921, trials took place in Britain of a gyroscopically-controlled, sea-launched 'munitions carrier' with a 200 lb (90 kg) warhead. The design proved unreliable, but the concept was considered sufficiently promising to warrant further development. However no operational weapons would appear until late in World War II, and even then these were short-range weapons of limited effectiveness.

The Germans continued its research and tests until finally, engineer Robert Lusser drew up plans for what later became known as the *Vergeltungswaffe Eins* (Revenge Weapon One or V-I) and development began in mid 1942 at the secret research facility at Peenemunde, West on the Baltic. This is the first successful CM ever recorded in history.

The great advantage of the V-I lay in its cheapness and simplicity. Built of plain sheet steel and plywood, its pulse jet ran on low-grade petrol and required only 550 man-hours to produce. Some 26 feet long, with a wingspan of 19 feet, it carried a 850 kg warhead a range of some 250 km at a speed of 350-400 mph. Further prospective advances in guidance systems, propulsion and warhead design will continue to make cruise missiles even more efficient.

FUNCTIONS OF CRUISE MISSILES

The increasing demand and interest in producing a 'human-replacing-machines' to carry out missions beyond enemy lines and also to minimize human casualties and increase efficiency, not forgetting accuracy, was the main reason for the invention of cruise missiles.

Therefore its main function or missions that normally assigned to these missiles is to deliver mainly conventional warheads with high accuracy to strategic and vital targets with a deadly destruction.

The CM having low profile or extremely small Radar Cross Section (RCS) makes it almost invisible to radars and therefore also to enemies' air defence weapons. Also with its terrain hugging capabilities to avoid detections by radar, high subsonic speeds, efficient engines which gives it high maneuverability, long range endurance and state of the art guidance systems makes it perfect for its role and functions.

In 1991, Desert Storm was the first combat test of the cruise missile system. It also marked the first coordinated Tomahawk and manned-aircraft strike in history. During the Gulf War, Tomahawk missiles launched from the battleships Missouri and Wisconsin struck with accuracy at Iraqi command centers, radar installations, surface-to-air missile sites, command and control centers, electrical power facilities and were also credited with the destruction of Iraq's presidential palace.

US used most of its Air Launched Cruise Missiles (ALCM) and Sea Launched Cruise Missiles (SLCM) from its destroyers and B-52 bombers. During this campaign, US fired its Tomahawk Conventional Land Attack Missiles (TLAM -C/D) to ground targets in Iraq, mainly on Baghdad and also used its Air To Ground Missiles. (AGM) 86B from its B-52G and B-52H.

GENERAL CHARACTERISTICS OF CRUISE MISSILES

In general, a cruise missile can be divided into 4 main components that made up its systems. Its Air Frame or chassis, Propulsion System, Guidance System and its Warhead. Cruise missiles come in a number of variations and can be launched from surface, submarines, destroyers or aircrafts.

AIR FRAME

The airframe is essentially that of a small (unmanned) aeroplane or a design based on an

RPY. Early two-wing, three-surface tail aircraft designs were followed by four-wing/four tail cruciform configurations. The body of a *Tomahawk* has two wings and a four-fan tail.

A key factor in the future development of cruise missile airframes is the extent to which low observable (stealth) technology can be incorporated. Stealthy cruise missiles will be harder to detect, further reducing attack warning time and making defensive countermeasures less effective.

By incorporating stealth technology into an object that is already as small as a cruise missile can render it all but invisible to conventional radar. The *Tomahawk* ALCM, designed in the 1970s utilizing the simple low observable technologies than available, has an RCS of some 0.05 square meters, whilst advanced 'stealthy' cruise missiles such as the US AGM 129A will display an even smaller RCS. By comparison, a bird in flight displays an RCS of 0.01 square meters.

The value of stealth technologies to cruise missiles is that it makes them even harder to detect and intercepted by Surface-to-Air Missiles (SAM) that depends heavily on the ability of their fire control radars to detect and lock onto their target. Cruise missiles with radar cross sections of less than 0.1 square meters are difficult to track by radar and even if a SAM battery can detect the missile, it may not be able to lock onto the target accurately enough in order to engage it.

PROPULSION SYSTEM

Basically the conventional long-range cruise missile has a 2-stage propulsion system, launching and cruising. Still there are some missiles, especially short-range Anti Ship Cruise Missiles (ASCMs) like the *Exocet*, are powered throughout their flight by rocket motors. Older rocket-propelled models, such as the *Styx* and *Silkworm* ASCMs use liquid fuelled rocket engines, while newer ones, such as the *Exocet*, use solid fuel motors.

The first stage, boosting or launching stage normally is done by using solid rocket booster. Solid fuel is used instead of liquid fuel because solid fuels have a faster reaction time and unlike the often highly corrosive liquid fuels, can be held ready in

silos for instant use. The booster falls away once it has burned its fuel.

The second stage, which is the sustained cruising stage, starts immediately after the booster rockets are done with and the wings, tail fins and air inlet unfold and the turbofan engine takes over. This engine weighs just 145 pounds (65 kg) and produces 600 pounds of thrust burning RJ4 fuel. The fuel load is 800 to 1,000 pounds (450 kg) of fuel or approximately 150 gallons (600 liters). With this engine, a cruise missile has a cruising speed of 550 mph (880 km/h) at altitudes of 30 - 100 metres.

