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EDITORIAL

POINTER has come a long way since its first publication as an instructional journal of the School of Methods of Instruction in 1975. Its transformation to a professional military journal in the early 1980s and subsequent reinvigoration in 2003 has culminated in its present position as a key learning node in the SAF for sharing and networking. The *POINTER* journal today holds a reservoir of ideas and knowledge harnessed both domestically and internationally that not only enriches SAF Officers professionally, it is also a useful source of reference for students, researchers and staff officers.

In recent years, *POINTER* has gained prominence as a useful source of reference and research by prestigious foreign military institutions. For example, CPT Choy Dawen's article entitled "Effects-Based Operations: Obstacles and Opportunities" (Vol. 30 No. 2) was compiled by the Swedish National Defence College as part of its course readings on EBO. The Department of Distance Education of the U.S. Army War College also sought COL Noel Cheah's article on "The Application of the Just War Tradition in Contemporary Wars Between States" (Vol. 26 No. 3) as part of their resource materials for the Defence Strategy Course. Even as this editorial is being written, we are responding to a request from the Institute of Chartered Financial Analysts of India for a reprint of MAJ(NS) Seet Pi Shen's article entitled

"Manoeuvre Warfare – Lessons from the Boardroom for the Battle" (Vol. 29 No. 2) in their executive reference book on military management. These requests speak volumes of the quality of essays published by *POINTER* and the value it adds to current literature for military education.

In this issue of *POINTER*, we are once again honoured by the contributions of eminent foreign thought leaders. VADM(Ret) Yedidia Yaari and Mr Haim Assa, who are leading experts in military and strategic affairs in Israel, share their thoughts and present a case for a possible next spiral in the revolution of warfare – in what they term as the theory of Diffused or Distributed Warfare.

In his article, LTC Irvin Lim, a regular contributor of *POINTER*, examines the security dilemma in the prevailing complex security environment and the delicate balancing needed for deterrence to be effective and successful. Looking within the SAF, he identifies a few key areas in which the 3G SAF could reflect, reframe and rethink in order to build an effective and credible deterrence strategy to deal with the full spectrum of both conventional and unconventional threats.

In this issue, we are also pleased to publish two of the winning essays of the 2004 CDF Essay Competition. The top essay, "Strategies for Managing Force Transformation – Creating New

Defining Moments for the Future” by LTC Lawrence Lim discusses broad strategies to manage the SAF’s transformation process. He argues that overcoming structural and systemic limitations to transformation and long development capability timelines will require employing experimentation, leveraging on IKC2, and systems integration. The other winning essay “The Soldier and the City-State: Civil-Military Relations and the Case of Singapore” by CPT Teh Hua Fung first provides a historical context for civil-military relations, and assesses the established conceptual frameworks of Huntington and Janowitz’s civil-military theories. It then examines the applicability of these models on the type and degree of civilian control (or lack thereof) over the SAF, illustrating the unique nature of Singapore’s civil-military model and how it differs from the conventional Huntington-Janowitz paradigm.

In his article, Dr Ang Cheng Guan, an academic who has authored three books on the Vietnam War and is in the process of writing two others, examines the decision-making on the communist side of the Vietnam War, showing the progression of the Vietnamese communists’ struggle from one that was essentially political in nature to a full-scale war and its eventual victory.

Under the section of Tech Edge, we are pleased to present an edited report on a joint research undertaken by Sweden and Singapore on Teams in a Command Post of the Future (CPoF) Environment. The report outlines the development and the findings from an experiment conducted on Team Insight Model (TIM) – a team collaboration model believed to bring about better tempo, situation awareness, plan and preparedness for the team, resulting in better decisions and outcomes. This research paper gained international recognition when it won the Best Paper (Experimentation Track) Award at the premier 10th International Command and Control Research and Technology Symposium organised under the U.S. Department of Defense Command and Control Research Program.

Last but not least, this issue of Personality Profiles concludes our four-part special feature on the great commanders of World War II. In this final instalment, we look at the lives and careers of two outstanding commanders from the Pacific Theatre namely: Admiral Isoroku Yamamoto (1884-1943) and General Douglas MacArthur (1880-1964).

Editor, *POINTER*

Dynamic Molecules

The Theory of Diffused Warfare¹

by VADM(Ret) Yedidia Yaari and Mr Haim Assa



The military campaign in Iraq in March 2003 provided, for the first time, the setting for a full scale demonstration of the practical effects of the Revolution in Military Affairs (RMA) and particularly of Network-Centric Warfare (NCW)². RMA, a thinking process that spanned over most of the 1990s, has had a profound impact on almost every aspect of military conduct and essentially led to a paradigm shift, of which NCW is probably the key component. The operational experience accumulated by the U.S. and coalition forces since the early 90s, and the more narrowly focused, yet sometimes more relevant experience of the Israeli Defense Forces (IDF) in Lebanon and in the current conflict with the Palestinians, have provided rich empirical data and combat experience for stock taking of

both RMA and NCW theory-building and theory-assessment.

This article summarises the arguments for the next spiral in this revolutionary process which we dub, Diffused or Distributed Warfare (DW).

The theory of DW is based on the assumption made by many RMA thinkers, that at the core of everything we see now lies a fundamental shift from military doctrines – based on a linear approach – that strive to concentrate masses of forces on a few singular points in the battlefield, to a world of diffused and distributed warfare: from war campaigns consisting of horizontal collisions between rival forces, breaking through the opponent's layers of defence and conducted along distinct lines with distinct starting and end

points – to diffused warfare that takes place, simultaneously, on the entire battle space, distributing the force mass to a multitude of separate pressure points, rather than concentrating it on assumed Clausewitzian centres of gravity.

If these statements seem to contradict widely accepted conventions of physical force – i.e., that highly concentrated forces make for greater power – this is due to a common optical illusion, which we address more extensively later on, concerning linear warfare. As a matter of fact, only a small fraction of the entire force, usually the very front of the formation, actually engages in fighting at any given moment.

On the other hand, the diffused masses of the DW concept can be more powerful and effective than the concentrated blow of the classic linear approach, simply because they operate in parallel as a network of “world views”. The mass is diffused into many molecular forces distributed throughout the entire battle space as independent pressure points, but the tactical picture of each molecular component of the network is available to all the others, as well as to the Command and Control coordination centre behind it. This way, it constitutes a much more efficient “virtual” substitution for the geographical concentration of forces of the linear approach. First, because it operates and is controlled as if it were a unified force and, second, because the sum of its engagement contacts, thus also its engagement effect, is dramatically larger³.

We argue however, that in managing this shift much more attention should be given to the definition of its practical building blocks from bottom up – as it seems that even in the most current conceptions of NCW, one can still trace a benign spillover from past linear paradigms. In fact, the very term, *Network-Centric*, for example, is almost a contradiction in terms. It is essential for networks that they have no centre. Network is the complete opposite of centrality.

Yet, we do need functioning coordinators for the network as a key to efficiently operate in it, and we certainly need the network to function as a means for command and control. Thus, the metaphor of the Dynamic Molecule, which is the basic force structure building block in our theory, was chosen intuitively for its biological connotations. The network of Diffused Warfare must therefore be built having nature’s structures in mind just as much as man-made architectural conceptions.⁴

Also, the term “asymmetric warfare”, often used to describe modern warfare against guerrilla and paramilitary forces, does not adequately capture the significance of the change that has taken place in the battlefield.

Fighting, inherently, aspires to achieve an asymmetry of victory on one side and defeat on the other. The 1973 October War, in the Middle East, for instance, was fought between nation-states’ armed forces, yet was totally asymmetric at the starting point; the recent military campaign in Iraq was a product of asymmetry, that

was built systematically over a period of more than a decade, culminating in the American attack in March 2003. Therefore, the trivial use of the term will be avoided, assuming that asymmetry in some form or degree exists in every conflict situation.

What we do perceive as relevant in that regard is that the pace of change in the nature of conflicts in recent years (for example, as illustrated in the conflict between Israel and the Arabs, and between various US-led coalitions and their opponents) is accelerating dramatically.

The shifts are so dramatic that they are becoming much more difficult to predict and even more difficult to translate into valid suppositions pertaining to force structure. Highly priced weapons systems at once become obsolete and central force components are left with no missions. A prime example is the strategic submarine fleets of both the United States and the former Soviet Union.

Future military solutions to the current state of affairs, therefore, will have to be generic ones – in terms of major platforms, ammunition and communication systems – to easily accommodate rapidly changing realities. Relevance, that is, the degree of adequacy of solutions to problems, will be the ultimate test in any given situation.

In this respect, the concept of DW is indeed, by its very nature, generic in the broadest sense of the term. At the core of our conception lies the elementary nucleus of a multi-service, multi-

dimensional molecular unit, rather than the current linear military structures derived, sometimes arbitrarily, from diverse definitions of the “unit of action”, or even the current version of Joint, that has prevailed with minor adjustments since World War II. In fact, we try to look beyond Joint and current NCW, in search for more generic and adaptable ways of fighting the new types of wars ahead.

We start out by exploring the principal conceptual components of linear warfare – manoeuvre, fire power, command and control, and territory occupation – from the perspective of DW followed by a discussion of the underlying (practical and theoretical) differences between the two approaches. First, though, a brief note on the battlefield itself is in place.

By the turn of the 21st century, the international legitimacy of armed conflict had become a prime consideration in the decisions of states to go to war. The status, indeed the very existence, of *international* courts for war criminals are indicative of the importance attached to this factor. Furthermore, domestic opposition to acts of military force which risk the lives of innocent civilians, is no longer a marginal phenomenon and has come to have a significant impact on national decision making processes. Thus, two factors – international legitimacy and the ban against operations that, intentionally or unintentionally, endanger the lives of non-combatants – determine now to a great extent, the operability of concrete military actions.

The development of sophisticated precision weapon systems currently

allows the military to better meet the above requirements. This remains true even though in many cases the weapons might have been developed initially with the simple intent of achieving optimal results militarily, that is, to replace weapons based on wasteful amounts of inaccurate “statistic” fire power, with “smart” and more economic armament.

The convergence of these two processes has created a new view of the battlefield. The focus is no longer on the enemy’s territory but rather on the legitimate targets within it. The battlefield thus becomes the sum of designated legitimate targets, rather than a territorial quantity for conquest. The penetration and capturing of territory, which in the past was the main activity of war, can today be accomplished to a much greater degree as a by-product of the stand-off campaign, with relatively low friction. The fact, for instance, that Baghdad is the objective, does not mean one must allocate forces to conquer all of Iraq.

This shift, of course, carries a price for the two complementary – military and political – dimensions of war campaigns in their post-victory stages or in the “second campaign”, as we painfully see happening in Iraq. DW can be applied here as well, but these aspects will be discussed separately later on. What is important, however, at this point is that the new battlefield lacks the concrete front lines that characterised previous wars, just as it also lacks a distinguishable home front.

Military fronts still exist, but they are becoming increasingly few. Examples

include Israel’s border with Syria, the line dividing the two Koreas, and to a certain degree, along the Indo-Pakistani border. This trend is gaining strength in today’s chaotic reality, wherein the armed forces of states fight diverse military and paramilitary organisations, operating on their own or arbitrarily under the umbrella of a nesting-state. One will not find a military front in Kosovo or Afghanistan, nor for all practical purposes, in Iraq either. There were and always will be *lines of contact*, but observable, fully fledged battle fronts, are becoming increasingly scarce.

Thus, rather than defined by parameters of front-lines and home-fronts, the nature of future conflicts for nation states will be determined by legitimate objectives and desired effects in a *multitude of contact points* – be them military or civilian, infrastructure or system related.

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Against this setting emerges the theory of Diffused Warfare, which we believe both reflects and shapes the current natural “next step” in the evolution of the battlefield. The theory simply provides the theoretical foundations for understanding what is anyway, and has been for some time, taking place in the realm of modern warfare.

Manoeuvring

Classical manoeuvre warfare derives from a linear perception. From

Hannibal's defeat of the Romans at Cannae in 216 B.C., to Schwartzkoff's "Hail Mary" of Desert Storm in 1991, manoeuvre warfare constituted the heart of the "element of surprise" in the battlefield, and its main determining factor. Basically, manoeuvre warfare reflects a military movement from point A to point B, under the assumption that the arrival at point B, or indeed the very movement itself, will create a meaningful effect insofar that it will tip, perhaps decisively, the operative, tactic, or strategic balance in one's favour. That effect may be reflected in terms of achieving advantageous positions or fire power effectiveness, or both of the above.

In a linear system, manoeuvre warfare is mostly a derivative of a larger plan from which it assumes its strategic logic – say a movement from point C to point D. The pattern of the larger movement determines the pattern of the singular manoeuvre. Therefore, once the enemy understands one, it is equipped to understand the other.

Practically, this is how the classic linear war system is created. The belligerents are both aware of the starting point and by foreseeing the Grand Design or gathering intelligence, they are capable of determining each other's desired end-state. The force masses of both sides are now deployed to thrust or obstruct the grand manoeuvre by way of thrusting or obstructing the sum of its partial movements.

DW, on the other hand, strives to create the effect of manoeuvre warfare essentially from the nature of mobility

itself. In this respect, the manoeuvre is diffused into a series of simultaneous movements on the ground, in the air, and at sea. The movements are not committed to a unified pattern, yet their logic of conduct relies on the one objective of closing the sensor-to-shooter circle. That is, closing the chain of events that includes target detection, identification, fire, hit, and damage assessment. The focus is on the specific targets themselves, rather than on capturing the territory wherein they exist. From this logic of conduct we derive the desired time frame for the force to stay on a given location and the timing for moving on to the next objective.

The main distinction between the two different conceptions of manoeuvre warfare is that contrary to the traditional perception, in DW the main effect of the manoeuvre is not necessarily the main movement on the ground. It is not the drive to run over or penetrate the enemy's lines – usually from the flanks or from other weak spots – which leaves the captured area behind to one's forces' control. Rather, the movement and fire power of molecular structures create an integrated multi-dimensional manoeuvre, whose effect is no less dramatic, since it occurs simultaneously throughout the theatre of operation.

What makes this effect possible is first and foremost the fact that air power has matured from an auxiliary component to a decisive player in the ground battle. The major part of manoeuvre in DW is executed in and through the air. The fundamental feature of DW and the necessary condition for its dynamic molecules is the multi-dimensional merger of

surface – ground and sea – and air components. There can be molecules based solely on air components, consisting of UAV's and manned platforms, for instance, but it is hardly probable that DW will devise molecules without the vertical line of site that air elements provide.



The operative model of the coalition forces in western Iraq illustrates this. A force of some 2,000 ground troops, operating in a diffused mode and in concert with integrated air components, in fact controlled over a land mass the size of Belgium. That specific method of activity reserved now almost exclusively for Special Forces, is currently the closest example for the molecular perception of DW. The theory and praxis, though, need to be further developed and laid out systematically.

Fire Power

The relative weight of statistic-fire in diffused warfare is considerably less than it is in linear warfare. Since linear warfare relies on massive movements of friction, its diffusion renders a large part of the gunfire, particularly long-

range gunfire, obsolete, while more sophisticated air and land precision weapons provide more effective alternatives.

As noted, the perception of the battlefield as a space of legitimate tactical targets is fundamental to the conception of DW. In this respect, precision weapons are superior as they can better achieve simultaneous destruction of targets posed throughout the entire relevant battle space. During the initial stages of the military campaign in Iraq, this effect was coined “Shock and Awe”.

The use of precision fire against the Iraqi Republican Guards that encircled Baghdad was the first full-scale demonstration of this perception. There is no record in the military history of the world of another event in which such a large number of diverse targets were destroyed within such a short period of time – with such impressive accuracy.

This dramatic improvement in the effectiveness of firepower has had a profound impact on the way manoeuvre warfare is perceived by the diffused warfare approach. Not only do we face a fundamental shift in the relative weight of the two elements of manoeuvre warfare and fire power. Indeed, in some respects, the increased effectiveness of precision fire has made obsolescent the need to conduct high-risk manoeuvre warfare at all.

The current transformation does not only reflect a shift from a centralised world of linear masses to molecular

diffusion, but also a move towards lower levels of the ever existing uncertainty of the battlefield.

The more precise and efficient weapons and battle damage assessment (BDA) become, the greater our level of certainty regarding the overall battle picture and the war conduct at large – and subsequently, the greater our ability to manage risks. Classical manoeuvre warfare was first and foremost, the product of high degrees of uncertainty as to the ability of one's offence to crush the power mass of the enemy's defence, in a frontal thrust. Uncertainty not only in terms of the consequences of defeat, but also in regards to the price of victory. This uncertainty in outcomes was always the main incentive to try pushing the opponent off balance, through a cunning manoeuvre.

In a conversation with Liddell Hart, General Heinritzi, who conducted some of the more successful defence battles of the German Army along the Russian front between the years 1942 and 1944, and at Schlezia in early 1945, expressed his view that the superiority of defence over offence is at least six or seven to one, in terms of force ratio.⁵

As the precision fire during the initial stage of Operation Iraqi Freedom demonstrated, frontally crushing a massive enemy force, without the need for massive ground manoeuvre warfare, is indeed possible now, with an acceptable degree of certainty.

It also refuted General Heinritzi's argument for defence-offence size ratio.

The actual size of the Iraqi force that participated in the fighting against the US-led coalition is difficult to assess. Yet, whatever assessment we may accept, clearly, the American victory had nothing to do with the offence vs. defence force ratio.

Precision weapons however are not without limitations. The most profound one is the need to maintain a continuous line-of-sight with the target – at least as far as mobile objectives are concerned. The fact that the weapons are targeted at the distinct singular components rather than their distinct geographic location (as is the case with statistic fire) requires us to maintain continuous contact with all targets that are not static objects. The process of “closing the circle” when the target is mobile, requires that the weapon's operator possesses an uninterrupted picture of the target throughout all the necessary stages of the operation including, target detection, identification, fire, hit and damage assessment.

The above requirement is not a simple one to meet. The solution naturally requires real-time fusion of intelligence-targeting sources, constant availability of designated sensor-to-shooter cycle, and multi-channel control over the allocation of tasks and resources. In this respect, perhaps the most decisive element is the basic ability to continuously integrate vertical and horizontal lines-of-sight.

Effective “closing of the circle” is contingent upon our ability to converge in real-time all the lines-of-sight of the relevant sensors and shooters in a given situation, and even more so on

their ability to switch roles whenever necessary.

A target being monitored vertically from the air, for instance, will cease to be relevant the moment the line of sight with it is disrupted. In order to preserve its relevance in such cases, the horizontal line-of-sight – from either sea or land – must remain intact. Similarly, interchangeability between sensor and shooter must be sustained along the entire line of contact in order to ensure maximum flexibility for the shooting stage.

The notion of Dynamic Molecules is founded on this principle. Instead of using the current “units of action” of linear warfare as the point of departure, diffused warfare creates parallel structures defined by their capability to continuously sustain vertical and horizontal lines-of-sight. In theory, these structures can expand to the size of the traditional units of action, such as platoons or regiments. However, their uniqueness lies in their independence. Every molecule contains an independent multi-dimensional sensor and shooter component, capable at all times of tying into the other molecular systems operating in its proximity.

The function of the dynamic molecule is not to be confused with the range-finding or air support officers of the past, as each of its components can function either as the scout who identifies the target or the shooter who kills it. The structure’s ability to sustain that interchangeability among its components, and the expediency with which it can close the circle, determines its overall effectiveness.

Command and Control

Diffused warfare relies on networks of “world views” rather than on networks of verbal or textual communication. Every component in the molecule has access to the picture the other components see, and the controller sees the world views of all the molecules he or she controls, creating the common integrated picture of the entire relevant battle space.

The mode of operation in diffused warfare is based on “open bidding”. All the elements in the structure – land, air or maritime – participate as sensors in creating the “world picture” and the moment a legitimate target is detected, ideally, the one best positioned for taking the shot, will act as the shooter, thus closing the sensor-shooter circle.

The quality of fusion of the “world views” into one comprehensive picture, and the speed of integration will, in most cases, determine its relevance. Like in the example above, if vertical contact with an enemy target – say, a target in an urban area monitored from the air – is disrupted, the line-of-sight will continue to be sustained by the horizontal elements of the molecule. The main sensor changes but the picture remains relevant. The same applies to the allocation of fire power for the firing phase.

However, if the above seems straightforward and convincing in theory – such capability is by no means trivial. The quality and speed of this fusion, will be determined by the effectiveness of the element coordinating and controlling the process. Technically, managing this multitude of channels

and demand for bandwidth is a major technological challenge still ahead of us. Clearly, the command and control dimension of diffused warfare, and the resulting command structure, is certainly one of the most complex challenges of diffused warfare. Assuming we can deal with the technical issues, we will still be faced with difficult questions, such as real-time hierarchy between multi-service elements in the network, issues pertaining to location of the controller, command structure of the molecule, etc.

On the other hand, we do not want to lose sight of the broader meanings of the network perspective in diffused warfare. To a large extent, a network of “world views” replaces the need for the massive investments in back-ups and reserves so typical of linear warfare. We are all familiar with the endless trails of land forces that often endure an entire military campaign without firing even one shot, while tracking after a small force that conducts the actual fighting. This network of world pictures is, in fact, what allows us to operate in complete contradiction to General Heinritzi’s assessment of defence-offence force ratios, by dramatically reducing the battle space uncertainty.

We not only know exactly what happened in every point of contact in terms of BDA, but we can also monitor the opponent’s reaction to it.

Thus, the main risk involved in the deployment of light molecular forces throughout the enemy’s battle space, is resolved by the ability to see and integrate in real-time the enemy reactions in every area of deployment,

and to respond rapidly. Taking into account the internal backing provided by the other components of the molecule – air, ground, and sea – a system of forces is created that hardly has any significant mass, compared to traditional linear force build-ups, but is capable of creating much larger systemic effect, while in principle, not risking a greater degree of exposure.

Territory conquest and control?

As mentioned, the significance of the opponent’s territories as conceptualised by diffused warfare is the sum of relevant targets within it that are rendered legitimate to destroy. Nevertheless, by and large, systemic objectives of territorial conquest and control, cannot be achieved but through linear means. Clearly, the preservation of *some* linear capabilities will remain necessary in any future force structure plan. It is also reasonable that the two modes will be applied together in one campaign, particularly if the ultimate objective is to capture territory for an extended period of time, such as the US’s campaign in Iraq. However, as the battlefield and battle theory continue to evolve, the relative weight of linear elements will gradually decrease as will the massive land forces become increasingly decentralised.

The prime challenge for diffused warfare is reflected in what one can term today as the “paradox of conquest”. The more rapid and overwhelming the victory and the process of territory capture, the more difficult and costly becomes the task of holding on to it later on. Rapid movement leaves in

its path an abundance of unaddressed matters, which serve as the breeding ground for effective resistance, specifically guerrilla and terrorist activity. Israel found herself in such a position following her military campaign in Lebanon in 1982 as did the U.S. in the aftermath of the 2003 military campaign in Iraq.