A turbofan engine is an air breathing engine, meaning it doesn't carry its own oxidants but uses the atmosphere's air for burning of fuels. A turbofan engine consists of 4 main parts, the fan, compressor, combustion area and turbines.

In this engine, air is sucked in from the right by the compressor. The compressor is basically a cone-shaped cylinder with small fan blades attached in rows. Assuming the light blue represents air at normal air pressure, then as the air is forced through the compression stage its pressure rises significantly. In some engines, the pressure of the air can rise by a factor of 30.

This high-pressure air then enters the combustion area, where a ring of fuel injectors injects a steady stream of fuel. The fuel is generally kerosene, jet fuel, propane or natural gas. At the left of the engine is the turbine section. In this section, there are two sets of turbines. The first set directly drives the compressor. The turbines, the shaft and the compressor all turn as a single unit.

The final turbine stage drives a shaft that makes its way back to the front of the engine to power the fan. The multiple concentric shaft approach, by the way, is extremely common in gas turbines. The purpose of the fan is to dramatically increase the amount of air moving through the engine and therefore increase the engine's thrust.

Although slower to reach the target, a missile with an air-breathing engine has the advantage of range, because unlike a rocket motor system it does not have to carry the weight of an oxidizer - the

weight of fuel carried by a turbojet powered cruise missile is only a third that needed by an otherwise identical rocket-powered missile: moreover, the air-breather is more maneuverable.

GUIDANCE SYSTEM

There are 3 different controlling or guiding methods of cruise missiles. The missiles may be programmed: as "autonomous" (i.e. launch and leave); or for remote piloting by command (i.e. flown by a human operator over a remote communications link); or as semi-autonomous (a combination of the two, with remote manual input in the terminal stage).

The latest and most advanced method is of course the autonomous method which consists of 2 guidance stage. The first is an in-flight guidance system to maintain its flight path and altitude. This stage consists of 3 different guidance systems:

- Inertial Guidance System (IGS).
- Terrain Contour Matching (TERCOM).
- Global Positioning System (GPS).

Meanwhile the second stage or the terminal stage uses a terminal guidance system for the final approach to the target which is the Digital Scene Matching Area Correlation (DSMAC).

- **IGS.** The Inertial Guidance System (IGS) or Inertial Navigation System (INS) uses gyroscopes and accelerometers (which detects motion) to calculate changes in relative positions. Wholly independent of any external signals or support, they cannot be jammed or affected by electronic countermeasures.

The disadvantage of INS is its inherent inaccuracy, making it unsuitable for use as the sole guidance system in a cruise missile. Gyroscopes are subject to errors which accumulate over time - the longer the flight time, the greater the error. The INS fitted to the US Tomahawk drifts by 900 metres per hour. At its cruising speed of 800 km/hr and a distance of 1,600

km, this inertial drift equates to an error of 1,800 metres, necessitating the use of supplementary guidance systems such as Terrain Contour Matching (TERCOM) or GPS.

- **TERCOM.** Terrain Contour Matching (TERCOM) was first patented in 1958, but it was not until the development of micro-electronics in the 1970s that practical TERCOM systems first appeared. A pre-requisite for TERCOM is the ability to generate electronic maps from high resolution satellite images. These are digitized and stored in the system's memory across a matrix of cells. Each cell covers a set area of ground and is allotted an average elevation.

A radar-altimeter is used to compare the elevation of the terrain over which the missile is flying with the elevation data in the on-board maps. This establishes the position of the missile and makes any necessary corrections to its inertial navigation system. Using this technique, TERCOM can achieve accuracies of 30-100 metres. The TERCOM system is responsible for a cruise missile's ability to "hug the ground" during flight.

- **GPS.** The Global Positioning Satellite (GPS) system uses the military's network of GPS satellites and an onboard GPS receiver to detect its position with very high accuracy. Satellite navigation systems provide a highly accurate means of determining the precise position of an object on or over the earth's surface.

The US GPS consists of twenty four NAVSTAR satellites in polar orbit (three of which are back-ups). The system can be used to obtain both horizontal (latitude and longitude) and vertical (altitude) fixes. Signals from three satellites are needed to obtain horizontal fixes, the signal from a fourth to obtain the vertical fix and give a complete three-dimensional position. If the receiver picks up data from more than four satellites, the accuracy of the fix is increased.

Accurate satellite data allows a cruise missile to receive regular mid-course updates which counteract the drift inherent in traditional gyroscope-based inertial navigation systems

('INS'). Packaged with even a simple INS, satellite navigation systems give cruise missile accuracies of between 10 and 100 metres.