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How does one apply the principles of diffused warfare to campaigns that include the conquest and control of territory for extended periods of time? This is indeed a key question – particularly since the grave consequences of stationing massive forces in occupied territories, trying to control it by way of conducting conspicuous high-intensity linear warfare activities, have become painfully evident.

In general, long-term occupation runs against the principles of diffused warfare. Indeed, diffused warfare in many aspects renders land occupation unnecessary. As a generic concept, though, diffused warfare can be accommodated to the task of territorial occupation. The molecule's lack of massive signature, its attribute of versatility, and the difficulty for the enemy to detect and predict its

patterns of conduct, can provide an important edge for the molecule in its attempt to thwart guerrilla/terrorist actions typically conducted in occupied territories.

In this sense, the IDF's rate of success in destroying terrorist cells in the Palestinian Intifada, is an impressive achievement. In many respects Israel's military conduct today, in her military-controlled territories, already reflects some degree of diffused warfare – certainly in comparison to past wars.

A determining factor in the occupation of territory is the quality of intelligence. Nothing can replace a properly deployed intelligence infrastructure. However, such an asset is not obtained in the course of one day. The unique capability of the molecule to integrate intelligence coming in from different sources in real time, through the network of "world views", creates a crucial edge in providing operational solutions to concrete events. This advantage in many cases compensates for the absence of in-depth intelligence.

At any rate, long-term occupation of territory is a very complex and sensitive task, ridden with unpredictable difficulties and obstacles. It requires combinations of linear force structures and a great number of diffused elements. The optimal ratio in each case is largely a matter of trial and error. No two cases are the same: Kosovo is not Afghanistan, Afghanistan is not Iraq, and neither of the above is identical to the circumstances of Israel and the Palestinians.

The general trend though is clear. The experience accumulated from military occupations of territory and the often subsequent threat of terrorism and guerrilla warfare, show that diffused warfare is well equipped to fight in conditions of that specific asymmetry, most simply, because it is capable of creating a state of counter-in-kind asymmetry.

The notion of the dynamic molecule will be further developed. What is important at this stage is to emphasise the interdependency between precision fire and the concept of molecular force structure. The latter cannot exist without the former. 

Endnotes

- 1 This article is extracted from a chapter in a book published (in Hebrew) by Yedioth Ahronoth, Tel Aviv, Israel.
- 2 A good starting point for understanding NCW is: *Network Centric Warfare: Background and Oversight Issues for Congress*, by Clay Wilson. See: <http://fpc.state.gov/documents/organization/33858.pdf>.
- 3 The sum of engagement effect also includes side effects of disorientation and lack of coherent comprehension of the battle situation, on the opponent side, as well as fragmented and distorted intelligence, inability to launch counterattack, etc..
- 4 We prefer not to use the more popular metaphor of Neural Networks, as rather than trying to follow human *brain*, we try to watch the way human *body* is structured.
- 5 Sir Basil Liddle Hart, *The other side of the Hill*, p225.



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Credible Deterrence:

Reviewing Discourse & Reframing the SAF to deal with Full Spectrum Threat Complex

by LTC Irvin Lim Fang Jau

**“A credible deterrence must depend on a viable defence,
in other words on a strong armed force.”¹**

Introduction

Deterrence is what we make of it. More importantly, it is what a potential aggressor *makes* of it. And what the latter makes of it depends largely on how credible and consistent are words and deeds played out in the international arena of high stakes inter-state politics. Deterrence, in a conventional sense, is about communicating political resolve backed by military capability to prevent adventurism or aggression between states. If, as has been said: “Diplomacy is the art of letting someone else get your way,” then one could say that deterrence is the art of letting someone know you can and will do what you say and there will be a high price to pay at pain for any provocation gone awry. If diplomacy spins on compromise, then deterrence spins on credibility. A stated defence policy of deterrence implies in effect an interactive dynamic of competitive credibility. To be effective, there must be no credibility gap in communicating deterrence, otherwise “aberrant decoding”² may more easily

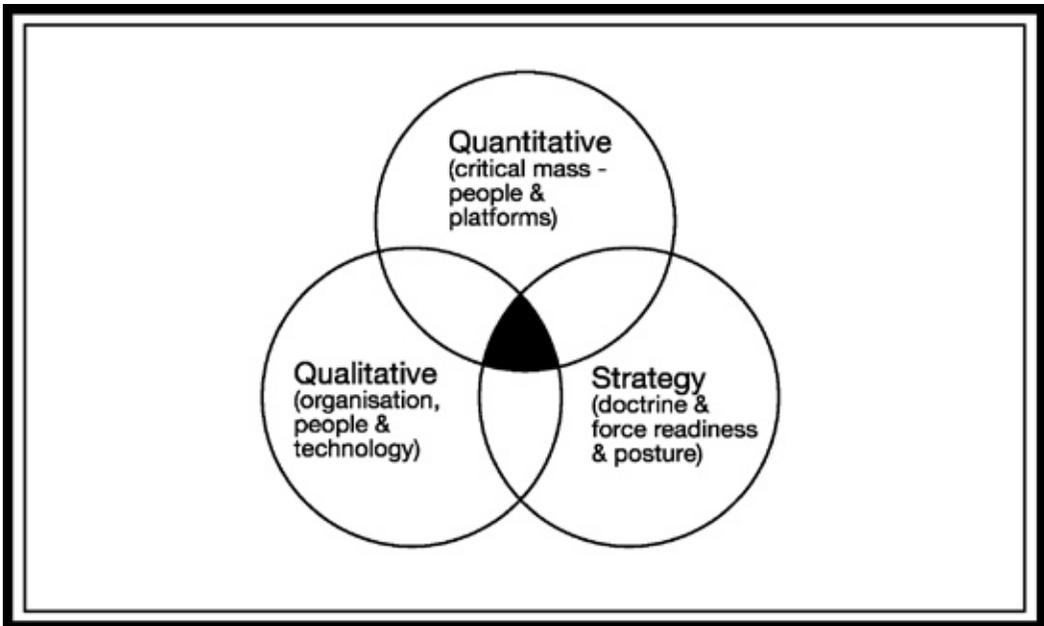
set in and messages lose their sharp edge leading to faulty if not fatalistic moves and counter-moves downstream. Insofar as that communication message signalling is successful, deterrence as a matter of national policy and defence strategy can significantly shape adversarial perceptions, and give pause to aggressive intent. Deterrence with its promise of denial and punishment³, can help to prevent brinkmanship and bluster from tipping over the escalatory edge.

The Dismal Logic of a Security Dilemma

Deterrence as conceptual praxis can be understood to be working at three levels: quantitative, qualitative and strategy: And if I may illustrate further, the delta of effective credible deterrence that marks its sweet-spot as an instrument of state policy is in the convergence of all three aspects.

The logic of arms build-up in the service of deterrence simply put is this: the greater a state’s aggregate power

Communicating Deterrent Capability and Resolve



(quantitative and qualitative), relative to its potential adversaries, the less likely it would be attacked, and the more likely it can defeat an aggressor and survive even if it is attacked, thereby enhancing its survivability and improving its security environment.

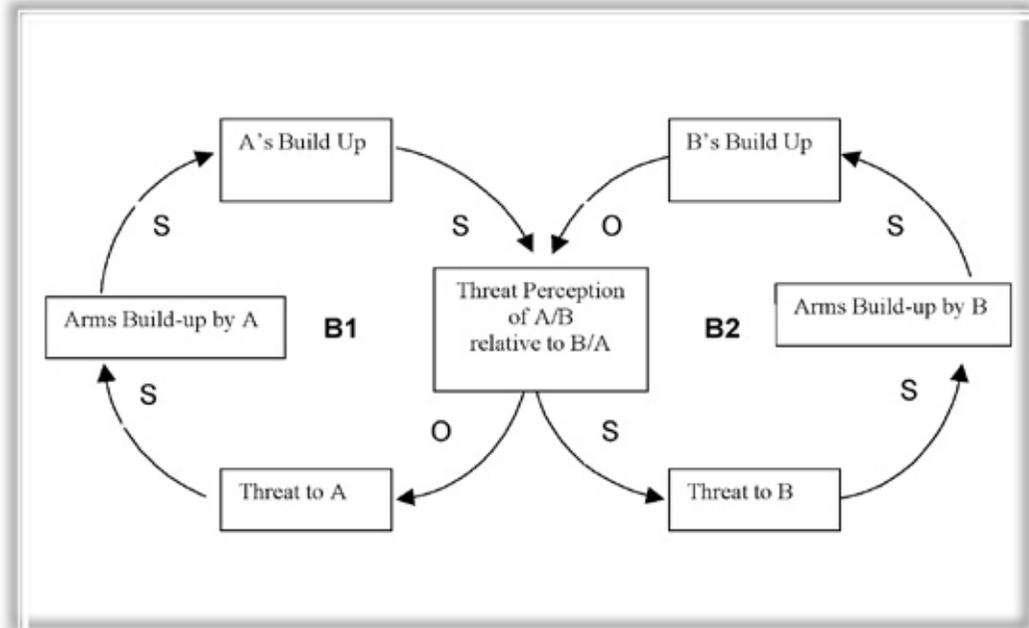
However, in so doing, the dynamics of a security dilemma (and possibly self-deception too) begin to take root – the more a state builds up its defences to be strong and safe, the more it inadvertently creates in other states around it a sense of greater insecurity, thereby obliging the latter to react in kind by counterbalancing behaviour. Therein lies the dilemma and the delicate balancing act/dance that has to be made without tripping or tipping over if deterrence is to be successful. After all, when one deals with the subject of deterrence, there is always either a very clear and unambiguous

adversary, as with the Taiwan-China or Pakistan-Indian situation, or a more general and unnamed one. In any case, both belie an interactive dynamic. Assuming that deterrence as a strategy belies an interactive dynamic of force and counter-force *ala* arms race, is deterrence an abject and distressing “dismal science”⁴ then? After all, the inescapable net effect of the interactive logic played out in the real world is that the more a state balances against perceived threat and *vice versa*, the less benign the security environment. Balancing behaviour which results in an arms matching and then racing dynamic are hallmarks of a classic security dilemma continuum which can eventually lead to a spiralling security deficit for parties concerned.

And as for successful military strategy, there is yet another caution.

SECURITY DILEMMA:
ESCALATION⁵ + BALANCING BEHAVIOUR
→ LESS BENIGN SECURITY ENVIRONMENT

STABLE BALANCING OR DESTABILIZING?



Shiping Tang argues that states often hold false optimism in offensive dominance strategies like first-strike doctrine in the quest for effective deterrence; especially given the increased effectiveness of offensive weapons like precision-guided missiles (PGMs) used in the battlefields from Kosovo, to Afghanistan and now to Iraq (1991 Gulf War and Ops Iraqi Freedom). He argues from a balance of power security environment angle that “the more effective the offensive weapon, the more likely states are to pursue a more offensive capability and adopt a more offence-oriented doctrine”, thereby exercising less restraint, contributing to the overall detriment

of the states’ security environment.⁶ The dangerous turn in the recent RMA and dawn of the Information revolution – convergent trends – promote a more offence-dominated military posture, and therefore create a more dangerous world:

“Before the Gulf War and Kosovo, a weak state could hope to deter a more powerful state by denial. With the coming of long-range PGMs, the weaker state no longer has that option because the strong can now act with total impunity...in information warfare, offence is strongly favoured, surprise attack and Blitzkrieg become more feasible, and deterrence becomes more difficult.”⁷

The dangerous turn towards long range PGMs is all the more salient in the light of current strategic trends in potential flashpoints across Asia. For example, in a call that reflects growing concerns over the North Korean Taepodong missile threat, a recent review of Japan's defence posture recommended that the country should have the capability to launch pre-emptive strikes against enemy missile bases and other targets.⁸ Japan's post WWII pacifist "defence-only" policy looks set for major review in the light of the perceived threat from the rapid militarisation of China and North Korea, as well as unresolved territorial disputes involving rights to vital energy resources in the East China Sea.⁹ Further down under, Australia has confirmed plans to place long-range cruise missiles that would extend its capability for strikes anywhere in Asia on the new Joint Strike Fighter fleet expected to be delivered from 2012.¹⁰ Pakistan too recently successfully test-fired its first cruise missile – the Hatf VII Balbur – capable of carrying nuclear warheads; joining a select club of nations which have developed terrain-hugging projectiles.¹¹ For better or for worse, the linkage between long-range missiles and national defence strategy is increasingly evident in the upward surge in global missile technology proliferation trends. And as John Mearsheimer has argued in *Conventional Deterrence*, deterrence is weakened if the attacker believes he can effectively carry out a blitzkrieg attack or a limited aims strategy. This is a moot point when one contemplates the global proliferation of PGMs with its corollary renovation of inter-

state offence-defence doctrine with potentially detrimental knock-on effects on deterrence outcomes.

So More Go Nuclear?

With little progress on the enforcement of anti-nuclear weapons proliferation regimes, a growing global arms market and determination by countries to pursue nukes as a badge of great-power status, it is perhaps a foregone conclusion that the long-range missile club is set to grow in membership in the decades to come. In the end, Tang dismally concludes that "[w]ith so many forces putting offence over defence, the deterrent effect of nuclear weapons remains the ultimate guarantor of defence dominance." Perhaps this classic security dilemma dynamic explains largely Iran and North Korea's quests to join the nuclear club. One need only remember the telling remark by India's then Chief of Staff, who was asked what lessons he had learned from observing the conflict at the end of the 1991 Gulf War. His now famous ironic remark starkly put was – "Don't fight the Americans without nuclear weapons."¹²

From the standpoint of successful deterrence, can the seemingly fatalistic concept of Mutually Assured Destruction ironically lead to a better world because it makes war unthinkable? After all, the "Long Peace" during the Cold War was arguably due to the bipolar structure as it was due to the existence of a large number of nuclear weapons on both sides. While some like Mearsheimer have predicted that Europe would go back to the future by being unstable and fighting each other again, others

like Tang make the argument that the existence of nuclear weapons as well as successful reconciliation processes between former age-old enemies have served to hold back the ugly forces of history from returning; albeit for now, at least.¹³ The same logic and interactive dynamic may yet apply and play itself out in the Indian subcontinent. Now that both countries have joined the nuclear club, some South Asian commentators are already questioning the “pointless arms race” between India and Pakistan, arguing that “the best argument for pulling out of an arms race is that social development and economic growth are the best defence of any nation.”¹⁴ The same too has been said of the exponential growth of business relations between India and China of late, which is seen by some as “an effective deterrent... business is seen as a bridge to peaceful relations.”¹⁵ Then again, despite increased global economic interdependence, peace can still often be a bridge too far whenever vital national interests and historical sensitivities remain at stake.

Another key observation with regard to going nuclear is that having WMD can have a certain deterrence utility up to a break-point – for the U.S., it did not deter Saddam Hussein; nor in fighting wars in Korea or Vietnam; or in quelling unrest in Somalia or Bosnia.¹⁶ The very heinous nature of its use in any end-game strategy makes it more likely that a second-order range of non-nuclear conventional forces be used to fight a conflict, thereby the latter serves as a practically more viable and tenable deterrence strategy in the final analysis.

Furthermore, the hot pursuit of a nuclear WMD deterrent capability or the like has proven to be largely destabilising at best. At worst, it can lead to a strategic failure of deterrence itself by encouraging a pre-emptory response from states threatened by such action. Saddam Hussein who tried to play his long game of deception eventually fell from his “difficult balancing act: getting rid of his WMD to win relief from the sanctions while pretending he still had them to serve as a strategic deterrent.”¹⁷ In the same neighbourhood, Israel feels gravely threatened that Iran’s covert nuclear weapon programme is fast approaching a “point of no return” and has frequently repeated, in elliptical but unmistakable terms, that it would not be daunted by the difficulty of the operation – the prospect of retaliation or international relations, to use force if diplomacy and other measures failed. In the same vein, the U.S., in the face of faltering diplomatic efforts to get Teheran to stop its heavy-water project, has indicated that “[a]ll options are on the table...the use of force is the last option for any president.”¹⁸ On another front over in the Korean peninsula, the nuclear test programme stand off between North Korea and the U.S. has yet to elicit signs of meaningful breakthrough. The nuclear brinkmanship and diplomatic sabre-rattling in the Korean peninsula and the Gulf may get worse before it gets better, as countries insist on their rights to press on with fuel cycle work. In the final analysis, “[g]oing nuclear is a political decision, driven mainly by national security concerns, and those concerns often can be managed.”¹⁹ If the recent pledge to give up nuclear weapons by North Korea, after tortuous

negotiations on 19 September 2005 holds true, there is indeed scope for state security concerns to be managed without resort to military nuclearisation.

From CounterForce²⁰ to CounterValue²¹ Deterrence?

Even if the dismal threats of the WMD kind do not spread out of control as feared, base-level conventional threats ranging from long range artillery, rockets to surface-to-surface missiles (SSMs) that have been around for a long time now have the potential to pack a devastating, if not decisive, punch that can paralyse and put an entire country at grave risk; a global missile proliferation issue that merits serious and urgent international attention.

Take the China-Taiwan cross-straits dispute as a case-in-point. China's fast growing array of reportedly 725 SSMs pointing across the straits have exacerbated Taiwanese security concerns. For a small and overexposed geographical point-target like Taiwan, the issue that has surfaced of late is whether counterforce alone would prove to be a sufficient deterrent, given the growing and potentially overwhelming conventional missiles arrayed against it from across the strait. Already, there have been reports that Taiwan has successfully test-fired locally developed cruise missiles – the Hsuing Feng series – with a range of up to 1000km and capable of hitting China's southeast military bases and cities. At one level, it is clear that the pursuit and development of strategic weapons like cruise missiles are aimed at deterring China from launching an attack against the island.²² Yet at another level, the

offensive logic of not just a counterforce but potentially countervalue deterrence appears to be taking shape, even if not quite yet as conclusive as some reports would suggest. It nevertheless signals an important conceptual, if rhetorical, break-away from the previously declared pledge for Taiwan to buy only defensive weapons in favour of a more offensively-geared pre-emptive logic that “the best deterrent to war would be the capability to launch an attack”.²³ In other words, the best means of defence is attack – the best means of deterrence is readiness to attack. But would such a “balance of terror” across the Taiwan straits (should it come to pass) based on pre-emption and offensive countervalue targeting prove to be more of a credible deterrent or create just the opposite escalatory dynamic that destabilises the precarious balance, undermining further an uneasy peace in the endgame? To be sure, there are divergent schools of thoughts developing on the Taiwan exemplar. Some commentators arguing against the position that Taiwan could be adding to tension in the Taiwan Strait by developing a credible deterrence against China with its planned arms modernisation purchases, have reasoned that “[i]f Taiwan could credibly hurt China, then China will be far less likely to risk an attack and – who knows? – with military options effectively ruled out for both, the two sides might even begin to cooperate.”²⁴

**...the best means of defence is attack
– the best means of deterrence is
readiness to attack.**

Of course, this is a sanguine argument for arms acquisition, but the reality

is that it remains a highly charged and contentious view. To exacerbate controversy, reports have even surfaced in the media alleging that Taiwan should consider seriously the countervalue targeting of the Three Gorges Dam as a strategic deterrent against China. In itself, countervalue targeting can be a highly touchy or even taboo area, given that its targeting envelope may well include civilian infrastructure and even population centres. In the current milieu, countervalue targeting potentially runs into problems with adherence to the Law of Armed Conflict, including principles of reciprocity, necessity and proportionality. From a defence strategy perspective, a shift from counterforce to countervalue deterrence may provoke countervailing responses with counterproductive consequences that will need to be contemplated with due caution. Nevertheless, as a deterrent strategy of last resort, it may yet have some value or justification *in extremis*, especially from the perspective of decisive effects-based operations against an overwhelming/overbearing threat.

Deterrence and Influence against Unconventional Threats

As if conventional deterrence is not enough for states to deal with these days, the increasingly pressing need for unconventional deterrence is now confronting nation states.

Non-state actors can rage not by the rules of war and operate on a different “rational” calculus not readily amenable to negotiation or compromise. Thomas Friedman calls them “undeterrables”. In essence, the term refers to individuals

or groups possessed with the absolute conviction that they have nothing to lose. They are therefore impervious to classical deterrence because they have nothing of value that a state executing a deterrent strategy can hold at risk.

Given the challenging full spectrum threat complex, exacerbated by the unrelenting and uncompromising persistence of terror attacks around the world by state, non-state and sub-state actors, many now conclude that “in the fight against al-Qaeda and its compartmentalised network, deterrence does not work.”²⁵ If deterrence as we conventionally know it does not work against terror threats, what form and shape should unconventional deterrence take then? RAND analyst Paul Davis in a 2002 report contends that “Everyone can be influenced sometime”, and cautions against confusing counterterrorism issues by overaggregation. As he put it:

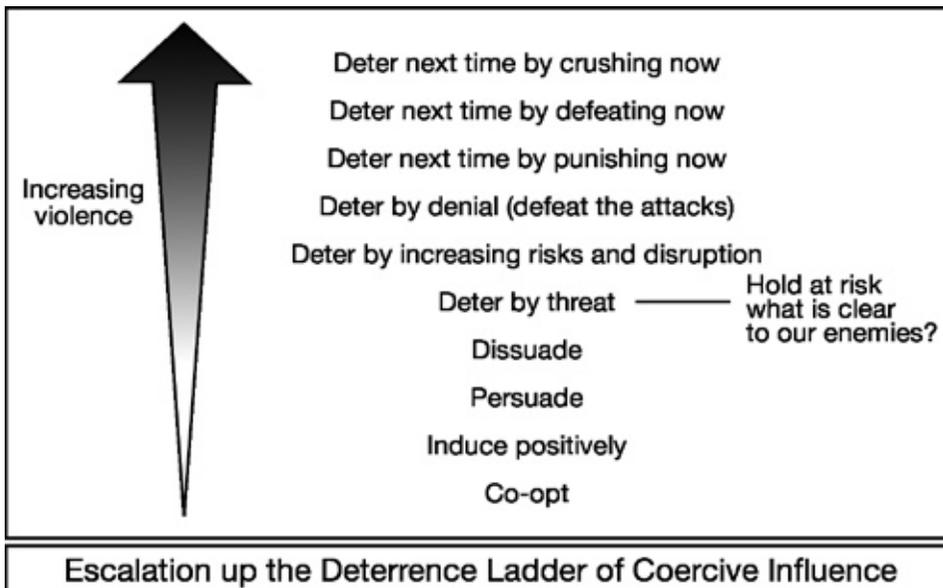
“Can al Qaeda be deterred? Of course not. But wait, what do we mean by that? If we ask, instead, whether elements of the al Qaeda *system* can be deterred from doing specific things, the answer is ‘Yes.’ Moreover, even the most dangerous elements in a system may be deflected from one mode of activity to another, or from one set of targets to another. Deterrence and influence are not simple switches.”²⁶

The key idea advanced is that despite their seemingly blind adherence to supra-religio-politico ideologies, terrorists are *not* a uniform group with an on-off switch. Therein, perhaps, lies the key to how to leverage on the different levels and levers of multi-

faceted civil-military force application to skin the terrorism cat. The following schema of escalation up the coercive ladder of influence-cum-deterrence proposed by Davis and Jenkins is insightful and potentially useful as an operational heuristic, if not operational strategy, in this regard:

The proposed schema suggests that more can be done at the lower steps up the deterrence ladder of coercive

outreach projects, the military can play a useful role in helping to undercut the grassroots support and indiscriminate violence of terrorism proponents by winning the (moral high) ground. Over time, with positive inducement and persuasive soft-power influence, some “undeterrables” may even be co-opted or dissuaded from pursuing the internecine course of terrorism and brought back to the negotiating table.



influence. For example, co-option, positive inducement, persuasion and dissuasion all point to the necessity of devising a strategy of winning hearts and minds. Such a broad-front strategy is often prescribed as indispensable antidote for overcoming the daunting challenges of unconventional and irregular low intensity conflicts in which terrorism is a main feature. Through the selective conduct of Operations Other Than War such as peace-support operations, disaster relief, humanitarian assistance missions and even participation in community

But to be sure, there is an acknowledgement these days that in deterring or dealing with threats of an unconventional nature, military power alone will not be sufficient. The other instruments of national power will have to be called into play. Military craft will need to be closely aligned with statecraft – domestic and international. The timely sharing of accurate civil-military intelligence (including Horizon-scanning) with synergistic coordination in joint force protection and the beefing up capabilities against Chemi-Bio, Radiological and Explosive (CBRE) threats can prevent terror attacks and

better mitigate their consequences. The imperatives of hand-in-glove interagency coordination adds a new meaning and punch to the whole notion of Integrated Warfare as part of a robust and resilient National Security Architecture, especially in the Singaporean context.

In this respect, going beyond well-articulated “poison shrimp”, “hornet’s nest” and “hedgehog/porcupine” metaphors of the past²⁷, the SAF must transform from “one big flick switch” for major conventional defence, to a 3G force that is more like a “nimble turn-knob” that can make calibrated and adaptive turns to help *prevent, protect and respond* to small scale to big scale intensity contingencies along the spectrum of conventional and unconventional conflict/crisis scenarios in concert with homeland security agencies from peacetime to troubled peace or war.

The SAF – From One Big Flick Switch to Nimble Turn-Knob

In a deconstructive era of SAF 3G transformation away from being one big-switch, is it time to reflect, reframe, rethink and re-tinker with the nation’s deterrence strategy, which has served the country well thus far? Where are the areas and how can deterrence as a strategy be better refined or renovated? After all, deterrence will continue to be the key strategy capstone in articulating and operationalising the nation’s security policies.

Without a clear and looming conventional threat to the sovereignty and interests of the national polity,

it can be said that a state of “general deterrence” (as opposed to “immediate deterrence”)²⁸ is in force for a small country like Singapore that in part accounts for its espoused capability-based, not threat-based, force structure development. The condition of general deterrence continues to prevail and drives the SAF’s mission to deter threats, and should deterrence fail, for the SAF to secure a swift and decisive victory over the adversary. In a nutshell, the key success factors of mounting a credible deterrence are about *right-sizing resources, readiness, resolve-resilience and right-shaping strategy, rapid technology insertion with robust training* to raise the price of success such that any aggressor may not take it all *and* winning at all costs will indeed be too painful and self-defeating for an aggressor to even contemplate seriously.

Right-Sizing Resources

Given its small population base, the citizen soldier through National Service remains the central pillar of Singapore’s deterrent military strength. Baring any radical technological breakthroughs, this will not likely change in the foreseeable future given that the immutable realities of geography and demographics will continue to define the strategies for survival of a small state like Singapore.

The SAF has been steadily enhancing its order of battle since independence, and has now reached a stage in force structure development whereby platforms and bean-counting alone will neither be sustainable nor sufficient. Deterrence based on platforms alone can be a capital-intensive game that will not necessarily provide the next S-curve

advantage desired or deliver much in real military punch when it comes to the crunch; other than for prestige reasons. This is particularly the case in an era where network and knowledge-centric enabled capabilities promise to usher in a whole new way of waging wars more efficiently and with greater lethality, often not readily apparent other than in execution. Numbers still matter²⁹, of course, but perhaps not as much as they used to.

In an era of lean budgets where every bang must be well accounted for by every buck spent, it is not easy to premise a deterrence capability based on Relative Combat Power (RCP) overmatching and outspending one's potential adversary, as clearly such strategies as the Soviets had learnt at great cost in the Cold War could lead to premature emasculation and capitulation when fiscal stamina to keep up with the arms race runs out. More recently, a group of scholars in Taiwan's top government funded research institute had urged the government to cancel a massive order worth S\$30 billion of weaponry arguing that the deal would not only trigger a dangerous arms race with China, but also push the island into the "black hole of financial and economic collapse."³⁰ How then does one right-size a force³¹ while keeping a keen eye on preserving, if not enhancing, deterrence then? On the one hand, maintaining significant just-in-case "standby" capabilities to ward off every foreseeable contingency is clearly not sustainable. And on the other, having a credible critical mass of just-in-time capabilities and expertise that can be quickly ramped-up accords a certain operational responsiveness, political flexibility and peace-of-mind

critical for deterrence. After all, as has been well-noted – especially in the wake of SAF's swift response to the Asian Tsunami humanitarian assistance and other disaster relief efforts around the world like when Hurricane Katrina struck New Orleans in early September 2005 – Singapore's strength lies in its "rapid decision-making at the political level, effective coordination and military preparedness."³² The issue of right-sizing and ready-standing a credible deterrent force remains a key area of prudent force structure fiscal and fighting capability balancing that needs to be handled with circumspection and due diligence. For example, the recent change in SAF NSmen In-Camp Training liability from 13 to 10 years is a major structural change that must enhance and not draw-down on deterrent fighting capability; or be misconstrued as such.³³

As 3G force transformation picks up steam across the armed services, another organisational challenge will also be in ensuring that there is no capability overmatch in conventional warfare areas at the expense of unconventional capability development. A balanced and coordinated portfolio of both conventional military defence and unconventional national security capabilities development requires judicious policy formulation and well coordinated multi-agency budget allocation with keen oversight.

From strategic resource management perspective, capitalising on superior People, Concepts and Technology, as well articulated in the SAF's 3G transformation vision, seeks to sharpen

the SAF's deterrent edge even as its force structure undergoes major review and radical renovation in the years ahead.

There is however a potential rub; an issue of popular (mis)perception which may need to be mitigated with well-calibrated information management plans, and force structure foresight. That is, much of the exotic 3G high-technologies that promise to deliver force-multiplication ride on an Integrated Knowledge-Based Command and Control system that may not readily be apparent to the public eye compared to say, a column of main battle tanks rumbling down the streets, a fleet of new generation fighters screaming through the air amidst the pomp and pageantry of a National Day event or even advanced capital ships sailing the high seas.



Aerial flypast during National Day Parade

Furthermore, as the costs of such advanced assets are many times more exorbitant than the older platforms they are replacing, it is likely that platform numbers will decrease as there will not

be a simple one-for-one replacement in many cases, even though capability has increased many fold. This issue of public/popular perception – both domestic and potential adversarial – is an important one that should not be ignored. Also, while those well-read on military developments may well appreciate that a 3G SAF poses an even more formidable force to be seriously reckoned with, there is a need to communicate the message to the potential adversarial population so that there will be no dissonance or disconnect; otherwise the deterrent message may be diluted to the detriment of peace.

Readiness

Readiness is about having a responsive array of relevant capabilities, with rapid-turn-on to meet a range of contingencies, both conventional and unconventional. This surge capability across a threat spectrum of contingencies must be poised for executing the key mission components of extant drawer plans, while being ready for plug-in to combined or joint modular mission deployments at short notice.

One of these capabilities that will enhance readiness is in the greater utility of Special Forces (SF). Particularly in the aftermath of Operation Enduring Freedom experience in Afghanistan, there is increased realisation that the SF's proven ability to operate in a dynamic and ambiguous Contemporary Operating Environment (COE) against indigenous and surrogate forces naturally makes it an ideal economy of force for decisive and effective operations.³⁴ For example, the

involvement of joint and combined forces in multinational exercises and operations such as the Proliferation Security Initiative (PSI), featuring highly trained SF in multi-modal take-downs of WMD in transit on land, in the air and at sea, highlight the utility. Another area in which modular and multi-modal mission types with SF elements can come to feature more is that of combined conventional multilateral exercises. The inclusion of conventional and unconventional operational scenarios with greater complexity and opposing force free-play can heighten realism and build up greater interoperability readiness; both joint and combined.

The recent uptrend in SAF overseas deployments on peace support missions like those in East Timor and the Gulf provide another useful avenue through which the operational readiness and joint capabilities of the SAF is tested and showcased. Every time SAF personnel and assets rise to the occasion to successfully accomplish the often daunting and dangerous missions under real world conditions, and take back with them new professional insights and experiences, the organisation reinforces its operational expertise and learning capacity further. These bench-marking exposures invariably contribute to the development and expansion of SAF's capability envelope of operational options, which enhances overall organisational readiness to handle an even greater range of contingencies near and far.

On the home front, the SAF must continue to maintain its ability to place hundreds and thousands of Singaporean men and women under arms within 24

hours. High Combat readiness and mobilisation rates must continue to be key markers of its deterrent capability, providing credibility and confidence in the SAF's decisive fighting capability.

Resolve and Resilience

Deterrence is not just about having the latest high tech weaponry and fighting capability, it is also about having a strong will to win and unbreakable fighting spirit. These softer aspects of hard deterrent power are often the true centre of gravity of a fighting force as they relate to the very heart or psychological resilience of a people willing to fight and even die for what they hold dear and believe in with deep conviction.³⁵ This "soft dimension" of deterrence is something that cannot be overstated enough. In this, Singapore's Total Defence doctrine remains a key brace in strengthening Singapore's underlying internal resolve and resilience.

- **Internal Resolve & Resilience**

The concept of Total Defence continues to have a resonating relevance for Singapore's efforts at forging a credible deterrence and decisive fighting force. And this has been well-noted by external observers:

"[B]y practising the Total Defence concept, it appears that all four (sic) million Singaporeans will always have a role in safeguarding their national security and sovereignty...All the modern sophisticated weaponry a country owns would become useless if its people have a carefree and non-committal attitude when faced with defence and security issues...The Total

Defence concept practised by Singapore truly fulfils its defense(sic) doctrine, which gives priority to a defence strategy that encompasses every aspect of its people's lifestyle...the concept... is totally appropriate... as the current threat, which is borderless terrorism, can be destroyed only through total public participation and not through sophisticated military weaponry."³⁶

For that matter, even if terror threats cannot just simply be "destroyed" in the short term, they need to be deterred or dissuaded as well. Having a strong and united home front, prevents social fissures from being exploited, and helps in that deterrence and dissuasion for the aggressor to stand-down. And in an era where home-grown terrorists may lurk *incognito* as the enemy of the state within, it can also serve to promote greater internal social surveillance to arrest potential threats before they explode.

- **Collective Defence & Cooperative Security Arrangements**

Collective defence arrangements, though never a watertight guarantee, can nevertheless provide some limited deterrence against foreign aggression, even if signalling in effort. Take the Five Power Defence Arrangement (FPDA) for example. The FPDA was initially set up in 1971 to overcome the massive vacuum in the region's air defence and gave birth to the Integrated Air Defence System (IADS) at Butterworth which covered Malaysia and Singapore. Through combined annual military exercises and regular consultations over the past three decades, it provided a useful psychological assurance and

credible deterrence especially in the early post-colonial years of nation building that allowed the young independent nations of Singapore and Malaysia to pursue economic development in relative domestic peace and stability despite external turmoil and regional uncertainties. Over the past decades, even as Singapore and Malaysian defence capabilities have grown, the relevance of FPDA to the regional security framework and its psychological deterrent value remains. And because deterrence can fail, sometimes the pressures brought to bear on states in a state of tension by an external power(s)/grouping can have dampening effects by bringing brinkmanship back to the table of negotiation.³⁷ And in another example where the role of collective defence relationships and strong cooperative security partnerships can prove to be instrumental – of late, concerns over perennial piracy and potential maritime terrorism in the Malacca Straits have led littoral and regional states to seek out opportunities to work together by intensifying activities such as coordinated sea patrols and air surveillance "so as to have a deterrent effect and a confidence-building effect" as Singapore's Prime Minister Lee Hsien Loong had put it.³⁸

Right-Shaping Strategy

Effective credible deterrence is predicated upon what a potential aggressor perceives and believes. It is about influencing intentions and outcomes. As such deterrence is about shaping the perception, belief systems, decision-making processes and actions of a potential adversary. It would

therefore be useful to explore strategies of deterrence that go beyond the direct military demonstrations related to the application of brute force for coercion and compulsion. Such non-kinetic shaping strategies, for want of a better term, can potentially have a major impact on the social decision-making/action matrix of potential adversaries by targeting their individual and collective mind's eye. Non-kinetic shaping of the cognitive battle space, with a thorough understanding of elite-popular dispositions, should therefore form part and parcel of integrated perception and media management efforts that always begin and end with the range of targeted and unintended audiences in mind. In this regard, leveraging on Effects – Based Operations (EBO) concepts for Information Operations/Warfare (IO/IW) can enhance deterrence projection by influencing perceptions, intentions, and ultimately policy.

In Effects-Based Operations, it is said that “not everything that counts can be counted, and not everything that can be counted counts.”³⁹ Therefore, the introduction of what the U.S. calls “Influence Net Modelling” approach is an attempt to go beyond bean-counting Relative Combat Power comparisons, to better understand and influence adversaries by “mapping” accurately the psychological profiles of political actors/key military decisions makers with graphic depictions of their relationships. They suggest how decisions are made and implemented – in short, the nets are diagrams of who influences whom, how that influence is exerted and why. With the recent popularity of EBO methodology in military planning,

such Influence Net Modelling when applied to human behaviour recognises that there is beyond the physical domain, a cognitive domain to deterrence through insights generated by the influence nets that can be harnessed to actively shape missions and strategies, thereby helping to achieve desired outcome effects and lay-bare unintended consequences. I would venture to suggest that from a deterrent EBO perspective, “decisive” semiotic points could even be derived for greater synergy and convergence of right-shaping strategy across the joint services. For the SAF, such decisive semiotic points could be in the form of the following key deterrent descriptors:

- a. A formidable knowledge-enabled force with balanced and niche capabilities to deal with full spectrum threat complex capabilities including a broad suite of robust counter CBRE expertise.
- b. A powerful integrated force with dynamic multi-modal manoeuvre fires that can achieve anticipatory self-defence strike effects to decisively deny, punish and paralyse an aggressor should deterrence fail.
- c. A vigilant force with a spectrum of superior real-time joint sense-making and precision sensor-shooter capabilities that can calibrate responses for achieving desired operational effects.
- d. A smart learning organisation that is well-led by high calibre commanders, and is always able to quickly adapt and capitalise swiftly on the innovative spirit, talent

potential and intellectual capital of its people to overcome any contingency or adversity.

e. A proactive and flexible force for peace and stability in the region and beyond that is well-regarded and valued as a reliable partner-of-choice.

f. A united force that is highly trained, adaptable, committed, cohesive and confident across the rank-and-file, backed up by resilient national solidarity amongst the different poly-ethnic communities.

g. A high tech, high combat readiness organisation with high systems reliability, sustainability, and rapid system break down turnarounds.

h. An integrated force that makes the country a hard target – with closely coordinated interagency cooperation to protect the integrity of the nation’s vital systems hardware infrastructure.

From such semiotic key descriptors, a sampling of which is proposed above, deterrent strategy becomes more than shaping for effects. Deterrence then becomes a holistic function of a full spectrum strategy that is plugged into systems integration in all its key physical and cognitive dimensions – hardware, software as well as “heartware” aspects like commitment, confidence, courage, cohesion and deep conviction to defend the country and protect its vital interests. Right-shaping strategy will then need to ask questions about what are the sources of our enduring competitive advantage

and centre of gravity with regards to deterrence.

Rapid Technology Insertion with Robust Training

In the SAF’s transformation efforts, the search for the smart application of technology in areas with the highest pay-off must continue. Strategy-driven experimentation of advanced concepts and developmental projects including so-called IKC2 phantom/skunk projects should be critically evaluated to see if indeed the pay-offs and return on investments (ROIs) are real and do ultimately enhance and advance the war fighting outcomes envisaged. There is also a need to reconceptualise the meaning of conventional deterrence and defence doctrine in an age of Knowledge-driven Effects-Based Operations. In the SAF’s drive ahead to deconstruct and reconstruct new and more relevant 3G warfighting concepts, there will be a need to think and tinker out of the box – For example, examining if instead of traditional Relative Combat Power based on *platform firepower* overmatch, to one of *superior systems-of-systems warfighting* overmatch would ultimately lead to a more sustainable force structure with winning pay-offs. Already it has been envisaged from a deterrent perspective, the 3G SAF will be smaller, leaner yet more capable in engaging in combat beyond visual range – “because the enemy knows you can see him, he may not be so ready to fight. That is the real objective of deterrence.”⁴⁰ In this regard, high-tech gearing can afford an asymmetric advantage to a high-tech savvy force that chooses to fight to its advantage

according to its own area of comparative strength, while being able to credibly deal with areas of comparative vulnerabilities at the same time. In the roadmap to 3G SAF transformation, the build-up of indigenous capability in critical high-pay-off areas that accord comparative system superiority, through rigorous combat lab experimentation and field test-bedding⁴¹, will be key to pushing the envelope of warfighting concepts *vis-a-vis* deterrence as we know it today. Rapid technology insertion with relevant Operational Testing and Evaluation (OT&E) follow-through can serve as a critical systems integrator and powerful force multiplier that can make a real difference in enhancing deterrent value.

And at the people system level, tough, relevant and realistic *in situ* and integrated networked training must continue to be enhanced across the services, even as more simulation technologies come on-line to value-add to the learning and training process. SAF personnel must continue to be sent for the toughest of military training courses and the best of tertiary education at home and abroad to hone their warcraft. No doubt hard to measure, but there is something to be said for the fine calibre of its fighting men and deterrence every time SAF personnel distinguish themselves and their country by topping or excelling at such courses. As is well recognised, soldiers who train hard and smart in peacetime will not easily melt under the fire of war.

Conclusion

Deterrence's litmus test is that even when tensions rise to boiling

point levels, war remains a *non-option* for the potential adversary: because it can neither be started nor succeed. To be credible, denial and punishment must not be false promises. Deterrence is ultimately about holistic hedging strategy – more than just capability (quantity and quality) and resolve alone – that is coherent and convergent in its communicative intent bringing together all the elements and instruments of national power. A credible and effective deterrence strategy must account for the spectrum of potential threats arrayed at the state and its people today and tomorrow. To be credible, one must have both demonstrated a willingness *in extremis* to decisively use one's weapons as *well* as demonstrated a broad-based capability with robust and resilient capacity that is communicated unambiguously to handle the full range of contingencies possible.

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A strategy mix and communicative which eschews the classic security dilemma of an offensive-inclined deterrence posture and force structure – bearing in mind the self-reinforcing logic that what makes one secure, can often make one's adversary less secure. And in this regard, regular strategic dialogue, confidence building measures and mutually beneficial partnerships built on a confluence of interests and commonality of perceptions make for a better peace. In the context of a small and young nation like Singapore, it

is clear that deterrence is not the sole means of preserving the island nation state's freedom, independence and sovereignty. Diplomacy forms the other cornerstone of Singapore's efforts to work with regional neighbours and extra-regional players as responsible members of the international community to resolve conflicts or disagreements peacefully before they come to a boil; as has been well put by a senior Singaporean bureaucrat: "deterrence and diplomacy are different sides of the same coin, not alternatives."⁴² In other words, a capable defence accords credible deterrence while deft diplomacy can help preserve détente and concord. And with particular regards to the SAF, its increased role in promoting defence diplomacy over the years continues to form a key thrust in enhancing the nation's active diplomatic outreach efforts; albeit both regional and afar.