- **Digital Scene Matching Area Correlation.**

Once it is close to the target, the missile switches to a "terminal guidance system" to choose the point of impact. Terminal guidance systems help the missile to home in on the target in the final stages of flight. The DSMAC system uses a camera and an image correlator to find the target and is especially useful if the target is moving. This is a two-dimensional, map-matching concept that employs an onboard sensor to obtain a sequence of images of the ground directly below the missile. The images are compared to reference data stored in the missile's navigational computer and route changes are made accordingly, prior to final target acquisition. DSMAC is another complex technology only employed to date in US systems. A cruise missile can also be equipped with thermal imaging or illumination sensors (as used in smart bombs).

- **WARHEAD.** As mentioned earlier, a cruise missile is capable of using conventional weapons and currently, most cruise missiles are armed with conventional, high-explosive warheads, blast fragmentation warheads and submunitions. Today's CM may also be equipped with nuclear warheads and CBW agents.

Also during the Gulf War, the US is reported to have tested a specialised warhead designed to disable electrical transformers and power-generating plants. Known as 'KIT -2', this warhead dropped carbon-fibre spools which unwound to cause massive short circuits in Iraqi electrical equipment.

It is also possible to be armed with submunition warheads that contain a number of small devices or bomb cradles designed for specialised roles such as anti-airfield or anti-personnel. Examples include the British JP-233 air base attack bomb which contains devices to penetrate and explode in concrete and anti-personnel mines to prevent repair. Because a cruise missile is similar to a manned

aircraft, submunitions designed for delivery by conventional strike aircraft can be adapted for use in cruise missiles with relative ease.

THE ROYAL AIR DEFENCE ARTILLERY

At present, The Malaysian Air Defence (AD) Artillery consists of 5 different weapon systems which is 35mm Oerlikon, Starburst Missile, IGLA Missile, ANZA Missile and Jernas Weapon System. The categories of these weapons are as such:

- **35mm Oerlikon - Skyguard.** This air defence (AD) gun is classified as a Very Short Ranged AD (VSHORAD) which has an effective range of 4 km. It is controlled by a Fire Control Radar (FCR) which is the Skyguard Radar that has a radar coverage of 16 km. The ammunition in the Malaysian Army inventory for this system is not capable of neutralizing a cruise missile threat.
- **Starburst Missile.** This is a semi-automatic command to line of sight (SACLOS) weapon system. Meaning the missile fired requires the operator to use a laser beam to guide the missile to its target. Starburst also falls under VSHORAD and has an effective range of 4.5 km for moving targets and 5.5 km for static targets. This system does not have the capability to engage a cruise missile.
- **IGLA Missile.** This system is a 'fire and forget' missile that has infra-red sensors to home in to the heat produced by a target. It has an effective range of 7 km and is also categorized as a VSHORAD weapon system. The IGLA missile is not capable of neutralizing a cruise missile.
- **ANZA Missile.** This is also a 'fire and forget' missile that locks on the target's infra-red radiation or heat source. It has an effective range of 5.2 km and is also categorized as a VSHORAD weapon system.
- **Jernas Weapon System.** Jernas is an upgraded export version of the UK's Rapier air defence missile system. Jernas consists of a Missile Launcher, Tracker Radar dan

Surveillance Radar. The Surveillance Radar and the Tracker Radar both have a Radar Cross Section of up to 0.01 meter square which means it is able to detect objects as small as a bird. Jernas missile's effective range is up to 8 km which classifies it into a Short Ranged Air Defence (SHORAD) and has a day/night all weather capability. It incorporates both active and passive tracking system which allows it to conduct dual-firing to engage two targets simultaneously.

THE THREAT

Based on the characteristics of CM and the capabilities of our AD weapons, the threat that CM posed to our AD artillery may be described under these aspects:

- **Radar Cross Section (RCS).** As explained earlier, RCS is the ratio between the size of target's cross section and the amount of energy received from the radio wave's echo that reflected back from the target. In simple words, it is how well can the radar 'see' a target. Our Skyguard Radar has a RCS of 0.1 meter square only, meanwhile a YCM has an RCS of at least 0.05 meter square and the latest CM such as the US AGM- J129A has a RCS of only 0.01 meter square. This is further worsened by a CM which is built using Radar Absorbent Materials to increase the stealth properties. Therefore our Oerlikon-Skyguard weapon system is not capable of detecting and destroying a CM because Oerlikon-Skyguard is unable to detect a CM.
- **Target Visibility and Detectability.** A CM has 'terrain hugging' capabilities by using the TERCOM system and may fly above ground surface of only 50 - 100 meter. This would cause any radar not to be able to detect it because of terrain masking and other natural obstacles. With its small size and by flying low, the operators of both Starburst and IGLA weapon systems would be extremely difficult to detect it visually. The Starburst system requires that the operator guides the missile towards the target, but if the target cannot be visually identified, therefore it may not be engaged successfully.

RECOMMENDATIONS

The threat posed by modern missile has traditionally been seen predominantly in terms of ballistic missiles. But the ballistic missile is far from representing the totality of the missile threat. Modern cruise missiles carry a similar size warhead as a ballistic missile over a similar range, but deliver it with far greater accuracy and at a fraction of a ballistic missile's cost. The means to develop advanced cruise missiles can increasingly be obtained on the open market. Some 19 countries currently produce cruise missiles and several more have the capability to produce them. At least 54 others countries have cruise missiles of some type in their arsenals.