The maxim of *pace para bellum* – routinely reiterated by Singapore's leaders with a sense of resolute realism continues to hold true for the city-state: "If we want peace, we have to prepare for war...this is the basis of our policy of deterrence"⁴³ Preparedness posture is key to prevention. Prevention must be built upon a robust and resilient national security architecture backed up by reckonable combat capability, with strong resolve and self-reliance as the ultimate guarantee. Credible Deterrence provides the indispensable incremental peace dividends on a day-by-day basis that safeguards the national interests, sovereignty, freedoms, livelihood and values which Singaporeans hold dear 

Endnotes

- ¹ See then BG Lee Hsien-Loong, in *The Straits Times*, (6 Nov 1984).
- ² In communications semiotic theory, 'aberrant decoding' is used by Umberto Eco to refer to a text that has been decoded by means of a different code from that used to encode it. These codes can be cultural, social, political et al. See Eco, Umberto (1965): 'Towards a Semiotic Enquiry into the Television Message', in Corner, J. & Hawthorn, J. (Eds.) *Communication Studies: An Introductory Reader*, (1st Edn.), (London: Edward Arnold, 1980), pp131-50.
- ³ John Mearsheimer has argued that "[t]here is a well known distinction between deterrence based on punishment, which involves threatening to destroy large portions of an opponent's population and industry, and deterrence based on denial, which requires convincing an opponent that he will not attain his goals on the battlefield." See John Mearsheimer, *Conventional Deterrence*, (Cornell University Press, Ithaca: CA, 1983).
- ⁴ A moniker borrowed from the realm of Economics, which has often been described as "the dismal science". 19th century author Thomas Carlyle originally coined the term while referring to Thomas Malthus and his belief that exponential population growth and linear food supply growth would result in worldwide famine. Malthus was wrong because he did not take into account advances in productivity. In recent times, Economics has again been referred to the dismal science because of the theory of diminishing marginal returns.
- ⁵ In the escalation archetype, one party (A) takes actions that are perceived by the other as a threat. The other party (B) responds in a similar manner, increasing the threat to A and resulting in more threatening actions by A – a vicious circle/spiral is set in motion. The reinforcing loop is traced out by the following figure 8 produced by two balancing loops. See *Toolbox*, (Nov 1990), Pegasus Communications.
- ⁶ Shiping Tang, 'A Systemic Theory of the Security Environment', in *The Journal of Strategic Studies*, Vol. 27, No. 1 (Mar 2004), pp1-34.
- ⁷ *Ibid*: p12.
- ⁸ See 'Japanese Panel Calls for First-Strike Capability' in *The Straits Times*, (2 Oct 2004). p. 6. Japan has reiterated its longstanding position that having a first-strike capability is within its right of self-defence, but that recognising its possession may upset neighbouring countries, has in practice left this aspect of its security to the US. In a sign

- of changing threat perceptions, Japan is reportedly set to enter into joint development with the US for a next-generation missile defence system in 2006.
- 9 There is a growing consensus at home and abroad for Japan to develop nuclear capabilities if China caught up with the United States in nuclear capacity. See 'Japan Should Be Ready to Strike First, says Report', in *The Straits Times*, (11 Aug 2005), p9.
 - 10 See 'Aussies Plan to Extend Missile Range', in *The Sunday Times*, (31 Oct 2004) p21.
 - 11 The missile has a reported range of 500km, and can be launched from ships, submarines and aircraft with pin-point accuracy while avoiding radar detection. According to the Federation of American Scientists, there are at least 12 countries which export cruise missiles: Britain, the United States, China, France, Germany, Israel, Italy, Japan, Norway, Russia, Sweden and Taiwan. See 'Pakistan Test-Fires Its First Cruise Missile', in *The Straits Times*, (12 Aug 2005), p14.
 - 12 See 'India-Pakistan: Background and Threats', available at <http://usgovinfo.about.com/library/weekly/aa010202.htm>.
 - 13 In fact, some analysts like Kenneth Waltz have even argued, perhaps less convincingly these days, that the world would be a safer place if more countries had nuclear weapons. To be sure, such an argument is highly polemical and extremely contingent on a common acceptance of mutual destruction, which may not be shared by all state or non-state actors in the current milieu of global terrorism. See his 'The Spread of Nuclear Weapons: More May Better', *Adelphi Papers*, No. 171 (London: International Institute for Strategic Studies, 1981).
 - 14 See Siddharth Srivastava, 'India's Military Hungry for More', in *Asia Times*, (16 Feb 2005).
 - 15 *Ibid.*
 - 16 Shanahan, Op Cit. See also MAJ W. Eric Herr, *Operation Vigilant Warrior – Conventional Deterrence Theory, Doctrine and Practice* (Alabama: Air University, June 1996) available at <http://www.fas.org/man/eprint/herr.htm>
 - 17 See Johanna McGeary, 'What Saddam was Really Thinking', in *Times*, (18 Oct 2004), pp32-34.
 - 18 'Is Iran Next?', in *The Straits Times*, (14 Aug 2005), p19.
 - 19 Richard Rhodes, 'Living with the Bomb', in *National Geographic*, (Aug 2005), pp9-113.
 - 20 Attack on Armed Forces' Centres.
 - 21 Attack on Civilian Targets.
 - 22 'Taiwan Test-Fires Local Cruise Missile', in *The Straits Times*, (6 Jun 2005), p3
 - 23 See 'Taiwan Test-Fires Missiles That can Hit Chinese Cities', in *The Straits Times*, (27 Sep 2004), p. A2; also 'Taiwan to Test-fire Cruise Missile that could Hit Shanghai', in *The Straits Times*, (4 Oct 2004), p. A2 and 'China Blasts Taiwan PM's Threat of Missile Strike', in *The Straits Times*, (3 Sep), p. A2. As Taiwanese Premier Yu Shyi Kun had put it baldly: "You (China) have the capability to destroy me and Taiwan should have the capability to counter. You strike me with 100 missiles and I should at least strike back with 50... You strike Taipei and Kaohsiung and I shall strike Shanghai. This way, Taiwan will be safe." If budget permits, Taiwan's military plans to produce 6 cruise missiles each year at a cost of NT\$100 million (S\$4.9 million) apiece. Mass production could begin in 2006.
 - 24 In the same opinion piece, Arthur Waldron goes on to make an interesting parallel observation: "looking to the example of Singapore, we may ask whether its growing military strength has raised tensions with its neighbours?...The answer is indisputably 'not at all'. Far from raising military tensions, Singapore's strength has rendered military options unattractive for all, and thereby provided the precondition for genuine cooperation." See 'A Militarily Strong Taiwan is Good', in *The Straits Times*, (30 Jul 2004).
 - 25 Ruth Wedgwood, 'Fighting a War Under Its Rules', available at <http://www.foreignaffairs.org/20040501faresponse83312/ruth-wedgwood-kenneth-roth/combatants-or-criminals-how-washington-should-handle-terrorists.html>.
 - 26 As Davis & Jenkins argue further: "terrorist leaders go through stages, depending on age, successes and failures, opportunities, and associations with others. And even killers can "retire." Thus, we should avoid blanket statements about nondeterrability. Finally, it is virtually a law of social science that people do not behave consistently from one day to the next. Someone who may seem zealous and unbending one day may be "reachable" the next. This is something on which law-enforcement and intelligence agencies have long depended. In practice, "No" may only mean "Not today." Nevertheless, to the extent that bin Laden and other al Qaeda leaders are driven by messianic zeal and a sense of religious mission, retirement seems most unlikely." See Paul K Davis & Brian Michael Jenkins, *Deterrence and Influence in the Counterterrorism: A Component in the War on al Qaeda*, (Santa Monica: RAND, 2002), pp22-23.

- ²⁷ For a good account of the development of Singapore's deterrence strategies which still remain relevant today, see Bilveer Singh, 'A Small State's Quest for Security – Operationalizing Deterrence in Singapore's Strategic Thinking' in Ban Kah Choon *et al*, *Imagining Singapore*, (Singapore: Times Academic Press, 1992), pp97-131.
- ²⁸ 'Immediate deterrence' is defined as "the relationship between opposing states where at least one side is seriously considering an attack while the other is mounting a threat of retaliation in order to prevent it" and contrasts it with "general deterrence," which "relates to opponents who maintain armed forces to regulate their relationship even though neither is anywhere near mounting an attack." In the latter sense, a deterrence relationship between major powers with important opposing interests would seem to be all but inevitable. See Abram N. Shulsky <http://www.rand.org/publications/MR/MR1161/>.
- ²⁹ See Irvin Lim, 'Critical Mass: Weighing in on Force Transformation and Speed Kills Post-Operation Iraqi Freedom', in *POINTER*, (Vol. 30, No.1., 2004), pp45-60; also *IDSS Working Paper No. 58*. (2004), (NTU: Singapore, 2004), pp1-32.
- ³⁰ 'Academics Urge Taipei to Scrap US Arms Deal' in *The Straits Times*, (21 Sep 2004), pA3.
- ³¹ See my *Critical Mass: Weighing in on Force Transformation & Speed Kills Post-Operation Iraqi Freedom*, *IDSS Working Paper No. 58* (Singapore: NTU-IDSS, Jan 2004), pp1-32.
- ³² See Sharon Hobson, 'Disaster Relief: Welcome Relief?' in *Jane's Defence Weekly*, (18 May 2005). The SAF's swift deployment of unmanned surveillance aircraft to help find an Indonesian Air Force helicopter that went missing in Papua in Oct 2005 is another case in point. See 'RSAF Helps Search for Missing Copter' in *The Straits Times*, (1 Nov 2005), p15.
- ³³ From April 2005, In-Camp Training for operationally ready national servicemen (NSmen) will be shortened from 13 years to 10 years. The reduction is possible as the SAF on-going transformation into a 'third generation' fighting force will rely more on exploiting superior technology and less on having large numbers. In addition, the bigger pool of male 18 year-olds entering National Service in the next 10 years, explains why the SAF announced with effect from December 2004 that it could reduce national service from 2.5 years to two years. See Goh Chin Lian, 'NS Call-Ups Cut to 10 Years', in *The Straits Times*, (12 Aug 2005), p1.
- ³⁴ See 'US To Rely on Special Forces', in *The Sunday Times*, (5 Sep 2004), p20. See also Paul A. Ott, 'Unconventional Warfare in the Contemporary Operational Environment: Transforming Special Forces', (Army Command and General Staff College Fort Leavenworth KS School of Advanced Military Studies, 2002), pp1-69. available at <http://www.stormingmedia.us/89/8933/A893304.html>
- ³⁵ See Irvin Lim, 'Of Fighting Spirit and Flaming Sword: Reflections on Our Will and Wherewithal to Survive, Defend and Die for an Island in the Sun We own Called Home', in *Pointer*, (Vol. 28, No. 4, 2002), pp18-42.
- ³⁶ See Azmi Hassan, 'Total Defence Lies in Public Participation', reproduced in translated English in *The Straits Times*, (23 Jan 05); commentary originally published in Malay in *Berita Harian Malaysia*, (19 Feb 05).
- ³⁷ In a recent book 'Engaging India: Diplomacy, Democracy and the Bomb' (Brookings Institution Press) published by the former US Deputy Secretary of State, Strobe Talbott tells the story of former US President Bill Clinton's personal diplomacy in averting a possible nuclear war in South Asia. Startling revelations of Bull Clinton's alleged role in helping to stop the Indian-Pakistan dispute from becoming an internecine nuclear exchange in late 1999 highlights the dangers of deterrence gone wrong, and the importance of external mediation. Vajpayee and Sharif did not realise how close they were to the brink, so there was an even greater risk that they would blindly stumble across it. See 'The Day Clinton Averted a Nuclear Conflict', in *The Sunday Times*, (19 Sep 2004).
- ³⁸ See 'Thailand Signs Anti-Piracy Pact, May Join Air Patrols over Malacca Strait', in *AFP*, (3 Sep 2005).
- ³⁹ See William M. Arkin, 'Military Strategy: Mapping the Minds in Iraq's Regime Social Scientists Take Aim at Saddam Hussein' in *Los Angeles Times*, – (Sunday Opinion: 1 Sep 2002).
- ⁴⁰ Singapore's Chief Defence Scientist Prof Lui Pao Chuen, interview cited in Felix Soh, 'What 3G Fighting Force Means To Boots On Ground', in *The Sunday Times*, (10 Jul 2005), p25.
- ⁴¹ SAF's first-ever conduct of 3G strike wargames (Ex Forging Sabre) in the U.S. from 10-21 Nov and Ex Wallaby in Australia from 17 Oct – early Nov 2005, highlight the serious pace of transformation in which experimental field testing in demanding and realistic operational environments is being pursued. See 'Key SAF Wargames in the U.S. and Australia' in *The Straits Times*, (17 Nov 2005), p46.

- ⁴² See Singapore's Second Permanent Secretary (Foreign Affairs) Bilahari Kausikan, 'Small State's Big Challenge to Stay Vital', in *The Straits Times*, (2 Sep 2005), p. 31. excerpted from orig. article in *The Little Red Dot*, (Institute of Policy Studies and World Scientific, 2005). That said, some scholars like Robert Jervis and Richard Belts have argued that there is nevertheless a contradictory relationship between deterrence and diplomacy, given that in a crisis, the need to present a credible defensive posture is often in dichotomy with the larger diplomatic effort to diffuse the situation.
- ⁴³ "Adequate defence spending is the insurance premium we have to pay for peace. We have to invest in defence so that we do not need to go to war. There is nothing more tempting to a potential aggressor than a

soft and easy target. If we are weak, those who want to impose their will on us may be tempted to go beyond spouting the rhetoric of war to actually try to use military force to subjugate us or prevent us from pursuing our national interests. If we want peace, we have to prepare for war. This is the basis of our policy of deterrence. We best avoid war not by merely advocating love and peace but by deterring those who may have aggressive designs on our security, territorial integrity and national interests. Potential aggressors must know that the cost of any military adventurism against Singapore would be too high for them." See Statement by Dr Tony Tan Keng Yam, Deputy Prime Minister and then Minister for Defence, at the Committee of Supply Debate (14 Mar 2003), available at http://www.mindef.gov.sg/imindef/resources/speeches/2003/14mar03_nr.html.



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Strategies For Managing Force Transformation – Creating New Defining Moments For The Future

by LTC Lawrence Lim Teng Chye

“Transformation is moving an organisation to a higher plane, leading it to become qualitatively different while retaining its essence”.

Peter Schwartz, *The Art of the Long View*, 1996

Introduction

Over the last 30 years, a number of significant events, or *defining moments* have left their marks in the annals of history. These events are defining because they make or break an organisation. Consequently, their effects are far reaching and can bring about fundamental changes in the outlook of an organisation. Some of these defining moments are “positive”. The unprecedented SARS outbreak in Singapore was such a positive defining moment and demonstrated our ability to rise to the occasion and triumph in the face of adversity. Under trying circumstances, Singaporeans stood shoulder to shoulder and combated the spread of the virus. Our people also contributed greatly by establishing a contact-tracing centre within 48 hrs and successfully adapted imaging devices originally developed for a military purpose in less than a week to spot potential SARS carriers¹. Through the

SARS crisis, Singaporeans appreciated the need to be always vigilant. Our ability to respond against such contingencies was also tested and further fine-tuned.

In contrast, “negative” defining moments introduce discontinuities that are so profound that they fundamentally question an organisation’s relevance and purpose for existence. One of such negative defining moments occurred on 9 November 1989 when the Berlin Wall fell. For many years, Western democracies have built their capabilities against an advancing Red Army. With the fall of the Berlin Wall, the enemy whom U.S. and NATO Forces have perfected their competence upon had also vanished². The heavy armoured forces that have been built up over the years became irrelevant overnight. September 11 is yet another defining moment that highlighted the threat of catastrophic terrorism and the need for strong homeland defence. A new security discontinuity had emerged and

exposed the US's lack of preparedness in dealing with the threat.

These negative defining moments have a common thread – they highlight an organisation's inability to deal with discontinuities, and adapt at a rate faster than its evolving context. This essay discusses broad strategies to manage the transformation of the Singapore Army to create capacity to shape new and positive defining moments for the future. Three broad strategies will be developed as a framework to overcome the systemic and structural factors that could limit an armed force's ability to anticipate, sense, adapt and respond faster than changes in the environment. *Firstly*, there is a need to leverage experimentation to condition our hearts and minds to see and act on the future. *Secondly*, we should harness the potential of Integrated Knowledge Command and Control (IKC2) to evolve modular force structures to meet new mission demands quickly and more effectively. *Thirdly*, to leverage systems integration to shorten capability development timelines and deliver cutting-edge systematic solutions to operational users at the frontline. Relevant examples from military history, systems engineering and lessons learned from ongoing force transformation efforts of other armed forces will be used to develop the above strategies.

Systemic And Structural Limitations

Strategic relevance is the essence of existence for the military. Nevertheless, events such as the fall of the Berlin Wall and September 11 clearly showed that transforming and moving to a higher

plane is not the natural order of business for all armed forces. This inaction can be attributed to systemic and structural factors that are unique to the military organisation. These factors reinforce one another and their compounded effects can seriously erode our ability to understand, focus and act on changes that really matter:

- **Focusing Too Much on Present Realities**

There is inherent bias towards meeting current mission demands and applying a more conservative yardstick in catering for the future. This is natural as current “pains” are felt, whereas future “pains” can only be talked about and will only happen downstream. Left unchecked, this has the effect of “crowding” out the future. Focussing too much on present realities will gradually desensitise our ability to feel and understand changes in the environment. Devoid of such understanding, we can be locked in effecting changes within an existing paradigm, rather than taking bold steps in shifting to new paradigms that are more consistent with the new context. Over time, this will lead to a downward spiral – the organisation becomes more inward looking and its ability to internalise gradual but subtle changes in its environment is further eroded. To remain relevant, we must constantly look outside while operating within.

- **Responding Too Slowly**

The military is a complex organisation comprising people and equipment. In the past, where threats have remained relatively stable, resources have been

optimised against anticipated threats and scenarios. Force capabilities have also been organised around stovepipes to enable rapid effective employment. This approach of organising resources and capabilities is however inherently incapable of dealing with amorphous and dynamic threats. When sudden changes occur in the environment, such as the fall of the Berlin Wall, stovepipe capabilities face mass and immediate operational obsolescence, as they cannot be readily adapted for new missions. This phenomenon is akin to structural unemployment in the labour market, and will require resources and time for personnel re-training, acquisition of new equipment and reorganisation before “redundant” forces can be redeployed. Consequently, a threat-driven paradigm will always be reactive and lag behind changes in the environment. In this new paradigm where threats have become multi-faceted and unpredictable, we need to strengthen our ability to respond faster than emerging threats. We need to break down stovepipes and reduce the friction to yield force structures that are readily configurable to meet new challenges.

- **Growing Too Slowly**

Systems should be developed such that they can be delivered quickly into the hands of operational users to facilitate the doctrine and standard operating procedures (SOPs) development. This is largely because training typically takes much longer compared to the time taken for development. It has been reported that in the U.S. Acquisition System, the time taken from system conception to fielding lasts an average of 132 months³ (or 13 years)! Unless our acquisition system is kept lean and

well oiled, our systems will run the risk of operational and technological obsolescence by the time they are rolled out. This has the effect of locking us in a vicious cycle of applying obsolete equipment against new threats and devoting scarce resources for yesterday’s missions. To break free, we need to adopt new acquisition philosophies and methodologies that will shorten development timelines and permit us to grow capabilities faster.

Creating Capacity For The Future

To create new and positive defining moments in our transformation journey, capacity is required to overcome the above systemic and structural limitations. Capacity is generated if we can identify and focus on the changes that really matter, evolve structures and processes that enable us to implement changes and following them through with minimal opportunity costs. Against the inherent bias to look inwards, we must first “force” ourselves to “perceive” the future by identifying the residual uncertainties and questioning the “what-ifs”. To strengthen our ability to take responsive and effective actions, the connectivity of our force elements must be enhanced to evolve force structures that can be quickly reconfigured and adapted to meet new mission demands. To shorten our capability development timelines and better optimise use of resources, it is necessary to move away from development of single large systems towards developing a range of military technologies that can be rapidly mobilised for integration and mass production. This will better lay the foundation to develop cutting-edge

systemic capabilities at short notice against unexpected threats.

To act with confidence, we must look ahead and contemplate the uncertainties, the challenges they pose

capability developments is an important output of experimentation, its real value lies in its power to illuminate blind spots, identify residual uncertainties, opening up our minds against taking a deterministic view of future events to

STRATEGY 1 : EMPLOY EXPERIMENTATION TO REPERCEIVE THE FUTURE

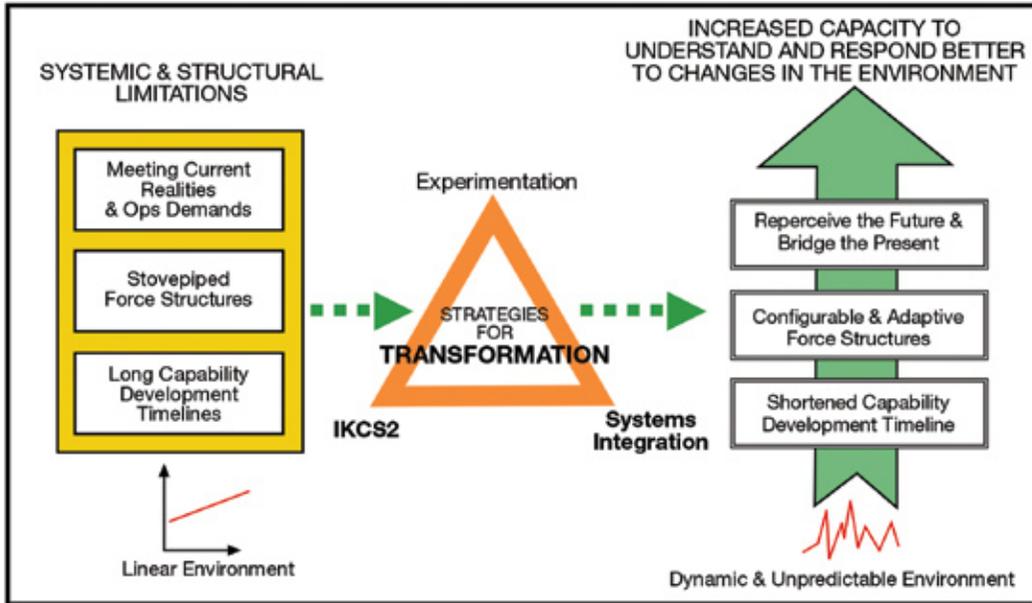


Figure 1. Framework to Generate Capacity to Create New and Positive Defining Moments for the Future.

and how an adversary might react to our actions. We have to part with comfortable ways of linear thinking and planning, take risks and experiment so that we can more effectively deter and defeat adversaries that have not yet emerged. Experimentation is one of the tools that can help us reperceive the future and focus on what really matters. Besides visualising future conflicts and emergent ops concepts, it also provides a platform to assess the impact of disruptive technologies and account for dynamic changes in the environment.

While the identification of a range of potential requirements for new

see the “what-ifs”, and thinking through the implications of the answers. In his book *The Art of the Long View*, Peter Schwartz called this process “Scenario Planning”. He described how the Royal Dutch Shell Company successfully assimilated scenario planning as part of their decision making process and helped transform Shell from the smallest of the “Seven Sisters”, into one of the world’s largest and most profitable oil companies.

During the 1970s, scenario planners at Shell, led by Pierre Wack were looking at the events that could affect the price of oil⁴. With dwindling oil reserves in the United States and

rising world demands, Pierre correctly identified that the Arabs (under the Organisation of Petroleum Exporting Countries [OPEC]) which held the majority of the world's oil stock could demand much higher prices, but were waiting for an opportune time. Oil was a strategic commodity at that time, and powerful consuming nations such as the U.S. would do whatever possible to keep prices low. Pierre helped Shell's top management "reperceive the future" by presenting possible oil price shock scenarios, made them feel the full ramifications, questioned the underlying assumptions for each scenario and helped managers imagine the decisions they might have to make as a result.

When the energy crisis struck in 1973, triggered by the Yom Kippur War, Shell's management was mentally prepared for change and responded quickly. Shell managed to turn adversity into opportunity and their fortunes rose steadily ever since. By questioning the assumptions about the way the world works, Shell was able to see the world more clearly and make better decisions about the future. This is the true value of experimentation, that is to gear our minds to be aware of subtle indicators of change so that we can actively look out for them, help us focus on the changes that really matter and prepare us to take actions responsively and confidently.

Without questioning the what-ifs and their implications, we could be pursuing transformation "blindly" and would be ill prepared to sail in a different course when the wind direction changes. Take for example the Future Combat System (FCS), the cornerstone of the U.S.

Army's transformation effort to become a lighter and more mobile force. Instead of deploying forces all over the world, the FCS is envisioned to transform the U.S. Army into a global, consolidated power projection force that is stationed primarily in the U.S.. It will be built around the lightly armoured Stryker wheeled combat vehicle in the interim (up to 2008), with the ultimate goal of creating a group of more technologically advanced mobile combat units for the Objective Force by 2020.

The experience from Ops Iraqi Freedom however underscored the value of heavy armoured ground forces. While frequently referred to as legacy, heavy armoured forces proved pivotal in breaking through Iraqi defences in the South, and in urban combat operations within Baghdad and other cities. The more lightly armoured forces such as those being developed by the FCS will have been more vulnerable to Iraqi rocket propelled grenades and other light arms. There is also evidence to suggest that sufficient time would be available to permit the build-up of heavy conventional forces. This is in cognisance that current geo-political realities will not allow unilateral action to be taken without exhausting all possible means for political mediation. In Ops Iraqi Freedom, a period of four months was available for force build-up as the U.S. and Allies painstakingly garnered political support through the UN and quelled domestic political opponents. This allowed Coalition Forces to assemble more than 250,000 troops, 500 tanks and 650 aircraft⁵.

The above observations however indicate that a balanced capability

portfolio will best meet the disparate demands of a wide spectrum of operations. They also highlight the potential pitfalls in force transformation – that without questioning the what-ifs and the whys, we could be pursuing technologies for the sake of it, instead of harnessing high payoff technologies and applying them to bring new operational concepts into fruition. We need not wait to fight a war to extract meaningful lessons learned. Like Shell, we can also turn adversity into opportunity. Experimentation will provide the platform for us to do so.

richness in interactions between nodes, empower forces to respond better and faster through integrated knowledge, and allow new micro-network structures to be created dynamically. Peter Evans, the author of *Blown to Bits* referred to this phenomenon as the “deconstruction” of value and organisational chains⁶.

The advent of smart, software intensive systems is producing the capacity to build force capabilities that are scalable and can adapt quickly to new challenges and unexpected circumstances. With IKC2, there will also be increased scope to organise

STRATEGY 2 : USE IKC2 TO CREATE NEW VALUE CHAINS

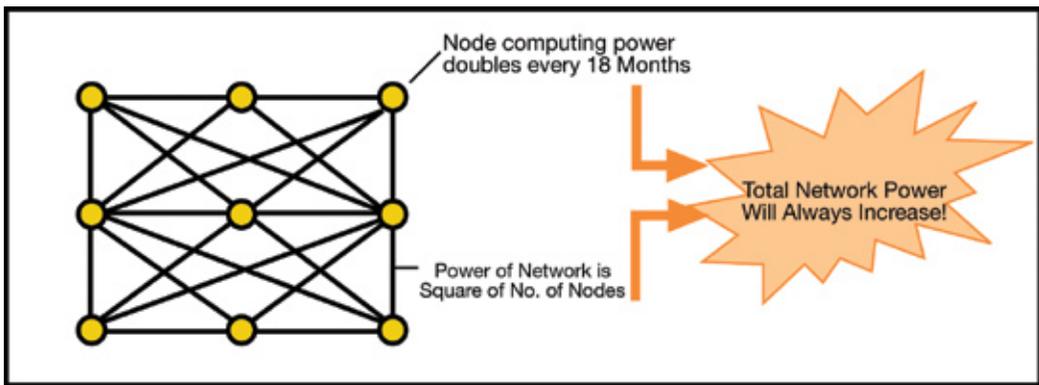


Figure 2. Moore's Law and Metcalfe's Law Illustrated.

By now, most of us would have been well accustomed with the following laws:

Moore's Law: Computing power will double every 18 months.

Metcalfe's Law: Power of Network = (Number of Nodes)².

The confluence of the 2 laws implies that with the application of IKC2, forces can be networked to enhance their reach, and their ability to leverage the collective strength of the entire system. Networking will also increase the

force elements in an object-oriented manner⁷, or as “Lego blocks” with a set of predefined interfaces to “plug and play” with the larger system. In such a system, efficiency is gained through the interaction between blocks, and the dynamic adaptation of the blocks as a whole to form new shapes to fit with its environment. Besides the property of being self-adaptive, this also allows operations to be decentralised yet combined in effect.

For example, in a classical meeting engagement between tanks, the side

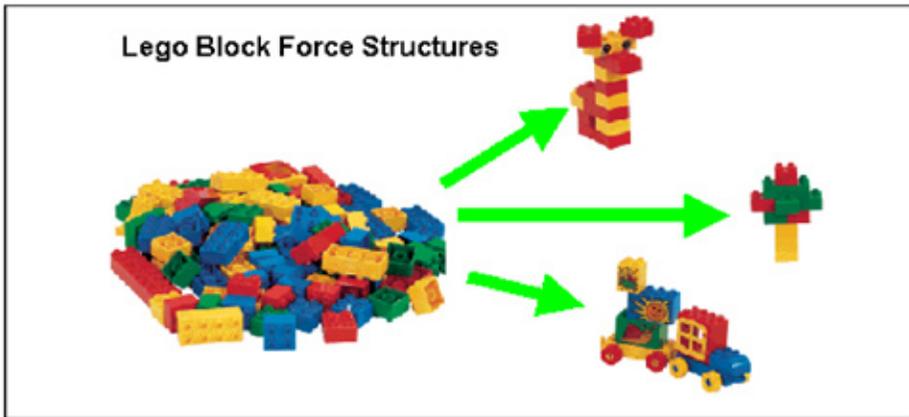


Figure 3. *The Lego Block Principle: Rapid Reconfiguration through Standard Interfaces.*

who shoots first usually gains the tactical advantage. Consequently, each platform is designed to detect and shoot targets at long stand-off distances. Combined effects (target acquisition and engagement) are achieved at the local platform level. However, against a network of sensors and shooters, an enemy who shoots first risks being detected and engaged first. If his forces were not dispersed, the positions of other nearby friendly forces would be compromised as well, thus leading to higher combat attrition. Although the functions of sensing and shooting are now decentralised to individual force elements, combined effects are achieved at the global level, enabled by interactions between nodes.

A decentralised concept of operations has also been found to play a larger role in stimulating innovation during operations. This is not surprising, as IKC2 will empower force elements to deconstruct and recreate new value chains on the fly. For example, during the war in Afghanistan, coalition forces took existing capabilities from the most advanced laser-guided weapons to 40-

year-old B-52s updated with modern electronics and used them together in new and unprecedented ways, with devastating effect on Taliban and al-Qaeda forces⁸. This was not achieved by the application of new revolutionary technologies per se, but by new operational concepts enabled by IKC2.

For all the promises that Moore and Metcalfe Laws hold for us, we have to be mindful of the potential pitfalls as well. Firstly, the rapid pace at which IT advances is an opportunity as well as a risk. Sensible IT acquisition strategies must be formulated such that our systems are always on par, if not better than what the commercial market can offer. In this regard, a phased acquisition approach would better mitigate the risk of block obsolescence while providing the flexibility for forces to experiment and evolve new techniques, tactics and procedures.

In order not to offset the yields from networking, complexities due to an increased number of nodes and interactions must also be adequately addressed⁹. In network mathematics, such complexities can grow at a factorial

rate and potentially outstrip the gains from Metcalfe¹⁰.

on the idea that the possession of scientific knowledge and engineering

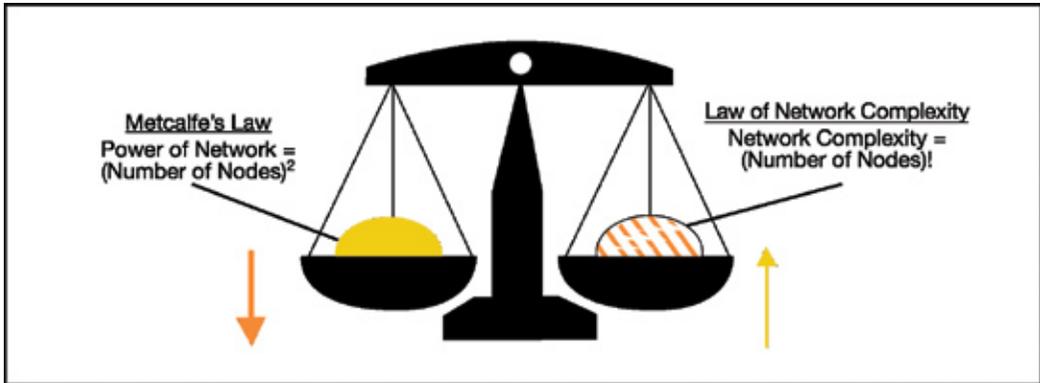


Figure 4. Managing Network Complexities in Order Not to Offset Gains from Metcalfe.

To manage complexities, interface and quality of service standards must be established as the principal means to regulate, control future growth, as well as to achieve interoperability. Instead of prescribing detailed and complex solutions, the proliferation of interface and quality of service standards is also a better strategy to promote network growth. It will establish the global architecture to assure interoperability in the long run while allowing networks to grow in a relatively distributed manner, from the ground up.

STRATEGY 3: SYSTEMS INTEGRATION TO SHORTEN CAPABILITY DEVELOPMENT TIMELINES

The divergence in the timelines between acquisition cycles and discontinuities suggest that one should move away from the development and procurement of single large systems, which consume significant resources and time, towards research and development of a range of military technologies that can be rapidly mobilised for integration and mass production. This is premised

techniques will prove more valuable in meeting unexpected exigencies than a large stockpile of obsolete equipment. Large-scale procurement is deferred to allow residual uncertainties to evolve and become clearer. When long-term uncertainties become short-term requirements, decision makers can then choose from an array of prototypes the system is best suited to meet the needs of the day, quickly and effectively. Peter Rosen referred to this approach as developing capabilities along “the technological dimensions of the security environment¹¹”.

There is anecdotal evidence to suggest that such a capability development philosophy can bring about a Revolution in Military Affairs (RMA). These revolutions occur not as a result of a single new technology or weapon, but when groups of technologies emerge collectively and together transform the nature of warfare. Soviet military writers have identified three such revolutions, two that are historical and one that is occurring now¹². The first revolution took place in the 1920s when the internal combustion engine,

mobile radios and military aviation combined to increase both the speed with which armies could advance, and the depth to which they could penetrate. Recognising the operational potential of the underlying technological trends, the Germans built their forces around small, high quality, mobile shock forces supported by air power and gave birth to Blitzkrieg.

According to the Soviets, the second revolution took place in the 1950s when ballistic missiles and nuclear weapons made it possible for nations to deliver overwhelming firepower rapidly and across continents. This ushered in the age of the Cold War and the strategic paradigm of Mutually Assured Destruction (MAD) which fuelled the development of strategic nuclear forces such as the Nuclear Submarines and Inter-Continental Ballistics Missiles (ICBMs).

The revolution occurring now has its origins back in the 80s when the development of micro-electronics, computers, sensors and communications fuelled a qualitative change in the effectiveness of tactical forces, allowing them to operate in smaller, leaner and more powerful discrete packages by leveraging light but highly effective tactical weapons and networking. The current RMA is significant as it has also opened up new realms of warfare in the information and knowledge domains and offered more viable military options as nuclear weapons have long been recognised as blunt policy instruments.

To build up a qualitative edge in the current RMA, we must begin to level up our systems integration knowledge,

especially in the areas of sensors, computers and communications, and embark on broad based R&D in an array of high payoff technologies. This will shorten development timelines and establish the knowledge foundation to deliver cutting-edge systemic capabilities at short notice against unexpected exigencies.

Conclusion

Transformation is not a destination. It is a journey as we renew our missions and roles with the strategic context to become something better and more relevant. We can therefore, by definition never arrive. While we cannot predict the future, we can put in place the structures and processes that will enable us to understand and respond better to changes in the environment.

This essay has highlighted three key broad strategies as a framework for action. *Firstly*, to employ experimentation to see the future with greater clarity and to condition our minds and hearts to take responsive decisive actions where it matters most. *Secondly*, to enhance our ability to adapt and respond by leveraging IKC2 to evolve re-configurable force structures. *Thirdly*, to shorten capability timelines by building up a qualitative edge in systems integration and broad based R&D in high payoff RMA technologies. It is hoped that this framework will provide the capacity for us to create new and positive defining moments in our transformation journey ahead. 🌐

(Ed note: This essay was an Award winner of the 2004 CDF Essay Competition)

Endnotes

1. For a full account of this story, see *The New York Times*, Technology Section, "Military Hardware is Adapted to Fight SARS" (12 May 03).
2. Gordon R Sullivan and Michael V. Harper, *Hope is Not a Method* (Broadway Books, 1997). See pp 148-150 on the impact the fall of the Berlin Wall had on the U.S. Army's Transformation effort.
3. William Cohen, Annual Report to the President and the Congress 1998, Chapter 18, p3.
4. Pierre Wack, "The Gentle Art of Reperceiving", *Harvard Business Review* Sept 1985, p9.
5. News reports indicate that Coalition Forces began building up forces after UN Security Council Resolution 1441 was passed in November 2002. The actual ground offensive started only on 20 March 04, that gave Coalition Forces about 4 months to build up and deploy forces.
6. See Philip Evans and Thomas S. Wurster, *Blown to Bits* (Harvard Business Scholl Press, 2000), pp69-71.
7. An object refers to an entity that contains all the data, behaviour and functions that pertain to the entity. Objects have interfaces through which they send and receive messages to and from other objects. For a thorough discussion on Object Orientated design, see Derek Hatley, Peter Hruschka and Imitiaz Pirbhai, *Process for Systems Architecting and Requirements Engineering* (Dorset House Publishing), pp255-257.
8. Remarks as delivered by U.S. Secretary of Defense Donald Rumsfeld, National Defense University, Fort McNair, Washington, D.C., Thursday, 31 January, 2002.
9. See Mark W. Maier and Eberhardt Rechtin, *The Art of Systems Architecting*, (2nd Edition, CRC Press, 2000) on the impact of complexity associated with the number interrelationship among elements could increase faster than the number of elements and affect system performance.
10. Jeffrey R Cares SSG XVIII Technical Report "Network Fundamentals", 21 July 1999.
11. See Stephen Peter Rosen, *Winning the Next War* (Cornell University Press, 1991) Chap 8, p221, where the author drew examples from guided missile development and showed how the US Air Force and Navy employed this strategy successfully to manage uncertainties and mitigated the threat of block obsolescence.
12. Notra Trulock III, Kerry Hines, Anne Herr, "Soviet Military Thought in Transition: Implications for the long Term Military Competition", (Arlington VA Pacific-Sierra Research Corporation, May 1988), p28.



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The Soldier and the City-State: Civil-Military Relations and the Case of Singapore

by CPT Teh Hua Fung

Introduction

“War made the State and the State made war.”

– Charles Tilly, Sociologist, Columbia University

Physical security has always been a basic tenet of survival and growth for nations and empires. Since the beginning of civilisation, the need to protect and enlarge territory has been of primary concern to Pharaohs, Emperors and Kings alike. In ancient times, the line between civilian and soldier was a fine one. Great rulers, such as Julius Caesar, Alexander the Great and Genghis Khan, were themselves also accomplished warriors. The spoils of their victories became the territories that they owned and administered. This is in stark contrast to what we know today, as rulers or heads of state have long ceased doing battle themselves in times of conflict. The responsibility of conducting war now resides in what we term the military establishment, or Armed Forces.

Civil-military relations “encompass the whole range of interactions and relationships between the Armed Forces and different segments of society within which they co-exist and operate”¹. This

subject has been studied by scholars from a variety of disciplines, such as political science, sociology and history. Their varied opinions and perspectives have brought a healthy intellectual complexity to it. As Peter Feaver explains, political scientists are focused primarily on institutions of political control, i.e., civilian domination of the military or vice-versa. Factors that preoccupy sociologists, on the other hand, typically deal with the integration of the military with society at large. As such, the field of civil-military relations is relevant in different ways to different countries.

In this three-part essay, a historical context of civil-military relations will first be presented to provide the backdrop for which a theoretical framework will be established based largely on the work of pioneers in this field like Huntington and Janowitz. In the third and final part of the essay, through examination of the type and degree of civilian control (or lack thereof) over the

military in Singapore, I will illustrate how the civil-military model in this city-state is unique, and how it differs from the traditional Huntington-Janowitz paradigm.

Civil-military relations “encompass the whole range of interactions and relationships between the Armed Forces and different segments of society within which they co-exist and operate”

Historical Context of Civil-Military Relations

- **The Dichotomy**

The term “civil-military relations” implies the existence of two discrete and coherent entities. While this might have been true as applied to the last two centuries, it is problematic to use this duality to describe earlier societies, whose war-fighting elements were sometimes well integrated and almost indiscreet in some instances. This was largely because early agrarian societies rarely had the capital to raise professional standing armies, but operated on the principle that every citizen was a soldier, ready to fight in the name of his people. Early examples of warrior-citizen empires include the Ancient Greeks and the Mongols.

- **The Scholar-Warrior**

Although common foot-soldiers gradually became full-time vocationalists at some point in history, the idea of a civil-military fusion was still prevalent in the upper rungs of the social strata. This is perhaps best represented in

the traditional Confucian ideal of the Scholar-Warrior. The Scholar-Warrior amalgamates the civilian activity of scholarship and the military activity of war. Indeed, martial association may well have inspired Confucius’s definition of a scholar. In his *Analects*, he utilises the Chinese character *shi* to designate a scholar, which actually means “warrior”². Similar ideals of scholarship and the martial ways were also expounded some two thousand years later by the Italian nobleman, Count Baldassare Castiglione in his most famous work, *Il Libro del cortegiano* (*The Book of the Courtier*). Written between 1513 and 1524, it attempts to describe the ideal Renaissance gentleman – one who is a perfect synthesis of the “chivalrous ideals of the Medieval knight” and the “educational program of the humanists.”³ Indeed, the practice of noble or aristocratic officership in many European countries such as England and France in Medieval times was the norm rather than exception.

- **Aristocratic Officership**

Up till the 1800s, European armies were led largely by officers who were either aristocrats or mercenaries. The mercenary system saw its demise, however, with the Thirty Years War (1618 – 1648) and the success of the disciplined armies of Gustavus Adolphus and Oliver Cromwell⁴. In the 18th century, aristocratic birth was a requirement for entry into all branches of the military in France, with the exception of the Artillery and Engineers (technical arms). Superior command ability, it was thought at the time, was a function of inborn natural genius and could not be fostered by “objective

social institutions”⁵. It was this mindset that made military training extremely wanting, as many institutions set up were designed as a means of subsidising the nobility rather than improving the army⁶. Wealth, birth and status tended to play the key role in admission to training and promotion. In England for instance, commissions in peacetime were “monopolised by the younger sons of country gentry”⁷. Frequently, these officers held seats in parliament and “made use of their legislative position to advance themselves in the army”⁸. According to Huntington, such officership was non-professional in nature, as it did not incorporate the qualities of military expertise, responsibility and corporateness.⁹ In less abstract terms, the early aristocrats, who were essentially the “state”, were unwilling to divest the responsibility of violence management.

Professional Military Reform

The first attempt at professional military reform was made by the Prussian government on 6 Aug 1808, where it issued a decree on the appointment of officers which was based on meritocracy and not caste:

“The only title to an officer’s commission shall be, in time of peace, education and professional knowledge; in time of war, distinguished valour and perception. From the entire nation, therefore, all individuals who possess these qualities are eligible for the highest military posts. All previously existing class preference in the military establishment is abolished and every man, without regard to his origins, has equal duties and equal rights.”¹⁰

This decree laid the foundation for the development of the military apparatus as a separate institution, and the model upon which “virtually all other officer corps were ultimately patterned”¹¹. Previous deficiencies due to the incompetence of the aristocratic amateurs were eradicated by the systematic training of non-statesmen to become officers. Other key developments included the formation of the Prussian General Staff system and the establishment of military science institutions such as the *Kriegsakademie* in Berlin.

Theoretical Framework

• Military Subordination

Keeping the time-frame similar but switching our focus to theory, we find that the distinction between soldier and state gave rise to a dichotomy or sorts. This dichotomy received explicit formulation by the nineteenth century luminary Carl Von Clausewitz in his famous dictum: “War is nothing but a continuation of political intercourse, with a mixture of other means.”¹² In his book *On War*, he examines the nature of war and its relation to other forms of activity. He argues that war is both autonomous and instrumental – that it is both a unique activity unto itself and an activity that is subordinate to policy intentions:

“The subordination of the political point of view to the military would be contrary to the common sense, for policy has declared the war; it is the intelligent faculty, War only the instrument, and not the reverse.

The subordination of the military point of view to the political is, therefore, the only thing which is possible.”¹³

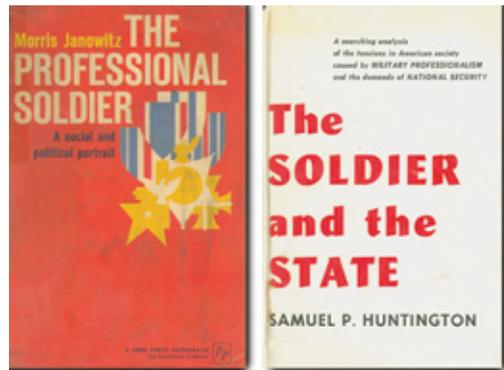
This idea of military subordination has been the single most important focus in the study of civil-military relations since. As Huntington paraphrases, “war has its own grammar, but not its own logic”.¹⁴ Governments that have been unable to achieve military subordination have, historically, become the victims of the classic *coup d’etats*, such as Egypt in 1956, Chile in 1973, and more recently, Pakistan in 1999.

- **The Civil-Military Problematique**

According to Peter Feaver, this is the very reason why scholars and policymakers are keenly interested in the study of civil-military relations. He calls it the “*civil-military problematique*” – that the “very institution created to protect the polity is given sufficient power to become a threat to the polity”. This dilemma is indeed vexing, as it involves the delicate balancing of two competing concerns. First, that the military must be technically and tactically strong enough to prevail in times of armed conflict. Second, that the military, given such huge powers of destruction, must not be allowed, by any moral measure, to destroy or prey on the society it is intended to defend. Its detriment to society need not necessarily be manifested in physical harm; it could also involve for instance, the mistreatment of conscripts or the depletion of social resources.

The two landmark studies that address the civil-military *problematique*

emerged in the mid-twentieth century – Samuel P. Huntington’s *The Soldier and the State* in 1957 and Morris Janowitz’s *The Professional Soldier* in 1960. Much associated literature that has been produced since is, in some part, an overt or inert response to these two seminal studies. In both cases, civilian control was (and still is) regarded as the normative ideal in a functioning democracy.



- **Professionalism and Civilian Control**

We now revisit the theme of professionalism, which, according to Huntington, is central to the ideal of civilian control. According to him, a professional occupation is one with the characteristics of *Expertise, Responsibility and Corporateness*.¹⁵ Pertaining to the professional military officer, he states that *Expertise* refers to specialised ability to manage violence; that *Responsibility* refers to a sense of ethical duty to the state, and that *Corporateness* refers to the sense of cohesion and common bond amongst officers. It follows that a professional military would be apolitical in practice. This means that it does not act with any sort of independent political agenda.