Although the Royal Artillery has recently procured the new Jernas weapon system with the state of the art technology and may counter a cruise missile threat, the amount of fire units of Jernas procured is still insufficient to provide AD protection to all national strategic assets and tactical targets against cruise missiles threat. Therefore we need to upgrade our inventory of AD weapons that is already in service, for it to be able, of not only countering a platform of a target, but also its armament that is released from standoff ranges. These can be achieved by:

- **Upgrading Skyguard Radar Capabilities.** This would be to increase its RCS to be able to see smaller targets and therefore able to engage the targets. This can be done by replacing the radar tracking system and circuitry system as well as installing the circuitry board for programmable MY Base for it to be up to the current technologies and capable of firing the AHEAD 35mm rounds.
- **Procure the AHEAD 35mm Rounds.** The AHEAD 35mm rounds are normal rounds with

an additional after fire timer settings. It has timers that are set when the shell leaves the muzzle velocity base on the Oerlikon guns. The Skyguard radars would pre-calculate the time of flight of the shell to reach the targets and set the timers so that it would automatically detonate when within range (3m) to the target and does not require direct impact to destroy a target. This calculation is achieved by taking into accounts the target's range, velocity, height and direction.

- **Acquiring Radar for The Starburst and IGLA System.** Currently, the United Kingdom has upgraded its Starburst system and named this new system the ASPIC-CLARA Missile System which actually uses the same Starburst Missiles but has radar to detect and guide the missile instead of human eyes. This would increase its detectability and reduce human error and also provides early warning to these weapons to increase the operator's readiness and alert states for it therm to be prepared to effectively takes enemy's aircrafts or weapons out on times.

CONCLUSION

At present, the Air Defence Artillery is only responsible for Low Level AD. Based on our weapon system capabilities and the characteristics of CM, the CM does not poses a threat to the Jernas weapon system, however, it does poses a threat to the remaining AD weapon systems based on the following 3 aspects. RCS of Skyguard radar is not sensitive enough to detect a small CM. The Oerlikon gun ammunition type is not capable of hitting a CM. The Starburst and IGLA weapon system requires human visual detection and with the capability of a CM to 'hug the terrain' and has a very small air frame makes it invisible to the human eyes and also to radars.

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DIRECTIVE CONTROL: THE PHILOSOPHY OF COMMAND AND CONTROL

By Mej Zulkarnain bin Haron

The key to the concept is simple: centralized planning and decentralized execution . . . The basic requirement of decentralized operations in general war is preplanned response in accordance with commonly understood doctrine. Lord Nelson did not win at Trafalgar because he had a great plan. He won because his subordinate commanders thoroughly understood that plan and their place in it well in advance of planned execution. You must be prepared to take action when certain conditions are met; you cannot anticipate minute-by-minute guidance.¹

INTRODUCTION

Military command at all levels is the art of decision making and motivating and directing all ranks into action to accomplish given missions. It requires a vision of the desired result, an understanding of concepts, mission priorities and the allocation of resources, an ability to assess people and risks and involves a continual process of re - evaluating the situation. A commander requires, above all, to decide on a course of action and to lead his command. Command also involves accountability and control. However, control is not an equal partner with command but merely an aspect of it. The execution of control is shared between the commander and his staff.

Instrumental to command and control for modern operations is the concept of *Auftragstaktik*, which is expressed in English by two closely related terms, “**directive control**” and “**mission-type orders**,” with both suggesting general guidance as opposed to prescriptive oversight. *Auftragstaktik* subsumes all the following concepts: individual initiative, independent decision-making and thinking leaders reaching tactical decisions on their own accord. In short, a commander would specify to subordinates what to do, not how to do it. The result of an evolutionary process in German doctrine, *Auftragstaktik* for our purposes here used interchangeably with “directive control” can be characterized more fully as follows:

Command is based on task (Auftrag) and situation. The task lays down the aims to be achieved, which the commander charged with achieving it must keep in the forefront of his mind. Task and situation give rise to the mission ... The mission must be a clearly defined aim to be pursued with all one's powers ... The commander must leave his subordinates freedom of action, to the extent that doing so does not imperil his intention.¹

WHAT IS DIRECTIVE CONTROL OR MISSION COMMAND?

A sound philosophy of command has four enduring tenets. It requires timely decision making, a clear understanding of the superior commander's intention, an ability on the part of subordinates to meet the superior's remit and the commander's determination to see plan through to a successful conclusion. This requires a style of command that promotes decentralized command, freedom and speed of action as well as initiative but which is responsive to superior direction. Directive control or mission command is the way of achieving this. It has the following key elements:²

¹ Richard E. Simpkin, *Race to the Swift: Thoughts on Twenty-First Century Warfare* (London: Brassey's Defence Publisher, 1985), p.228.

² *Joint Warfare Publication 0-01: Command*, p. 4-2.

- First, a commander ensures that his subordinates understand his intentions, their own mission and the strategic, operational and tactical concept.
- Second, subordinates are told what effect they are to achieve and the reason why it is necessary.
- Third, subordinates are allocated sufficient resources to carry out their missions.
- Fourth, a commander uses a minimum of control so as not to limit unnecessarily his subordinate's freedom of action.
- Finally, subordinates decide for themselves how best to achieve their missions.