Huntington argues for a system of “objective civilian control”, where political leaders, through well-defined distribution of formal power, keep the military autonomous and highly professional in nature. Such a system, he argues, “will produce the lowest possible level of military power with respect to all civilian groups”,¹⁶ while keeping the military effective in its functional capacity. The military’s expertise, in Huntington’s view, is fighting wars and he feels that this would be compromised by any imposition of civilian values.

Janowitz, in abstract, agrees with Huntington’s definition of professionalism. He too, describes it in terms of special skill, standards of ethics and performance, and group identity. However, Janowitz notes that politicisation of the military has been inevitable as the military as an institution becomes more modernised. He feels that due to advances in military technology, education and a shift of security paradigm, the professional realm of the military has expanded to include peace, political and social stability issues as well. This gives the military increased scope and might potentially give rise to “unprofessional” behaviour through abuse of the new-found power. He thus advocates enhancing the professional nature of the military as well, but through the integration of military decision-making by detailed civilian control.

Many theorists such as Samuel Finer, Roman Kolkowicz, Douglas Bland and Rebecca Schiff have

since come up with separate ways of looking at civilian control. Of course, each has a selective research bias. Finer, for instance, is concerned with certain sociological and affective elements of military intervention. Bland, on the other hand, is interested in the systemic issues of managing and structuring the military. Nevertheless, given the general agreement that civilian domination is the pre-requisite for a stable country, what emerges is one fundamental question: What kind of civilian control mechanism has worked (or hasn’t) for the country in question? Given that every country is unique in history, culture and ethnicity, one can expect the answer to be correspondingly unique in each case. Singapore is no exception.

The Case of Singapore

• The Armed Forces and Society – An Overview

Although Singapore’s military establishment is young and small by Asian standards, its visibility is extremely high in a country some have termed a “garrison state”.¹⁷ Its conscript army draws more than 85% of its strength from the citizenry¹⁸ and with a population of approximately four million, Singapore boasts one of the “highest military participation ratios in the non-communist world.”¹⁹ Since the inception of compulsory military service for all males in 1967, “National Service”, more commonly known as NS, has become the rites of passage for all Singaporean men. It has thus, over time, evolved into

a deep-seated way of life in present-day Singapore. It is commonplace to see young males in their late teens roaming the streets in their camouflaged fatigues, forming persistent specks of green in an otherwise cosmopolitan palette.



National Service: A Way of Life

The social pervasiveness of the Singapore Armed Forces (SAF) is further reinforced by glitzy television and print commercials for careers in the SAF that are managed by leading advertising firms.²⁰ The SAF also has its own radio station, *Power 98*, which, in between playing song requests, provides snippets of information on the SAF's training and operations. The SAF therefore is, *ceteris paribus*, extremely well represented in everyday life.

There also exist very telling political indicators of the military's pre-eminence in Singapore, the most obvious being the defence budget. Singapore's high and sustained defence spending over the years illustrates the Ministry of Defence's (MINDEF) importance in the minds of policymakers. In FY1998, MINDEF was allocated a total of SGD\$6.1 billion²¹, making the island's defence spending per capita the highest in the Asia-Pacific. In FY1999, this was increased to SGD\$7.3 billion, making up 25% of the overall budget.²² Of even greater significance is the recent budget

speech for FY2004²³, where Prime Minister Lee Hsien Loong announced a permanent 2% cut in budget allocations in FY2004 for all ministries except MINDEF. That the country's defence spending is generally not reduced in bad times or good is a clear indication of Singapore's commitment to the uninterrupted growth of its Armed Forces.

More visible to the man on the street are the continual reminders during official speeches of the need to keep the SAF strong and credible. The most notable of these in recent times was President S.R. Nathan's address at the Istana on 12 Jan 2005, where he proclaimed that:

“..... a strong SAF remains a priority. The SAF provides us with a credible deterrence and effective defence. The SAF is effective, because of our collective determination to fight to protect ourselves, our families and our homes when we are endangered. The dedication and sacrifices of generations of national servicemen demonstrate that despite many years of peace, this resolve remains unshaken. The SAF will maintain a high level of operational readiness as it modernises and transforms into the 3rd Generation SAF.”

Singapore, clearly, is one country that will not scrimp on its Armed Forces.

I shall therefore assume, for purposes of analysis, that the SAF is a well-oiled and functioning defence machine. Eliot Cohen, a prominent American academic, commented once that Singapore had “moulded a technologically sophisticated and large military that is capable of

striking far from the island state.”²⁴ Indeed, with a significant emphasis on technology as a force multiplier and a perpetually generous defence budget, it is, in Tim Huxley’s words, “the most impressive military force in contemporary Southeast Asia.”²⁵

- **Civilian Control of the SAF**

But despite its conspicuous military posture and capabilities, a most striking feature of civil-military relations in Singapore is the “undisputed dominance of the civilian sector over the military”.²⁶ This is especially so in “a region where an apolitical military has been the exception rather than the norm”²⁷. Certainly, few would dispute that Singapore has one of the “least politically oriented military forces in South East Asia”.²⁸ It is suffice to say that the military is not a political or social threat to the state and its people.

Socially, due to the lack of “internal security considerations” and “socio-economic deprivation so prevalent elsewhere in the region”,²⁹ the SAF plays a limited role in civic-action operations that might have granted it some internal social visibility. Structurally, military top brass come under the jurisdiction of a number of civilians, including the Permanent Secretary for Defence [PS(D)] and the Minister for Defence [M(D)]. As Tan Tai Yong rightfully points out, the pattern of civil-military relations in Singapore debunks established notions that a strong military posture and high military participation ratio “engenders the supremacy of the military, leading inexorably to various forms of militarism”.³⁰

Civilian control of an apolitical defence force, the normative ideal in civil-military relations, is, by all means, the status quo in Singapore. However, the reasons for its being are not as straightforward as what might have been postulated by Huntington or Janowitz. To understand why, it is imperative that the idea of civilian control is analysed with some granularity.

- **Power, Authority and Influence**

The ability to exert civilian control over the SAF is essentially a function of the SAF’s power: what kind of power does the SAF have, and how is it managed in the administration of Singapore? The degree and scope of the military’s power vis-à-vis other civilian agencies would have an impact on how civilian control can be effected and even to some extent, how much the military can potentially be tempted to abuse its power or set its own political agenda.

Power is defined as “the capacity to control the behaviour of other people”.³¹ The SAF’s power can thus be classified into two types – formal authority and informal influence.³² Formal authority comes from the official status or positions of SAF personnel. It is not something that is inherent in each person; rather, it derives from constitutionally sanctioned and legitimate structures. Informal influence, on the other hand, consists of power that is inherent in one or more members of the SAF. The source of this power could be a variety of factors such as wealth, charisma, gender, kinship and friendship. Recalling the *problematique*, such power, coupled with ill intent, can be a threat.

It would thus be instructive to examine the various ways in which the SAF's power has been managed from the time of Singapore's independence. To do this we have to take a critical look at key policies that have influenced the growth and development of the SAF, and examine the internal and external systems that have shaped the balance of formal and informal power in Singapore today. In the process I will allude to Huntington's and Janowitz's ideas of "objective civilian control" and "civilian oversight" in the context of Singapore and clarify the unique civil-military *modus operandi* that has enabled the civilian authorities to control a highly professional SAF.

- **Birth of the SAF**

The conditions underlying the SAF's relatively recent birth have contributed significantly to the kind of power structures and attitudes that exist in and outside the organisation today. This has invariably resulted in the relatively apolitical posture of the SAF.

Unlike the armed forces of Algeria, Burma and Indonesia, the SAF did not play any role in the founding of modern Singapore. Military regimes that have played such a role can, in their view, rightfully govern based on what Koonings and Kruijtt term the "Birthright Principle".³³ This is essentially a perception that the independence of a nation was a direct result of the struggles and sacrifices of the military. Armies that lay claim to such legitimacy include the People's Liberation Army of the People's Republic of China and the Armed Forces of Tito's Yugoslavia.³⁴

The SAF, on the contrary, cannot claim any legitimate political *authority* based on a struggle for liberation, as they simply weren't the liberators. With a legitimate People's Action Party (PAP) government in place at the time, there was also no political void to fill. This was unlike the case of Pakistan for instance, where General Pervez Musharraf's troops staged a lightning coup d'état on 12 October 1999, citing incompetent civilian leadership as the reason.

Apart from the issue of political legitimacy, Singapore's military, before independence, was a colonial asset that never had any kind of mass populist appeal to begin with. This was especially so for the ethnic Chinese majority, who dogmatically shunned soldiering as a profession. Apart from two infantry battalions, there were no indigenous military forces nor was there any kind of local military culture prior to independence. After independence, the transitional structures in place were largely an inheritance from the British Armed Forces, which were traditionally apolitical in nature. Huxley also suggests that later influences on the SAF, such as "close military relationships with Israel and the U.S.", further strengthened the SAF's political disinterestedness and technical competence.³⁵

- **A Military-Administrative State**

In the years following independence, the secondment of civil servants into positions of military leadership was key in the continued development of the SAF as a "civilianised" armed force. This closely paralleled what some scholars deem to be the transformation

of Singapore into a “Military-Administrative State”,³⁶ one where the bureaucracy and military exist as a single entity.

The most urgent concern for an independent Singapore in 1965 was the build-up of the SAF. As the PAP felt that defence was a national imperative, the Ministry of Interior and Defence was quickly set up in 1965 and the SAF’s development was entrusted to then Finance Minister Dr Goh Keng Swee. As there had been no precedence of high-ranking local military officers, he co-opted members of the Police Force and the Civil Service into the military brass. The first leaders of the SAF were thus from the existing bureaucracy. They included Tan Tek Kim, a senior police officer who headed the General Staff Division, and senior civil servant Kripa Ram Vij, who was the first Commandant of SAFTI.³⁷

Owing to the practice of civil-servant co-option, the SAF was basically, in its formative years, a “civil service in uniform”.³⁸ It did not develop along the lines of a separate military entity nor did it have its own political agenda. A mindset of obedience had ostensibly been ingrained in these early civil-military pioneers and the SAF, as Tan points out, “found itself firmly entrenched in the bureaucratic edifice of the state from its birth”.³⁹

As such, the SAF, quite apart from being formally subordinate to the political leadership, now constituted an element of informal obedience that derived from the civil service

backgrounds of its early leaders. While the evidence supporting this might not be wholly conclusive, it certainly seems reasonable to assume *some* degree of political disinterestedness due to occupational bias on the part of early pioneers.

- **Civilian Control in Early Singapore**

The state of affairs in Singapore’s formative years was without a doubt one of absolute civilian control. The SAF had no claim to “birthright” and lacked any sort of strong local tradition and heritage, especially in the ethnic Chinese majority. It is thus unimaginable that it would have had any kind of strong inklings of militarism or sectarian tendencies. The balance of civil-military power was thus tipped in favour of the state at the outset. The chain of political command was also kept intact through the co-option of career civil servants into the military brass. This, together with the influences of other apolitical military forces such as Britain’s, the US’s and Israel’s, gave the military a character that made civilian control not only possible, but also the path of least resistance.

Notwithstanding this, one can hardly propose that the dominance of the state is achieved through Huntington’s notion of “objective civilian control”. First of all, with civilians taking the lead role in the SAF’s build-up, the armed forces were not, for all intents and purposes, autonomous. Furthermore, while it is safe to assume that some degree of *Expertise* existed in the military, the SAF, based on Huntington’s model, was hardly a professional force at the time

as it probably lacked *Responsibility* and *Corporateness*. As Chan points out, the multi-ethnic community may have had a “migrant mentality of self-interest and little sense of national commitment”.⁴⁰ The absence of commonality in experience or training for the early soldiers was also an important factor. Given such cultural and social biases, it seems presumptuous to suggest that the SAF would have had any kind of bond and collective identity to create the professionalism that Huntington sought to “maximise”.

A Janowitzean attempt at rationalising Singapore’s civil-military model is slightly more accurate, but conceptually limited nevertheless. Although the SAF was indeed subject to the very deliberate oversight of a few civilian and pseudo-civilian leaders, this supervision was not in anticipation of a functionally expanding military force operating in a state of troubled peace. The integration of the SAF was for integration’s sake – it was bureaucratic, intentional and mediated. While it might have provided a channel for the government to guide the SAF’s development, it did not seem to be a control mechanism put in place to check an increasingly socio-politically powerful SAF.

It can therefore be seen that both Huntington’s and Janowitz’s models, while useful, are not wholly applicable in the case of early Singapore.

- **The SAF and the Defence Establishment**

Perhaps one thing that stands out about Singapore’s defence

establishment today, of which the SAF is a part, is its structural domination by its civilian leadership. The SAF is the armed branch of MINDEF. And MINDEF, quite apart from deciding on matters pertaining to the armed forces, also sets direction for issues regarding budget allocation, defence policy and manpower administration.

MINDEF is headed by a civilian Minister for Defence, who is frequently assisted by a junior minister⁴¹ and an assortment of politicians, senior civil servants and top military officers. Permanent Secretaries, with the assistance of Deputy Secretaries, are responsible for the overall running of three functional groups – Defence Administration, Defence Technology and Defence Policy. In the official MINDEF staff leadership structure (less the SAF)⁴², there are only two military officers⁴³ out of a total of 11 members.⁴⁴



At a National Day Observance Ceremony: Minister for Defence Teo Chee Hean; Minister for Manpower and Second Minister for Defence Dr Ng Eng Hen; Permanent Secretary (Defence) Chiang Chie Foo; Chief of Defence Force LG Ng Yat Chung

The general administration of the SAF comes under the Armed Forces Council, which is presided over by the

Minister for Defence and comprises the Permanent Secretaries of MINDEF, the Chief of Defence Force and the three Service Chiefs. The highest decision – making authority on defence and security matters is however, decided upon by the Defence Council, which is chaired by the Prime Minister and comprises “a small number of senior cabinet members”.⁴⁵ Military Officers are not permanent members of this Council and are only called upon to attend in an advisory capacity. This clearly illustrates that while the top military leadership does play a key role in the workings of MINDEF, it is the civilian elites, not the military brass that make the highest level decisions.

The existing structural protocol, with an overwhelming majority of civilians (nine of eleven people) at the highest levels of decision making, might lead to the impression that military professionalism is being maximised, leading to civilian control. This is true in form at least, as the SAF is systemically subjugated to civilian rule (it is also reasonable to assume that Huntington’s three conditions for professionalism have been imbued in SAF personnel over the years). However, civilians do not only give broad policy direction and let the SAF decide upon the military end game. Civilians⁴⁶ happen to be directly in charge of key defence matters such as policy, manpower, and technology. This naturally limits the degrees of freedom the Armed Force itself has to manoeuvre on certain issues. So while civilian control indeed continues to be the norm, Huntington’s normative model of objective civilian control, where the military is autonomous, is certainly not the case in Singapore

To some degree, such an organisational structure might have fallen within Janowitz’s system of imposing various levels of civilian supervision on the armed forces. However, Janowitz’s context was a totally different one, based on the assumption that war had been altered so much that “armed forces had become more police-like than military”,⁴⁷ This certainly ceases to be the case in Singapore. Janowitz’s ideas are also based largely on the risk that these constabulary forces will start to accrue political power with time. This too, can hardly be used to describe the SAF, whose orientation since its inception has been one of apoliticism.

Evidently, the traditional paradigms of civilian control are not wholly applicable in the case of Singapore and the SAF. Indeed, Huntington has been criticised for portraying an overly adversarial relationship between civilian and military elements in society and Janowitz’s postulations are based on assumptions that do not apply to Singapore. Singapore’s differences lie in its unique birth circumstances and the early development of the SAF’s culture and organisational structure. They are also due in part to the phenomenon of social civil-military integration in Singapore - how structures and attitudes facilitate the interaction of the civilian and military communities, leading to greater understanding between the two.

- **Civil-Military Integration**

The concept of integration is important in the study of Singapore’s civil-military relations as it affects the kind of informal influence the SAF has on civilians and vice-versa. A major

player under this genre is the National Service (NS) system, which requires all males to serve up to two years in the SAF.⁴⁸

The NS system was basically set up to make up for a lack of manpower resource. Like Israel, Singapore is a small country that has to resort to conscription to raise a large enough standing army for its defence needs. NS blurs the line between military and civilian life, and to many Singaporeans, men in green uniforms have become ubiquitous with everyday life.

Where NS plays a role in civil-military relations is subtle yet powerful. Often one hears of young Singaporean men referring to NS as “the great equaliser”. This is because NS serves to integrate disparate social, ethnic, religious, language and cultural groups “through common experience of military training”.⁴⁹ While it is difficult to determine exactly how much impact the NS system has on the social fabric of Singapore, there is little doubt it has helped create a shared consciousness and identity amongst a good number of Singaporeans. It also brings about some commonality of experience and demystifies the SAF, reducing the social nexus that sometimes exists between soldiers and civilians in some other countries.

Another facet of Singapore that has the effect of integrating the military and society is that of the Total Defence concept. This is the crux of Singapore’s defence strategy, which calls for different segments of society to each play a part in defending the nation. There exist five pillars of defence in this concept

– psychological defence, economic defence, civil defence, social defence and military defence. Such a strategy ensures that the “business of defence is not monopolised by the military” and that the “conduct of national security rests firmly in the hands of the civilian government.”⁵⁰ This holistic approach to security effectively integrates military and civilian activities into one continuum.



This integration of the SAF goes all the way up to the highest levels of public leadership. Today, five cabinet ministers including the Prime Minister, and a number of permanent secretaries, deputy secretaries and senior government-linked company (GLC) executives are ex-SAF officers.⁵¹ Many of them are SAF Overseas Scholars, and have ostensibly been groomed for senior leadership since their younger days. While they officially serve in a civilian capacity, their extensive military experience would have given them a strong and positive understanding of the SAF, facilitating integration at the pinnacle of policy making.

Such is the state of civil-military integration in Singapore. It is a strong force that not only binds civilian

and military elites in the leadership structure, but also creates empathy and understanding in the social sphere. This closely approximates Rebecca Schiff's model of *concordance*, which highlights "dialogue, accommodation and shared values or objectives among the military, the political elites, or society". She deems that under such conditions, military intervention is unlikely. This certainly seems to be the case in Singapore, which achieves civilian control by basically striving to achieve concordance.

Conclusion

The civil-military paradigm in Singapore does not gel completely with some of Huntington's and Janowitz's classic postulations. Then again, Singapore as a state has debunked many western notions about government in its years of independence. The SAF is by all means subordinate to the state; yet, its subordination is almost taken for granted given its history. Of greater scholastic interest are the many layers of civil-military integration that take place in society. In many ways, tight civilian control at the top and NS have "civilianised" the military in Singapore. On the other hand, with more than 80% of the population being part-time soldiers, and a cadre of soldiers-turned-public service and industry leaders, perhaps a certain "militarisation" of the civilian population has taken place as well. Whatever the case, the concordance between the military, public service elites and society is what keeps the SAF compliant, and Singapore safe, in an otherwise tense world of civil-military relations. 

(Ed note: This essay was an Award winner of the 2004 CDF Essay Competition)

Endnotes

- 1 Singh, p22.
- 2 Deng, M.D., *Scholar Warrior – An Introduction to the Tao in Everyday Life* (New York Harper: HarperCollins Publications, 1990), p11.
- 3 D'Epiro, P.&M.D., *Pinkowish, Sprezzatura – 50 Ways Italian Genius Shaped The World*, (U.S.A.: Anchor Books, 2001), p201.
- 4 Huntington, S.P., *The Soldier and the State – The Theory and Politics of Civil Military Relations*, (Cambridge MA: Harvard University Press, 1957), p21.
- 5 Ibid., p30.
- 6 Ibid., p25.
- 7 Ibid., p27.
- 8 Ibid., p24.
- 9 Ibid., pp7-18. These qualities will be elaborated upon in the latter part of the essay.
- 10 Ibid., p30.
- 11 Ibid., p31.
- 12 Clausewitz, C.V., *On War*, (Middlesex: Penguin Books, 1968), p402.
- 13 Ibid., p405.
- 14 Huntington, S.P., *The Soldier and the State – The Theory and Politics of Civil Military Relations*, (Cambridge MA: Harvard University Press, 1957), p57.
- 15 Ibid., p8.
- 16 Ibid., p84.
- 17 Tan, T.Y., "Singapore – Civil-Military Fusion" in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia*, (U.S.A.: Stanford University Press, 2001), p276.
- 18 Ibid.
- 19 Ibid.
- 20 The Army's, Air Force's and Navy's advertising accounts are currently managed by Mandate International, DDB Worldwide and Saatchi & Saatchi respectively.
- 21 Huxley, T., *Defending the Lion City – The Armed Forces of Singapore*, (New South Wales: Allen & Unwin, 2000), p28.

- ²² Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p277.
- ²³ Singapore Budget Speech 2004, Singapore Ministry of Finance website: <http://www.mof.gov.sg/>.
- ²⁴ This was stated in a book review of Tim Huxley’s *Defending the Lion City – The Armed Forces of Singapore* in the September/October 2001 edition of Foreign Affairs. Eliot Cohen is the Director of the Strategic Studies Program at the Paul H. Nitze School of Advanced International Studies at John Hopkins University, U.S.A..
- ²⁵ Huxley, T., *Defending the Lion City – The Armed Forces of Singapore*, (New South Wales: Allen & Unwin, 2000), p249.
- ²⁶ Chan, H.C. “Singapore” in H.A. Zakaria & H. Crouch (eds), *Military-Civilian Relations in South-East Asia*, (Singapore: Oxford University Press, 1985), p136.
- ²⁷ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p277.
- ²⁸ Huxley, T., “The Political Role of The Singapore Armed Forces’ Officer Corps: Towards a Military-Administrative State?”, Strategic and Defence Studies Center, Working Paper No. 279, (Canberra, 1993), p229.
- ²⁹ Ibid.
- ³⁰ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p277.
- ³¹ Huntington, S.P., *The Soldier and the State – The Theory and Politics of Civil Military Relations*, (Cambridge MA: Harvard University Press, 1957), p86.
- ³² These will also be referred at as “authority” and “influence” respectively for reasons of simplicity.
- ³³ Koonings, K., & D. Kruijtit (eds), *Political Armies – the Military and Nation Building in the Age of Democracy*, (London: Zed Books, 2002), p20.
- ³⁴ Ibid., pp19-20.
- ³⁵ Huxley, T., *Defending the Lion City – The Armed Forces of Singapore*, (New South Wales: Allen & Unwin, 2000), p230.
- ³⁶ Huxley, T., “The Political Role of The Singapore Armed Forces’ Officer Corps: Towards a Military-Administrative State?”, Strategic and Defence Studies Center, Working Paper No. 279, (Canberra, 1993), p1.
- ³⁷ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p282.
- ³⁸ Ibid.
- ³⁹ Ibid.
- ⁴⁰ Chan, H.C. “Singapore” in H.A. Zakaria & H. Crouch (eds), *Military-Civilian Relations in South-East Asia*, (Singapore: Oxford University Press, 1985), p142.
- ⁴¹ The Minister for Defence is currently Teo Chee Hean and the Second Minister for Defence is Ng Eng Hen.
- ⁴² Organisational Structure of MINDEF, MINDEF website: <http://www.mindef.gov.sg>.
- ⁴³ They are currently Brigadier-Generals holding the appointments of Future Systems Architect and Director, Joint Operations and Planning Directorate.
- ⁴⁴ Incidentally, these two officers, based on today’s structure, also report to the Chief of Defence Force (CDF).
- ⁴⁵ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p283.
- ⁴⁶ The three Deputy Secretaries, namely.
- ⁴⁷ Betz, D.J. *Civil-Military Relations in Russia and Eastern Europe*, (New York NY: RoutledgeCurzon, 2004), p9.
- ⁴⁸ A small number perform NS in the Police and the Civil Defence Forces.
- ⁴⁹ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.A.: Stanford University Press, 2001), p287.
- ⁵⁰ Ibid., pp286-287.
- ⁵¹ The trend of senior SAF officers assuming positions of leadership in politics, the civil service and Government-linked companies has been well-known since the early 1980s. In 1982 for instance, BG Tan Chin Tiong,

then the second-highest ranking SAF officer, retired and became Permanent Secretary in the Ministry of Home Affairs.

⁵² Singh, p43.

⁵³ Tan, T.Y., “Singapore – Civil-Military Fusion” in M. Alagappan *Coercion and Governance – The Declining Political Role of the Military in Asia.*, (U.S.Á.: Stanford University Press, 2001), p293.



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The Vietnam War From The Communist Perspective

by Dr Ang Cheng Guan

The literature on the Vietnam War in the English Language is voluminous and continues to grow. The writings have however focused predominantly on the decisions of the U.S. and its role in the war. Scholarly writings that present the communist perspective(s) of the war are scanty by comparison. But just as the history of a game of chess cannot be fully documented by only recording the moves of one of the players, similarly, any study of the Vietnam War would not be complete without examining the moves of all the players involved.

Therefore, to gain a more balanced and impartial understanding of the Vietnam War, it is imperative that the communist side of the war be documented and described as carefully and as objectively as possible. Only when this task has been satisfactorily accomplished can one proceed to the next step, which is to appraise and evaluate the actions, successes and failures of one side or the other. Too many premature judgements have been passed on American decision-making and conduct of the war without having given adequate consideration to understanding how the war was actually perceived and conducted on the communist side.

This short essay thus tries to reconstruct the evolution of decision-making on the communist side of the Vietnam War from 1954 to April 1975 when the war finally ended, to show the progression of the Vietnamese communists' struggle from one that was essentially political in nature, to a full-scale war and to its eventual victory. In describing the Vietnam War from the communist perspective, and in order to gain a complete and true picture of the war, one must not focus only on the role of the North Vietnamese, but also consider the other players and events in the arena, namely, the roles of the South Vietnamese communists, the developments in Cambodia and Laos, as well as the decisions and influences of the two principal communist patrons – Beijing and Moscow – with regards to the war. From the beginning, it was an Indochina War rather than just a Vietnam War. If Cambodia seemed to be rather peripheral in the early years of the war, it was because of Sihanouk's political acumen, and even more so the decisions of both Hanoi and Beijing to cultivate him, although not necessarily for the same reasons. As for Laos, it was definitely of strategic importance to both North Vietnam and China, but for reasons that again were different for Hanoi and for Beijing. All of them

are integral to our understanding of the Vietnam War from the communist perspective. On the basis of old and new Vietnamese language sources as well as recently available primary and secondary materials on the Vietnam War, this essay hopes to integrate all these perspectives into one narrative with the Vietnamese communists holding centre-stage.



Whereas most US-centric accounts of the Vietnam War begin in 1965, the Vietnamese communists begin their story in July 1954. To them, July 1954 marked the beginning of a new phase in the Vietnamese struggle for the reunification of the country. Even as talks were going on in Geneva (8 May-21 July 1954) to find a negotiated settlement to the on-going war against the French, the Vietnamese communist leadership at the 6th Plenary session of

the Lao Dong Party Central Committee (15-18 July 1954) had already concluded that North and South Vietnam could not be peacefully reunified and that they must immediately prepare for an eventual military confrontation with the U.S., which had “the greatest economic potential and the most powerful armed forces amongst the imperialist powers.” But they hoped that the inevitable could be delayed as long as possible till they had rebuilt their war-torn economy and the rag-tag Vietnamese People’s Army (VPA) had been transformed into a modern and regular revolutionary force.

By 1956 when it was obvious (though not unexpected) that there would not be an election to reunify the country as specified in the 21 July 1954 Geneva Agreement, a “debate” started within the Vietnamese communist leadership on the best strategy to achieve the goal of reunification. This “debate” continued right into the late ‘60s. While the goal of reunification was shared by all, the differences regarding the pace to achieve that goal was a recurrent issue of contention throughout. In the beginning and for a brief period until 1957, there was a consensus at the highest level that the top priority ought to be the rebuilding of North Vietnam’s shattered economy and modernising the VPA. Towards the end of 1957, however, the communists in South Vietnam were beginning to feel the heat of Ngo Dinh Diem’s actions against them. Although the first indication of a change of mind by the Hanoi leadership could be detected in December 1957, up till March 1958, a military campaign to achieve reunification was still considered neither feasible nor achievable, a view

that was also shared by the Russians and Chinese.

By mid-1958, Diem's renewed efforts to exterminate the communists in South Vietnam, which culminated in the passing of Law 10/59 (6 May 1959), was fatally damaging the communist revolutionary struggle in the South. According to a Vietnamese communist source, at the end of 1958 and in early 1959, Diem's policy of terror in the South had reached its height.¹ This period has been described as the "blackest, most hopeless years for the people in South Vietnam".² Hanoi understood that it could no longer continue to advocate restraint without losing the control and allegiance of the Southern communists as well as the reunification struggle to Diem who had the support of the United States.

It was against the above background that the difficult decision to renew the military struggle in the South was reluctantly taken at the landmark 15th Plenary Session of the Lao Dong Party held in January 1959. The decision was however not publicised till a week after the promulgation of Law 10/59 in May. Soon after the communiqué was issued, work on the Ho Chi Minh Trail (much of which were in Laotian territory) began. Even then, when the January 1959 decision was finally translated into action from September 1960 in South Vietnam, the political struggle still took precedence. The armed struggle was meant to support and not replace the political struggle as was made clear in the 13 January 1961 directive issued by the Lao Dong Party. This was so because the North,

specifically the military, was still far from ready to manage an expansion of the war. Moscow and Beijing – Hanoi's principal sponsors – were lukewarm to the decision to reactivate the armed struggle. Also, during this time, developments in Laos, which were not necessarily within the control of Hanoi, (or Moscow or Beijing) but which impinge on the situation in Vietnam, consumed much of the Vietnamese communists' energy and attention in 1960, 1961 up to mid-1962. The Protocol and the Declaration of Neutrality of Laos were finally signed on 23 July in Geneva, finally bringing the International Conference on the Settlement of the Laotian Question (which began on 16 May 1961) to an end. After being overshadowed by Laos for almost two years, South Vietnam returned to the forefront as the former moved out of centre-stage.

The unexpected death of Ngo Dinh Diem in November 1963 led to the next landmark decision taken at the 9th Plenary Session of the Lao Dong Party in November/December 1963. Having considered the new developments in the South, the Hanoi leadership calculated that the Americans would now move into South Vietnam sooner than later given the political uncertainties there following the death of Diem. The communist decision to further escalate the military struggle was therefore to pre-empt the Americans and to gain as much strategic advantage as possible before the anticipated direct American intervention in the fighting. The decision of the 9th Plenary Session can be viewed as a shift of gears in line with the policy adopted at the 15th Plenary Session in 1959.

According to most of the American intelligence reports, from about August 1963, the combat capability of the southern communists had been improving and they had scored a fair amount of successes. In a 13 December 1963 memorandum, it was reported that the South Vietnamese government had been unable to materially reduce the strength of the communists in spite of the increased number of non-communist offensive operations.³

The death of Diem and the subsequent Gulf of Tonkin incident in August 1964 (like the promulgation of Law 10/59 in May 1959) inadvertently strengthened the voice of the pro-escalation camp. But the decision of the 9th Plenary Session did not mean that the Vietnamese communists had thrown all caution to the wind. Indeed, if one were to study the events following both the 1959 and 1963 decisions, one would find that the Hanoi leadership was extremely hesitant and cautious about the military struggle. Within the leadership, there were those who continued to advocate caution arguing that the targets set out in the 2nd Five-Year Military Plan (1961-1965) had yet to be fully achieved. Compounding that, the North was also experiencing its worst drought since 1954.⁴

In short, while the objective of the Vietnamese communists was to try to win the reunification struggle before the Americans intervened directly in the war, Hanoi also did not wish to give the U.S. a pretext to attack North Vietnam. The escalation of the military struggle therefore needed to be handled very adroitly. This came across most clearly in a conversation of both Pham Van

Dong and Hoang Van Hoan with Mao Zedong on 5 October 1964. According to Dong, Hanoi would try to confine the war within the sphere of a special war, and would try to defeat the enemy within that sphere. It would try not to let the Americans turn the war into a limited war or expand it into North Vietnam.

In early 1965, the Vietnamese communists were still not confident of being able to confront the Americans in a “limited war”. They knew all along that they would never be able to defeat ‘the strongest in the world’ in a straight fight. The strategy was therefore to force the Americans to withdraw through negotiations. In the view of the Hanoi leadership, this was only achievable when they could defeat the U.S. air war, exhaust the U.S. troops in the South and weaken the will of the American politicians and soldiers.⁵ American troops eventually landed on Danang in March 1965. On hindsight, that event perhaps marked the beginning of American direct military intervention in the reunification struggle, which the Vietnamese communists had predicted in 1954 and had hitherto been trying to delay from happening.

This is perhaps the appropriate point to briefly mention that even while the fighting was going on, there were quite a number of behind-the-scene attempts to arrange secret talks between the two sides during this period, for example, “Marigold”, “Sunflower” and “Pennsylvania”. The various secret negotiations should also be understood in the context of the military struggle. The Vietnamese communists understood very early on that it was not possible to

achieve on the diplomatic table that which they could not obtain on the battlefield. Regarding negotiations, Mao commented that the North Vietnamese had “earned the qualification to negotiate”. However, it is another matter whether or not the negotiation would succeed. Zhou reminded his audience that Beijing had been talking to the U.S. for nine years and there had been more than 120 meetings and the Sino-American ambassadorial talks were still continuing in Warsaw.⁶ We now know that Vietnamese communists were never really prepared to negotiate before end-January 1968, insisting that the Americans must first capitulate. After numerous futile attempts to bring both sides to talk, both the U.S. and North Vietnamese representatives finally met face-to-face in Paris on 13 May 1968. The breakthrough came only when both sides, in their own ways, suffered significant defeats at the 1968 Tet Offensive – the U.S. politically and the Vietnamese communists militarily.

From 1965 to 1967, the war was fought to a stalemate. A stalemate was not good for the communist side because a protracted war, presuming the Americans had the patience, would only lead to a communist defeat. Hanoi therefore had to find ways to break that stalemate and in the spring of 1967, the Vietnamese communist leadership endorsed the plan for the “General Offensive General Uprising” (or more popularly known as the *Tet Offensive*), which was launched on the Vietnamese New Year or Tet on 31 January 1968.⁷

The “General Offensive General Uprising” failed to achieve the objectives spelt out by Le Duan in his letter of 18

January 1968. The heavy casualties suffered by the communists during the Tet Offensive compelled the Hanoi leadership to re-examine its strategy and this led to the resumption of the “debate” between the “escalation camp” and the “protracted war camp” within the Vietnamese communist leadership. An added dimension that had to be considered in 1968 was the question of whether it was then the appropriate time to negotiate with the enemy.

Intertwined into the above was the broader debate within the communist bloc between the Soviet strategy of peaceful coexistence (read: no fighting, negotiation) and the Chinese strategy of supporting national liberation struggles in the colonial countries (read: protracted struggle, no negotiation). Although the Vietnamese communists refrained from talking openly about the widening Sino-Soviet rift in public, they were acutely concerned about its negative impact on their struggle. The significance of both Russian and Chinese moral and material support to the Vietnamese communist national liberation struggle is well-known. It was impossible for Hanoi to stand apart, much as they wanted to, from the Sino-Soviet rivalry that had been brewing since 1956 and which worsened as the years went by. Those such as Vo Nguyen Giap, Hoang Minh Chinh and Nguyen Kien Giang who advocated a more cautious pace were crudely labelled as ‘pro-Soviet’ while Le Duan and others who shared his view on speeding up the struggle became known as ‘pro-China’.⁸ (It is perhaps worth noting that Le Duan was later re-labelled as ‘pro-Soviet’.) Le Duan, in fact had played a moderating role in debate over the pace of the reunification

struggle from 1956 till November 1963 before becoming more 'hawkish' (than the Chinese would have liked) after the death of Diem and particularly after the Gulf of Tonkin incident. Ho Chi Minh was the only Vietnamese leader who had the stature and the willingness to mediate between the two communist giants. But Ho's health was declining from 1964 and he no longer oversaw the day-to-day decisions, which were gradually being made by Le Duan and his associates.



Ho Chi Minh

Some brief remarks on the historiography of the Vietnam War may be useful here before we continue with our narrative. Although the literature of the Vietnam War in the English language is massive, in most of the accounts of the war, the substantial part of the story ends soon after either the Tet Offensive in 1968, or when the Paris Peace Agreement was finally signed in January 1973. The accounts of the seven-year period following the Tet 1968, or the two years after January 1973 are usually skimpy. One scholar noted that out of the 760 pages in the best-selling *Vietnam: A History* by Stanley Karnow,

the period after March 1968 was told in just 180 pages. This is just one notable example. The tendency to begin the story of the Vietnam War from 1965 and to end it in 1968 or 1973 reflects a very US-centric understanding of the war.

In the last few years, a handful of accounts spanning the years 1968 to 1973 have been published and they are based mainly on newly available U.S. sources of the Nixon administration as well as on some Vietnamese communist sources. Most notable of these include Jeffrey Kimball's *Nixon's Vietnam War* (1998); Lewis Sorley's *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam* (1999); Larry Berman's *No Peace, No Honor: Nixon, Kissinger, and Betrayal in Vietnam* (2001); and most recently, Pierre Asselin's *A Bitter Peace: Washington, Hanoi, and the Making of the Paris Agreement* (2002). These scholarly and pioneering accounts have undoubtedly contributed to redressing an imbalance in the narratives of the war. However, their focus is primarily on American decision-making, even on occasions when the spotlight was trained on the Vietnamese communists as evident in the accounts of Sorley and Asselin. But even in their accounts, the period after the signing of the Paris Peace Agreement to the end of April 1975 (that is, the period after the U.S. troops have left Vietnam) received scant treatment. Looking ahead, as researchers continue to tap the more readily available non-communist sources, we can expect to see more publications and analyses of the Vietnam War from the non-communist perspective and especially on the decision-making processes during the Nixon administration.

Hanoi's decision between late March and early April 1968 to accept President Johnson's proposal to negotiate an end to the Vietnam War is an important turning point of the war. The communist decision to negotiate was not unanimous. But having agreed to negotiations, the Vietnamese communists had to quickly achieve some tangible military victory to bolster its negotiating position. The first round of the Tet Offensive had failed militarily although it led to President Johnson's decision not to run for the forthcoming U.S. presidential election. The failure explains the controversial decisions to launch a second and then a third round of military offensives that lasted till the end of September 1968, all of which failed to achieve the illusive victory that the communists so badly needed. Not surprisingly, the Vietnamese communists dragged their feet over the pre-conditions and modalities for the peace talks. The Vietnamese communist leadership had evidently not thought through the whole issue of negotiations and this explained their capriciousness in forwarding instructions to the negotiating team in Paris. After almost eight months of wrangling, the Four-Party talks finally convened in Paris in January 1969 but they were mainly for the public eye, the real negotiations took place in private between Le Duc Tho and Averell Harriman (who after 20 January 1969 was succeeded by Cabot Lodge).

Meanwhile, the quest for the much-needed military victory continued without any tangible results. On 2 September 1969, Ho Chi Minh passed away a disappointed man. The reunification of the country was nowhere in sight and the relationship of Hanoi's

two patrons – China and the Soviet Union - was at a nadir. Significantly, Ho's untimely death did not lead to a power struggle in North Vietnam. Neither did it break the resolve of the Vietnamese communists. In the immediate months after Ho's passing, there was also a noticeable improvement in Sino-Vietnamese relations initiated by the Chinese side. Sino-Vietnamese relation had deteriorated because of Beijing's disapproval with the strategy adopted in the Tet Offensive and also because of its unhappiness over Hanoi's reluctance to take the Chinese side in the on-going Sino-Soviet dispute. Nixon's ploys – his threat to unleash a massive mining and bombing operation on North Vietnam (Operation Duck Hook) as well as his activation of a secret nuclear alert to threaten the Soviet Union in October 1969 into pressuring the Vietnamese communists to negotiate – failed to unnerve communists.⁹

While the Paris talks were going on, the Hanoi leadership at the 18th Party Central Committee meeting calculated that the military struggle was becoming an increasingly critical factor to bringing the Vietnam War to a conclusion. The communist leaders anticipated correctly that the fighting in Laos would soon spill over into Cambodia. On 18 March 1970, Sihanouk was ousted in a coup, which might not have been directly instigated by the U.S., but, as George Kahin recalled, the perception was that Lon Nol and Sri Matak could not have made a number of moves without "backup assurances from the United States".¹⁰ Declassified transcripts of the 1970-1971 conversations between Zhou Enlai and Henry Kissinger showed that the Zhou believed that the CIA had

a role in the deposition of Sihanouk. The coup essentially derailed the Paris talks, further expanded the war and brought about an uneasy coalition of the communist parties of the three Indochinese countries.

The relations between the Vietnamese and Cambodian communists were particularly troublesome and unstable. The attention of the Vietnamese communists in those months was not focused on the Paris talks but on how to exploit the 1970-1971 dry season to achieve a military advantage. After the 27 September 1970 private meeting between Xuan Thuy and Henry Kissinger, despite the many requests from the U.S. side for another meeting, both parties did not meet again till 31 May 1971.

During the eight-month hiatus, the communists conducted their 1970-1971 dry season military campaigns. Although they were reasonably successful, they were not resounding enough to serve as leverage at the negotiations. Vietnamese communists' relations with Pol Pot and the Khmer Rouge continued to deteriorate. There were also tell-tale signs that Sino-U.S. relation was thawing. All these could possibly explain Hanoi's decision to resume the secret talks the end of May 1971 even though they did not expect any immediate breakthrough.

On 9 July 1971, Henry Kissinger made his secret visit to Beijing. He left Beijing on 11 July and met Le Duc Tho the next day. The day after, on 13 July, Kissinger's recent visit to Beijing was officially broadcasted worldwide. Believing that Beijing and Washington

was in collusion to pressure Hanoi to concede in Paris, the knee-jerk reaction of the Vietnamese communists was to appear even more intransigent. Another natural response of the Hanoi leadership was to turn to the Soviet Union to counter-balance China but only to learn that Nixon would soon be visiting Moscow. This was clearly a very difficult period for the Vietnamese communists and there was a lot of soul searching on what should be their new game plan in light of all these developments. A decision was only reached between the end of June and early July 1972. Meanwhile, Nixon's landmark visit to China in February 1972 marked the high point of Sino-U.S. rapprochement. The Vietnamese communists continued to search for the "decisive victory" and began military planning for the 1972 military offensive (Easter Offensive).

At the end of June 1972, four years after the Hanoi leadership agreed to negotiations in April 1968, they finally decided to shift "from a strategy of war to a strategy of peace". This is a significant turning point. On 21 September 1972, Hanoi instructed their negotiators in Paris to make an all-out effort to obtain a peace agreement before November 1972, (that is, before the U.S. presidential election). They almost managed to achieve that goal. Indeed, when Le Duc Tho and Kissinger met in early October 1972, they both agreed on a timetable leading to the signing of the peace agreement on either 30 or 31 October 1972. But at the last moment, Nixon decided to launch the controversial Linebacker II (Christmas bombings). This led to another two-month delay. Both Moscow and Beijing publicly condemned the

bombings and reaffirmed their support for Hanoi. But in private, the Russians persuaded the Vietnamese communist leadership to continue to negotiate and to see workable compromises. The Chinese were also of the view that the prospect for an agreement was reasonably good and that Hanoi should go ahead to reach a settlement. Negotiations eventually resumed on 8 January 1973 and the Paris Peace Agreement was finally signed on 27 January 1973. Throughout the duration of the negotiations, the Hanoi leadership was determined that there would not be a repeat of Geneva 1954.¹¹



Signing the 1973 Paris Peace Accords by the governments of N. Vietnam, S. Vietnam and U.S.

Henry Kissinger in his account of the peace negotiations recollected that both Nixon and he “had no illusions that Hanoi’s fanatical leaders had abandoned their lifetime struggle” and that he had warned Nixon in late-1972 that “Hanoi would press against the edges of any agreement and that the peace could only be preserved by constant vigilance”.¹² But nobody, not even the Vietnamese communists themselves expected that they would be able to reunify the country that soon after the Paris Peace Agreement. In his recently published memoir¹³, Robert Hopkins Miller recalled his visit to South Vietnam, Cambodia and Laos

in October 1974 in his capacity as the officer in charge of those three countries in the State Department’s Bureau of East Asian and Pacific Affairs. He left with the impression that the situation in Cambodia was fast deteriorating, “on the ragged edge” and that “if friendly forces were deprived of ammunition, they could not survive for long”. In contrast, he found that Laos “resembled nothing so much as a peaceful, mythical kingdom of the mysterious East”. The Neo Lao Hak Xat (NLHX) and the Royal Laotian Government had signed the Vientiane Agreement on Restoring Peace and Achieving National Concord on 21 February 1973, about a month after the Paris Peace Agreement was signed.¹⁵ As for the situation in South Vietnam, Miller reported that it “appeared to be salvageable” and “tenable even though some territory was likely to be lost to Hanoi’s forces in the anticipated spring offensive of 1975”. Indeed, the Hanoi leadership had initially projected that the struggle would continue till 1976-1977 and no specific date was set for reunification. It was only around July 1974 that a decision was taken to aim for a victory in 1975-1976. Tran Van Tra, then commander of the B2 Front, recalled that it was not easy to reach that decision and that there were long debates over the communists’ strengths and weaknesses vis-à-vis the South Vietnamese military (which were still being supplied by the U.S.). By December 1974, the general sense was that the U.S. was unlikely to re-intervene in the Vietnam War. Nixon had resigned four months earlier on 9 August 1974 and the U.S. House of Representatives had also in that month slashed U.S. military aid to South Vietnam. Still, most were only cautiously optimistic of an early victory.