HISTORICAL BACKGROUND

Directive Control in German and British Doctrine

Useful insights about current operations can be gleaned through inquiry into the employment of directive control of forces in conflicts past. *Auftragstaktik* represents a capstone command and control doctrine in the German armed forces dating back to the early 19th century. Its origins can be found in the Prussian military reforms beginning in 1808, following Prussia's disastrous defeats by Napoleon.³ Doctrinal evidence of acknowledgment in Prussia of the need for fresh thinking about the nature of war can be found as far back as 1806:

Long-winded orders on dispositions must not be given before a battle. [The commander] looks at as much of the ground as he can, . . . gives his divisional commanders the general idea in a few words, and shows them the general layout of the ground on which the army is to form up. The manner of deployment is left to them; fastest is best. The commander cannot be everywhere. He must always keep the picture as a whole in his mind's eye and shape it, mainly by sound handling of the reserves.⁴

³ H.W. Koch, *A History of Prussia* (New York: Longman, 1978), p.180-187.

⁴ Simpkin, p.227.

Eventually, it would become a key feature in the warfighting philosophy of several nations. *Auftragstaktik* incorporated facets of leadership, battle tactics, command and control, senior-subordinate relationships and even war conceptualisation. The approach was comprehensive and it presupposed intuition, initiative, flexibility and decisive action.

Notably, a similar development took place in the early 19th-century British navy. There it would become widely known as the "*Nelson touch*," serving the British well at sea. In the present century, *Auftragstaktik* was crucial in many German land campaigns, particularly on the Western Front and in North Africa during the Second World War, often allowing German units to fight outnumbered and win. British and German experiences with directive control bear out Carl von Clausewitz's observation that no hard and fast rules governing the conduct of war ever present themselves; rather, the actions of the commander, for better or worse, decisively influence the course of events in the battlespace.⁵ This notion was articulated in Germany's 1933 Field Service Regulations: "*Leadership in war is an art, a free creative activity based on a foundation of knowledge. The greatest demands are made on the personality.*"⁶

Directive Control in the US Army

The concept of directive control surfaced in the US Army by the middle of World War II, when it was operationalised by George Patton and other successful combat leaders. Patton was arguably the leading proponent of directive control among US generals in the war. For all his reputed eccentricities and arrogance, Patton respected creative and intuitive powers in his subordinates, recognized that some judgmental error is inherent in decisive combat action. He acknowledged that the exercise of initiative at all levels, notwithstanding individual judgmental error, offered the best chance for victory. That Patton was one of America's most successful combat leaders is not coincidental.

⁵ Robert C. Rubel, "*Gettysburg and Midway: Historical Parallels in Operational Command*", *Naval War College Review*, 48 (1995), p.96.

⁶ John T. Nelson II, "*Auftragstaktik: A Case for Decentralise Battle*", (Parameters 17, 1987).

Directive control became a leading catchword in the US military in the 1980s. This is not to suggest that the adoption of the concept was trendy or faddish. On the contrary, since adoption, the concept has shown considerable staying power. In preparation for 21st century operations, the US Army leaders realise that they need more extensive doctrinal anchoring and attendant discussion of directive control in the secondary doctrinal literature. These steps will, in turn, foster more instruction of this command and control philosophy at various levels of command. Skilful commanders, guided by doctrine, should be able to develop and exercise suitable tactical moves in an operation on their own initiative, achieving mission objectives in accordance with theatre operational and strategic goals.⁷ Directive control allows commanders to adapt to changing circumstances, exercise flexibility, demonstrate initiative, anticipate events and thereby gain tactical and operational advantage.

THE COMPLEXITY OF MODERN WAR

Complex systems like war simply cannot be controlled the way machines can. We should not think of command and control as a coercive form of mechanistic control, the way an operator operates a machine. The object of mechanistic command and control is for the top of the organization to be “in control” of the bottom and for the bottom to be “under” the control of the top.

Adaptive Command and Control

In a complex, open environment, command and control is fundamentally a process of continuous adaptation. The simple command and control model, the Observation-Oriented-Decision-Action cycle (or OODA loop), essentially describes a process of continuous adaptation to a changing situation. See fig. 1. We might better liken the military organization to a predatory animal, seeking information, learning and adapting in its desire for continued survival than to some “lean, green machine.” Most military actions do not proceed with clockwork mechanics as “operations” but instead as “evolutions” along the “edge of chaos.”⁸

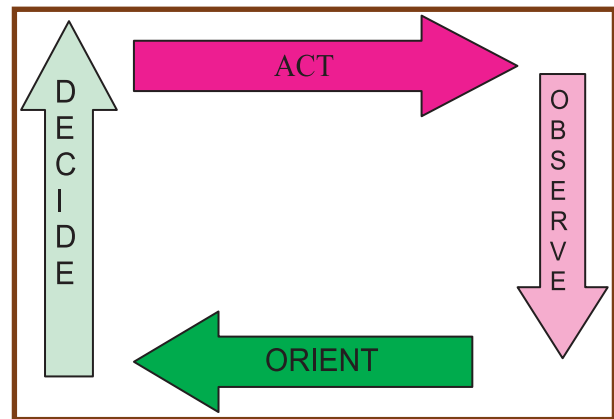


Figure 1

Rather than thinking of “command” and “control” both operating from the top of the organization toward the bottom, we should think of command and control as an adaptive process in which “command” is top-down guidance and “control” is bottom-up feedback. See Fig. 2. All parts of the organization contribute action and feedback of the “command” and “control” in overall cooperation. Command and control is thus fundamentally an activity of reciprocal influence involving give and take among all parts, from top to bottom and side to side.⁹

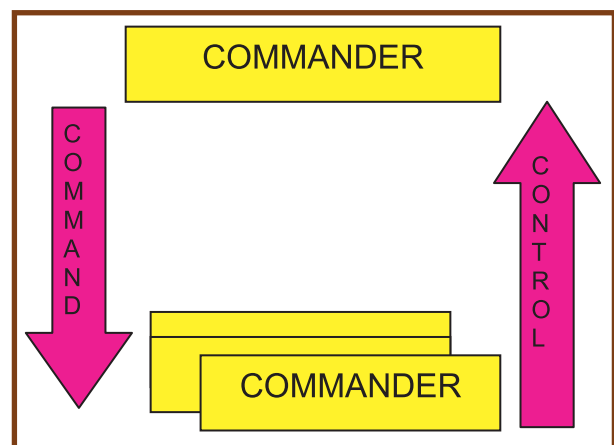


Figure 2

⁷ Raymond C. Bjorklund, *The Dollars and Sense of Command and Control*, (Washington: National Defence University Press, 1995), p. 49.

⁸ John F. Schmitt, *Command and (Out of) Control: The Military Implication of Complexity Theory*.

⁹ *ibid.*

Directive or Mission Command and Control

This response to the problem leads to is what is known in military terminology as directive or mission command and control, in which control is an emergent property arising spontaneously: unity of effort is not the product of conformity imposed from above but of the spontaneous, purposeful cooperation of the distributed elements of the force. Subordinates are guided not by detailed instructions and control measures but by their understanding of the requirements of the overall mission. Commanders command with a loose rein, allowing subordinates greater freedom of action and requiring them to adapt locally to developing conditions. Mission command and control tends to be decentralized to increase tempo and adaptability. Discipline imposed from above is reinforced with self-discipline throughout the organization. Necessary close coordination is effected locally rather than managed centrally.

The critical factor in such a system is to create command parameters and other systems features, which provide the necessary guidance and level of understanding to create unity of effort without unnecessarily constraining the activities of subordinates. In other words, how do we create the modes of agent behaviour under which the necessary system control will emerge naturally? Clearly, concepts like Commander's Intent and Focus of Effort play a key role, as do the extensive education, training and socialization of individual decision makers.

Directive control encourages flexibility and agility in operations to support the manoeuvre of forces, while engendering more autonomous command throughout the area of operations. Thus, directive control as a command and control philosophy conforms to, indeed, complements current and emerging war fighting doctrines. Foremost among these is manoeuvre warfare, an operational concept that has been widely embraced by the other armies in the world. The hallmarks of manoeuvre warfare; mobility, nimbleness, offensive surprise, penetration and swift operating tempo, place a high premium upon adaptability to unfolding circumstances and the ability to exploit rapidly developing opportunities. Specific battle area developments may prove different from those initially anticipated; in fact,

manoeuvre warfare strives to increase battlespace volatility and to exploit it. As a rule of thumb, one must simply expect the unexpected. By breaking enemy will and spirit through the sudden shock actions of mobile units, manoeuvre warfare offers a psychological force multiplier.

WHY DIRECTIVE CONTROL IS ESSENTIAL

The call for greater flexibility, selectivity and given a complex nature of modern warfare, it will have significant effect on command and control. If the Malaysian Army is to prove equal to future challenges; it must address fundamental questions, some of which have to do with command and control of forces in the small wars and low intensity conflicts that will be prevalent in coming years and in military operations other than war. Effective command and control endeavours to reduce operational uncertainty and to facilitate decision-making.

The attributes of recurring mission sets assigned to Army Troops such as non-combatant evacuation, surveillance, enforcement, security assistance and counter insurgency intrinsically require the decentralization of command. Responsibility for crucial decisions invariably filters down to lower ranks in such operations. Accordingly, our training calls for effective use of directive control and encourages innovative thinking about command. Army doctrine does so as well, conferring considerable import to initiative at relatively low echelons. Properly used, directive control is a fitting means to meet these objectives.

CHALLENGES

A present challenge is to develop military leaders capable of leading under various conditions and in diverse environments. To that end, development of a more coherent philosophy of command and control for military operations is overdue. Directive control should be the cornerstone of this philosophy, Army Land Manual Warfare providing the doctrinal basis. How does one better translate doctrine into practice? Discernible advantages accrue from the systematic use of directive control. On an individual level, such a command and control approach induces initiative and innovative leadership. On a

higher level, directive control causes commanders and their staff to ask fundamental questions associated with the principles of war.

Can directive control assist in overcoming the inevitable fog and friction of war? Viscount Horatio Nelson thought so. Nelson regarded war's fog as he did its close physical equivalent, the darkness of night, using both when he could to his operational purpose. One of Nelson's great victories, at Aboukir Bay in 1797, was fought in the dark under seemingly adverse conditions. But Nelson seemed in his element: *"I had the happiness to command a Band of Brothers; therefore, night was to my advantage. Each knew his duty, and I was sure each would feel for a French ship."*¹⁰

A grave contemporary mistake is to regard technological advances in communications as a means finally to overcome the fog and friction of war. Technological sophistication should not deter us from endeavouring to identify lessons from the past and accordingly, to learn from the successes as well as the failures of earlier warriors. Nelson, for his part, insisted that once his subordinate captains were acquainted with his ideas and intentions, signals became almost unnecessary.¹¹ One contemporary observer has been prompted to suggest that whatever the advances in radios, computers, satellites, and sophisticated electronic communications systems, war's fog will remain as resistant to technological fixes as the common cold has to the march of modern medicine.¹² This notion accentuates the need to consider enduring fundamentals.

Command micromanagement, for example, is and will remain detrimental. Although the functions of command and control have become increasingly interconnected with technology and the tempo of technological advancement has often been so great as to be justifiably labelled revolutionary, command and control still involve the vast and largely unquantifiable realm of human judgment and intellect, at least as much as in

Nelson's day, perhaps more so. And technology can be a two-edged sword, especially when developments lend themselves to ever-greater centralization of execution and in extreme cases to battlefield micromanagement. As experienced by US Army, helicopter command posts in the Vietnam War became almost proverbial. Instead of allowing junior officers on the ground to exercise command in accordance with their experience and assessment of the specific circumstances, some commanders could not resist the temptation to direct execution from above, largely cause it had become technologically feasible to do so.

IMPLEMENTING THE APPROACH

Our doctrine affords perspectives on the development of initiative by military leaders at all levels of command. Directive control should be embraced as more than merely a command and control philosophy. Rather, it should represent a critical facet of a more comprehensive approach to war fighting. Directive control has five principal facets whose overall objective is to achieve battlespace dominance through the successful and independent decision making of subordinate commanders.

- **Initiative.** The first of these, is scope for initiative. Commanders at all levels must be accorded considerable leeway for initiative. Such latitude can generate the speed of response critical to battlespace success. The fog and friction of war may invalidate the carefully wrought plans of higher authority, leaving the individual commander the best judge of the immediate tactical situation.
- **Risk Taking.** The second is prudent risk-taking. Risk-taking stems from initiative. What is different about risk-taking in this context is the importance attached to making an independent decision when circumstances dictate. An incorrect but earnest decision is far preferable to lack of action. Approaches to command should encourage subordinate commanders to exercise tactical initiative, while recognizing that errors and reverses will occur. The aggregation of successes on the part of commanders exercising battlespace initiative, so it is reasoned, will overcome the occasional

¹⁰ Michael A. Palmer, "Lord Nelson: Master of Command, Naval War College Review 41, 1998, p. 113.

¹¹ Michael A. Palmer, "Burke and Nelson Decentralised Style of Command". (US Naval Institute Proceeding), 117, (1991). p. 59.

¹² Palmer, "Lord Nelson; Master of Command", p. 114.

setbacks. A “zero defects” mindset tends to discourage subordinate initiative.

- **Commander’s Intent.** The third facet concerns the centrality of the commander’s intent to the entire command and control process. Commander’s intent binds together various tasks and defines the desired end-state. In determining the prudence of their decisions, subordinates should assess their projected initiatives in accordance with the commander’s intent.

- **Mutual Trust.** Fourth, superior-subordinate relations must be characterized by mutual trust. Such trust furnishes the subordinate with the confidence to exercise tactical initiative without concerns about reprimand for error or bad judgment. Likewise, superiors have confidence that subordinates will carry out orders and exercise their initiative consonant with the superior’s intent. Mutual trust is thus a manifestation of superior-subordinate professionalism. Mutually trusting individuals, moreover, are those most likely to anticipate one another’s actions, to understand intuitively how the others are thinking, hence setting in train a harmony of minds whereby detailed instructions are unnecessary.

- **Feedback.** Fifth, directive control presupposes subordinate initiative and feedback. Subordinates are expected to solve problems at their level of control, in lieu of appealing to higher authority. Decentralized execution must foster individual initiative at all levels. Centralized planning also requires feedback from all levels. Subordinates are expected to make specific recommendations for changes based upon their assessment of the situation. Open discussion is at all times appropriate. Nelson, for his part, made a habit of availing himself of frank discussions and the sharing of ideas among officers well attuned to one another. Nelson was said to have quipped that an order is a good basis for discussion. As a subordinate commander, he repeatedly “modified” orders to accommodate changing circumstances. A man of indomitable determination, Nelson shaped battlespace circumstances to his will, rather than merely responding to them as lesser men might.

Initiative and feedback involve significant delegation of authority. The implementation of directive control as envisaged for the 21st century entails a new dynamism in command and control, whereby the effects of particular actions are reported to higher commanders, affording them the opportunity to assess them and to react accordingly. Modern technology increasingly permits the continuous flow of information about unfolding situations and results of actions.

War, Clausewitz noted, *is the playground of chance, compelling commanders to assess risks and to judge probability and feasibility.*¹³ Through the like-mindedness engendered by doctrine, junior officers and NCOs must gain an appreciation for one of the conspicuous challenges of the modern battlefield: the pressures for technologically induced centralization of execution on the one hand and the decentralizing imperatives of operations on the other. Doctrine and experience are both involved in resolving the paradox that pits the need for directive control at the tactical level against the ability of generals to communicate with squads.

CONCLUSION

Directive control works only when trust and confidence obtain throughout the ranks. Such confidence must extend to the willingness and ability of all personnel to exercise individual initiative for mission accomplishment. This, in turn, involves doctrinal training and education fashioned to underscore the need for decisiveness, adaptability, flexibility and assumption of individual responsibility in command. Doctrine, a set of principles designed to engender like-mindedness, is intended to serve as a guide for commanders at all levels, particularly to subordinate commanders, by assisting the latter in the development of courses of action consistent with the commander’s intent, and drawing upon organizational strengths. Over the years, German officer training has gone to great lengths to accomplish this goal. Doctrine strove to foster the common understanding of individual initiative without which the command system would have been dysfunctional. Two quotes from World War II German general officers are instructive here:¹⁴

¹³ Rubel, p.97.

¹⁴ Charles G. Sutton, Jr, “*Command and Control at the Operational Level*”, (Washington :Pergamon – Brassey’s 1989), p.78-79.

We found that leaders at any level grow with their experience . . . Their initiative should be fostered in the case of a division commander as much as in the case of a platoon leader.

Generally the German higher commanders rarely or never reproached their subordinates unless they made a terrible blunder. They were fostering the individual's initiative. They left him room for initiative, and did not reprimand him unless he did something very wrong. This went down to the individual soldier, who was praised for developing initiative.

Current German army regulations describe Auftragstaktik in the following manner:

A command and control procedure within which the subordinate is given extensive latitude, within the framework of the intention of the individual giving the order, in carrying out his mission. The missions are to include only those restraints, which are indispensable for being able to interact with others, and it must be possible to accomplish them by making use of the subordinate's forces, resources, and the authority delegated to him. Mission-oriented command and control requires uniformity in the way of thinking, sound judgment and initiative, as well as responsible actions at all levels.¹⁵

The chief objective of any command and control system is unity of effort. Such effort embodies an overarching principle encompassing, as John Collins expresses it, "*solidarity of purposes, effort,*

and command, directing all energies, assets, and activities, physical and mental, toward desired ends."¹⁶ Unity of command has enormous salience in military service doctrine; unity of command should be regarded as essential to unity of effort. Be that as it may, complete unity of command is seldom achievable in any operations. Unity of purpose and unity of effort are usually the most one can hope for. A prominent challenge for command and control is to sustain unity of effort in operational environments of pronounced uncertainty, perplexity and turbulence. Accordingly, our doctrine emphasizes flexibility in the range of command relationships and command authority. Directive control contributes to such flexibility, representing the only potentially effective means of command in a number of critical environments.

In underscoring the importance of command structure, several publications specify that command and control structures must be flexible, reliable, interoperable and secure. Advanced technology furnishes command and control capabilities far superior to those of the past, of course. Satellite and space-based technology are the most prominent but certainly not the only examples. For reasons discussed above, having to do with the turbulence and complexity of the operational environment, command and control will encounter difficulties and will even be degraded in some instances. Articulated battlespace vision and clearly understandable commander's intent facilitate subordinate exercise of initiative, while maintaining objectives and priorities. Straightforward orders and discernible commander's intent are the basis of effective directive control of mission command.

¹⁵ "The German Army's Mission Oriented Command and Control", *Armor*, 90, (1981), p.12.

¹⁶ John M. Collins, "*Grand Strategy: Principle and Practices* (Annapolis, Naval Institutes Press: 1973), p.28.

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* Had Panjang Artikel. Disyorkan panjang artikel diantara 3,000 hingga 4,000 patah perkataan dan menggunakan font Arial, saiz 12. Sumbangan yang lebih pendek juga akan dipertimbangkan. Artikel tersebut hendaklah bertaip dengan baris dua jarak yang menggunakan kertas A4. Dua salinan berbentuk *soft copy* atau CD di majukan kepada Sidang Redaksi.

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New Straits Times; 16 Jun 1960.

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EDISI KE - 49

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Impaknya kepada TD”**

oleh Lt Kol Mohamad Rudi bin Othman

(Artikel Terbaik)



“Electronic Warfare Development ”

by Brig Jen Dato’ Mohd Zaki bin Wan
Mahood (Bersara)

(Artikel Kedua Terbaik)



**“The Human Dimension in Network
Centric Warfare”**

by Lt Kol Amiruddin bin Ismail

(Artikel Ketiga Terbaik)



Memo