When the communists 1974-1975 dry season offensive began with the Tay Nguyen campaign on 4 March 1975, no one, not even the most optimistic, (and neither did the Russians nor the Chinese), expected the Saigon administration to capitulate so easily within two months. In fact, the Hanoi leadership only gave the green light to attack Saigon on 22 April 1975. Saigon fell on 30 April 1975 marking the end of the Vietnam War. 🇻🇳

Endnotes

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- 12 Henry Kissinger, *Ending the Vietnam War: A History of America’s Involvement in and Extrication from the Vietnam War*, (New York: Simon & Schuster, 2003), p456.
- 13 Robert Hopkins Miller, *Vietnam and beyond: A Diplomat’s Cold War Education* (Lubbock: Texas Tech University Press, 2002), pp143-144, 148-149.
- 14 To assert their independence from the Vietnamese communists, the Khmer Rouge deliberately took control of Phnom Penh on 17 April 1975 while the fighting in South Vietnam was still going on.
- 15 In contrast to the Khmer Rouge, the Pathet Lao only took full control of Laos on 2 December 1975.



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C2 Team Collaboration Experiment (TCX)

A Joint Research by Sweden and Singapore on
Teams in a CPoF Environment

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“A well written paper. It has won the Best Paper (Experimentation Track) Award at the 10th International Command and Control Research and Technology Symposium (ICCRTS), 2005. I can only fault the experiment for not having a ‘control team’ that is subjected to the traditional regime of the SAF battle procedures for comparison.

A more theoretical counter-point about the experiment is that given today’s fast tempo of operations, will any team subject itself strictly to the serial regime of the ‘traditional SAF battle procedures’? With or without models and tools like MissionMate, I think a good team will try to de-serialise the processes to try and improve the speed of coming up with the plans and the quality of the plans. This is only natural and the paper constantly emphasized that this is a naturalistic process. Therefore it begs the question of whether it is the models and tools driving the improvements, or the quest for speed and quality in planning that is pushing for better collaborative tools and knowledge sharing methodologies.” – Teo Chin Hock, Director (C4IT Services), DSTA

Abstract

Key questions that the Swedish and Singapore Armed Forces are grappling with as we enter the Net-Centric age are: “how should command teams best collaborate to achieve effective results?” and “how can teams be continuously creative so as to constantly surprise and out-smart adversaries?”. A model that enables these outcomes must deal with the realism of war, characterised by uncertainty, time-pressure, high

complexity and dynamics. It must also encourage greater insight and creativity amongst the command team members so that the plans they design will outwit the enemy. To this end, the Team Insight Model (TIM) was developed, adopting Sweden’s Planning Under Time-pressure (PUT) Model¹, together with SCME’s technology development (in the form of MissionMate) and studies into Team Insights. The belief is that TIM will bring about better tempo, situation awareness, plan and

preparedness for the team, resulting in better decisions and outcomes.

The Team Collaboration Experiment was conducted in March 2005 as a testbed for applying TIM at Battalion Command Post level (interacting with a Brigade). This article will explain the theoretical basis of TIM, the method by which the experiment was carried out, as well as results and discussion on the outcomes from TCX.

Introduction

The progressive move to a technology-enabled military in the new century has a significant influence on the way C2 processes are carried out in the tactical command post. This study looks at a newly developed planning and execution process for the Army.

Boyd's OODA (Observe-Orient-Decide-Act) loop² provides a theoretical foundation on C2 operations. To outwit the enemy, one should work inside the enemy's OODA loop to render his planned actions ineffective, surprise him, and ultimately cause his cycle to collapse. Specifically, this means to augment planning processes and C2 information systems to enable an increase in the speed of decision-making, as well as better and more creative plans and decisions. Speed as an important enabler to decisive operations in war has been emphasised by Clausewitz³, Liddel Hart⁴ and more recently Lind⁵ and Van Creveld.⁶ Modern army regulations (e.g., U.S. Army⁷ and the Swedish Armed Forces⁸) are also in line with this.

Creativity in planning could provide an additional advantage in exploiting

terrain and resources to upset the enemy's plans, i.e., breaking up his OODA cycle. While most literature on warfare does not talk about creativity or insight generation, it is common to find expositions on developing surprises⁹ for military problem solving. In our Network-Centric era, exploiting distributed collaboration technologies for the purpose of information and ideas exchange can lead to successful planning processes to "out-OODA" the enemy. To this end, the Team Insight Model (TIM) is a theoretical model developed to address planning methodologies and C2 system design to achieve better decision speed and plans – resulting in winning Command Teams.

- **Planning Under Time-Pressure (PUT) Model**

With modern doctrines emphasizing speed, there should be an impetus to develop better doctrinal planning methodologies over current ones^{10 11 12 13} that are largely based on a decision outcome optimization rationale, with little emphasis on speed.

Recent research on military planning and decision making indicates that traditional planning models are seldom followed in field settings^{14 15 16 17} especially under time pressure. Instead of trying to find an optimal solution, the military decision maker often adopts a satisficing approach i.e., develops a "good-enough" solution or plan based on previous experience and understanding of the situation^{19 20 21 22 23}.

Empirical studies on military planning and decision-making^{24 25 26} concluded that there was a need for a military

decision-making model that, compared to the traditional models, (1) is faster in order to deal with time-pressure; (2) involves the commander more since the commander typically could come up with a better and faster solution than his staff; (3) involves a small group of experienced planners to develop the initial concept of operations; (4) allows for a more natural problem solving strategy^{27 28} with iterations between the sub-steps of the planning process; (5) uses wargaming as a means for visualizing the battle and communicate intent; and (6) reduces the need for transitions between teams of planners and executors, hence preserving plan intent. This gave rise to the Recognition Primed Model²⁹ (RPM) of decision-making.

Thunholm^{30 31}, building on the RPM, presented the Planning Under Time-pressure model (PUT), intended for use at the tactical level in a battlefield environment characterized by uncertainty, time-pressure, high complexity and dynamics. PUT is focused not only on decision speed but applies a cost-benefit perspective to the military planning process i.e., including only planning events crucial to the quality of the decision³². It is based on a satisficing rationale as described above.

The different stages of the PUT process are as follows³³:

1. Understand and visualize the mission given by higher headquarters.
2. Understand both current and predicted situation, including generation of simple (less time-

consuming) options for enemy and own forces. No selection of one option should be made at this stage.

3. Define situation-specific success criteria to be part of the final plan.
4. Develop one plan based on the above three stages.
5. Wargame plan against one or more possible enemy plans.
6. Make a formal decision. Develop and issue operational orders, and concurrently make contingency orders to speed up Execution phase.

Testing with the PUT model indicated significantly quicker decisions without loss of decision quality, lower perception of time-pressure and high usability ratings in realistic battlefield conditions. It was introduced in the Swedish Armed Forces as the tactical planning model in 2003.

• Team Insight

An area not often studied in the area of military decision-making is the area of insight generation by command teams. Insight can be defined either as a state of understanding – understanding a principle, a concept, a problem etc.³⁴, or as a phenomenological experience involving sudden emergence of an idea.

There are two types of insight³⁵. *Convergent insight* refers to the discovery of a creative structure or solution derived from making sense of an apparently disconnected set of facts, while *Divergent insight* refers to generation of ideas based on a pre-defined structure and the

discovery of novel use and implications from this starting structure.

Network-Centric capabilities support rich collaboration involving high throughput of ideas and knowledge exchange, increasing overall planning speed and ideation (insight generation) through diversity of views³⁶.

- **Team Collaboration Experiment 1 (TCX 1)**

The purpose of this study was to explore the Team Insight Model (TIM). TIM is a combination of a naturalistic planning and decision-making model called the Knowledge Battle Procedure (KBP) (inspired by PUT) and a C2 System for distributed planning called MissionMate (MM). These will be described in detail in the Methods section.

TCX 1 is the first study in a series carried out as part of the overall Swedish Armed Forces (SwAF) and Singapore Armed Forces (SAF) collaboration framework. Given the exploratory purpose of TCX 1, no formal hypotheses were formed. However, some expectations are connected to the use of TIM. First, a higher overall planning tempo throughout the chain of command is expected. This is based on parallel planning supported by the collaborative MissionMate platform, and also the use of a naturalistic planning procedure. Second, there is an expectation of higher overall plan and execution quality, as a result of increased shared situation awareness and better understanding of higher commander's intent through the use of MissionMate. Given

more channels to discuss and share information, better insights and creative solutions are expected to be generated. Third, it is postulated that TIM will be regarded as a good model for battle planning and execution under realistic battlefield conditions, given that KBP is a naturalistic process.

Method

- **Participants**

Participants were the Battalion Commanding Officer (CO) and Principal Staff Officers (PSOs) of the 40th Singapore Armoured Regiment (40 SAR), comprising S1, S2, S3, S4, Fire Support Officer (FSO), Bn Signal Officer (BSO) and Pioneer Officer (N = 8). As a team, the Battalion was generally young and had only been working together for a couple of weeks. This suggests possibly that participants should be less influenced by the current SAF Battle Procedure (BP) and hence more open to adopt the new KBP. On the other hand, inexperience of the participants with regard to battle planning could prevent them from contributing significantly to the process.

The superior Brigade Commander (Bde Comd) and staff were played by the actual Comd 8 SAB and staff officers organised as a White Cell (Scenario High Control).

- **Design**

The study was designed to explore the effects of the TIM on four variables: (a) team creativity; (b) decision quality; (c) decision tempo; and (d) planning and execution process.

The study design included a formal training session on the TIM, an applied scenario-based training session of planning and execution, and finally, one test-session (planning and execution of plan). Each session lasted 1.5 days.

- **Scenario**

The chosen scenario was realistic as it was a variation of one used in an earlier exercise. It was designed to enforce re-planning through a chain of injects given during the execution.

The task of the subjects was to follow the KBP in order to produce a Battalion operational order (OpsO) based on Brigade Orders. The time restriction of the KBP was 4 hours – to produce the order after receiving final Brigade Operations Orders.

- **MissionMate System**

The SAF Centre for Combat Military Experimentation, together with Defence Science and Technology Agency (DSTA), had recently developed a C2 system called MissionMate³⁷ that was used in a distributed Brigade Command Post at Ex Wallaby 04^{38,39}. Within MissionMate, the key applications used to enable TCX were the Team Operating Picture (TOP⁴⁰) and the Ecology Spaces. Specifically for TIM, each staff member constructed their personal operational and planning pictures. By having separate operational pictures for each staff, the total number of operational pictures gave rise to greater amount of information that could be visually seen, and facilitated collaboration on the situational constructs of others within the team.

Another collaborative tool within TOP was the Ecology Space⁴¹. The Ecology Space was used to track the development of the plans being formed throughout the entire battle procedure, for approval of plans with the higher command as well as for dissemination of orders to the lower echelon.

- **The Knowledge Battle Procedure (KBP)**

Capitalising on the MissionMate system and inspiration from PUT, SCME put together a knowledge battle procedure (KBP) in late 2004 that prescribes the ability to conduct distributed and parallel planning with higher and lower echelon of commands. The KBP is a step away from the current analytical and sequential SAF Battle Procedure. It consists of five stages:

1. Preliminary planning stage.
2. Receipt of orders.
3. Mission analysis.
4. Develop plan and wargaming, and
5. Operationalisation of plan.

During the preliminary planning stage, the lower echelon was able to listen and interact with the echelon planning the operations through MissionMate. While it was prescribed to only conduct terrain and enemy study of the area of operations, it did not preclude the lower echelon commander from moving on and conducting his preliminary mission analysis and preliminary plans since TeamSight readily facilitated parallel planning. Once orders were given, KBP prescribed only two meetings for the command team: the mission analysis stage and the wargaming

stage. Throughout battle planning, time was given for staff interaction through the MissionMate system, with ideas being captured in the ecology space to provide a history of how plans were conceptualised and formed.

Like the RPM and PUT, it prescribed early choice of one course of action (COA) at the mission analysis stage, but did not restrict the development of several choices of enemy COAs. KBP allowed the commander and his team to initially conceptualise several plans and COAs prior to higher echelon orders. Orders were not given verbally, but found in the ecology spaces. This enabled the command team to confirm their mutual and common understanding in the preliminary planning stages prior to clarifying with the higher echelon. The KBP was able to prescribe a detailed mission analysis stage where the command team could deliberate their preliminary ideas and concepts and conduct a pre-mortem (vulnerability analysis) before choosing the most appropriate one for plan development.

Unlike the SAF BP in which support plans are developed after the OCA or presentation of Ops Plans, KBP provided for all plans to develop concurrently through MissionMate. At the Battalion level, the KBP did not predict any time savings in the current 4-hour cycle. However at the brigade level, an overall savings of four hours in planning time was predicted – eight hours down from twelve.

- **Measures**

The variables were measured using a battery of observer protocols and

questionnaires. Two of the military observers came from Singapore and three from Sweden, while all nine civilian observers were from SCME.

Background variables

Before the training run, the participants answered a questionnaire on their personal background, such as age, sex, branch, military specialty, job and task experience as an officer, how long since last planning process at Battalion level, and the total number of planning processes the participant had been involved in.

Confounding variables

Two major confounding variables were measured during the exercise. One of them was *realism of scenario*. All military observers and key personnel (Bn COs and PSOs) answered questions after each run in order to determine the degree to which the participants believed that the scenario was realistic in every important aspect. The other was *system failure*. In order to detect if there were any major system failures during the exercise, they were asked questions on system performance after each run.

Dependent variables

- *Team Creativity*. Team creativity was measured and analysed as the combined profile of four subcategories:

- a. *Communicated ideas*. Frequency of generated ideas within the Battalion staff and between Battalion and Brigade, as compared to normal and whether they found the number of ideas satisfactory.

b. *Number of communicated ideas by each staff member.*

c. *Openness.* Whether degree of openness within the staff was satisfactory, how the level compared to similar staff (observers) and their normal state of openness in similar situations.

d. *Dominance.* Measure of how much each staff member dominated the staff's work.

– *Decision quality.*

a. *Quality of critical decision and plan.* Each of the Battalion staff and the Bde Comd, S2 and S3 rated their perception of the mission planning results, as well as the production of a good OpsO in terms of tactical content, clarity and completeness.

b. *Situation awareness.* Situation awareness was measured as follows: at three points during Execution, Battalion and Brigade staff were asked to rank-order three recent injects on their threat to succeeding in the Battalion's task, and to briefly describe consequences from one defined inject. The Brigade also judged the level of correctness of the Battalion staffs' ranking. Lastly, communication activity in the form of "building shared understanding" and "clarification" was observed within Battalion and between Battalion and Brigade.

– *Decision tempo.*

Decision tempo was measured by timing and observer protocols. The timings taken were:

a. Time needed for Battalion to decide on a COA upon receipt of warning orders from the Brigade;

b. Time needed for the Battalion to proceed from decision on concept COA to ready plan for wargaming with Brigade; and

c. Time needed for the Battalion to issue complete OpsO to company commanders after receiving final OpsO from the Brigade.

– *Planning and execution process.*

Four military observers documented the staffs' performance and usage of the KBP, particularly if any deviations from the process occurred and discrepancies in the number of concept COAs generated. After the exercise, participants filled out a questionnaire each to evaluate their experience with the process.

Four civilian observers also focused on the communication activity within the Battalion staff and between Battalion, and Brigade staff, classified according to six categories listed below (see Results section). Three one-hour time windows were selected: Battalion Wargaming, Brigade-Battalion Wargaming and Execution Phase.

Finally, MissionMate was evaluated on how it helped participants achieve their mission in both planning and execution phases.

• **Procedure**

Preparations. The participants were prepared for the experiment through 1.5 days of formal integrated training on the KBP, MM and TS systems, and

applied training for another 1.5 days with a complete session of planning and execution.

Data collection. Each of the two runs (training and test) was divided into three data collection phases: (1) initial part of the planning until issue of Commander's Planning Guidance; (2) finalisation of plan; and (3) wargaming, and execution of mission. All observations were documented and voice communications were recorded. The participants were required to answer questionnaires at each phase of the experiment.

Results

• **Confounding Factors**

Descriptive statistics for four scenario realism variables (realism of the scenario, realistic amount of information provided, realistic amount of time provided for planning; and realistic level of uncertainty in the scenario indicated that both participants and observers found the scenario to be satisfactorily realistic (M between 3.7 – 4.2 on a six-step scale). The other confounding variable of system failure was found to exist in terms of hardware, software and network failures; however, these problems were resolved fairly quickly upon detection, with no major implications on the conduct of the experiment.

• **Decision quality**

Quality of critical decision and plan. The first measure concerned the quality of the final OpsO and the second measure concerned the participants' (subjective) perception of the quality of the plan. The items concerning tactical

content, clarity, and completeness of the final OpsO were answered both by participants and subject matter experts (SMEs) from the Brigade. SMEs rated the quality of plan higher than the staff members on all aspects of quality. The participants on average rated their plans to be of reasonable to good quality.

Team situation awareness. The degree of team situational awareness was studied by comparing discrepancies in injects ranking by staff members vs. SMEs. No significant effects were revealed, indicating an overall agreement on how threatening the injects were for the mission. A second analysis correlated SMEs' and staff members' ranking of injects. The result was strongly positive ($r_x=.78$) but not significant. A third analysis on how correct each staff member was (with SME ratings as the dependent measure) did not reveal any significant effects, with the SMEs' rating of staff members' comments as relatively high.

• **Planning process**

The data collected on the process by the four observers were qualitative data. The key observations were as follows:

1. For both runs, the Battalion staff did not follow the planning process to the letter. Given time pressure, the Battalion staff took the initiative to work in parallel with the Brigade planning by listening in to the Brigade's preliminary planning stage when commander's planning guidance was given. After understanding broad directions of the Brigade, the Battalion went

directly into its own preliminary planning, followed by mission analysis and development of several component plans around key terrain objectives until orders were issued by the Brigade.

2. Having achieved a headstart, the Battalion did not plug into the Brigade planning process much. Instead, most of the time was spent working on its own plan – the Bn CO only occasionally looked at the Bde S2’s planning through the TOP. Although much of the planning was completed before the issue of orders, the Battalion still used up the four hours of planning time allocated, and felt they had insufficient time for planning. The “additional time” was used by the Battalion to improve the plan, work on presentations, and system familiarization.

3. During the initial stages of planning, the key contributors of ideas were the more senior members of the Battalion – CO, S2 and S3. The more junior staff (S1, S4, Pioneer and FSO) contributed mainly within their areas of specialization. Discussion mainly focused on “solving the problem”, with very little time spent on ways to surprise the enemy (creativity and idea generation). This could be attributed to the fact that the Battalion felt there was insufficient time to develop a contingency plan. Any idea generation that took place was mainly convergent, rather than divergent, with the main method used being *Completing the schema* – i.e., systematic aggregation of available data and information to develop the idea.

4. A COA was developed sequentially with several component options within the frame of a “total” COA. Discussion by the Battalion staff was done on a SmartBoard electronic map displayed on a knowledge wall. A decision tree-like process was undertaken, whereby options were explored at each major decision point, with the CO having the final say at each juncture.

5. The MissionMate system was found to be adequate in supporting collaborative planning. TeamSight TOP was used most during the Detailed Planning phase, Wargaming with Brigade, as well as during the Final-Coord and Execution. This was consistent with the expectation that most interactions would take place during these phases. For example, the CO was observed to have looked at the S2’s picture and initiated a discussion through TeamSight to correct some of his plans. In addition to the ability to share situation awareness, the amount of communication and collaboration was also greater than previously possible, and participants commented they were able to work faster with each other.

- **Communication Patterns**

Communication patterns of the staff were observed during different phases of the process and classified according to: “exchange of ideas”; “dissemination of information”; “building shared understanding”; “team monitoring and self correction”. The patterns were captured in real time for several one-hour periods. Inter-rater agreement between the four observers was good

at $W = 0.761$ (Kendall's W coefficient of concordance, on a scale of 0-1.00).

The Wargaming phase was found to be dominated by “building shared understanding” (41% of communication activity) and “dissemination of information” (26%). While intended for testing the plan against the Enemy COA (ECA), it was found to be largely used by the commander to convey his intent to his staff. During the Execution stage, communication was mainly for coordination purposes, with the breakdown as follows: “dissemination of information” (30%), “building shared understanding” (36%) and “clarification” (21%).

Of note was the significantly smaller amount of communication dealing with “exchange of ideas” (4% and 5% respectively for Wargaming and Execution) and “team monitoring and self correction” (2% and 3% respectively). This confirmed the observation that very limited amount of idea generation occurred during the process, likely due to shortage of time and limited option space for Battalion operations. Another possible reason was the relative immaturity of the team.

It was noted that voice communications dropped significantly in the second run, compared to during training and normal communication levels of a Battalion staff. During the training run, most activities were coordinated by frequent voice communication between the participants. In the Planning phase of the second run, however, participants communicated only infrequently via voice or VC/VoIP, and during meetings. The same was true for the Execution

phase. Voice exchanges revolved largely around participants directing other staff members to relevant overlays, or for the CO and S3 to broadcast critical updates. Despite this, participants were able to maintain a high level of situation awareness. This may be attributed to the aid of the MissionMate system.

- **Planning and decision making tempo**

As highlighted earlier, the Battalion did not follow the planning process precisely. Part of Battalion level Mission Analysis (Step 3) and Develop a Plan (Step 4) were conducted on the first day in parallel with Brigade planning. Therefore, the Battalion was able to arrive at a concept COA about 215 mins from the start of planning, rather than 690 mins as prescribed by the process. However, the Battalion took more time to arrive at a finalised plan, accomplishing it in 875 mins (compared to 750 mins as prescribed, a difference of about 2 hours). Although the Battalion had a headstart on the first day, they continued to use all the time allocated to complete planning.

The Battalion was found to have used more time during the Planning (69 minutes more) and Wargaming (24 minutes more for Battalion internal wargaming; 45 minutes more for Battalion-Brigade) stages. These were key stages for refining the plan and achieving shared understanding between the staff and with the superiors.

- **Team creativity**

Team creativity was rated by both observers and participants during the

planning phase, after war gaming, and after execution. No significant effects were obtained on both frequency of ideas shared and degree of openness within the staff as compared to normal for this type of task. The staff felt that a normal amount of ideas were produced, and found this number of ideas satisfactory. However, a close to significant effect of observers vs. staff members was obtained when assessing if the degree of openness was normal in this type of task, with observers perceiving it as slightly less normal than staff members.

Discussion

The purpose of TCX 1 was to explore the effects of the Team Insight Model in a realistic battle planning and execution task. TIM comprises a modified battle procedure (from the conventional SAF BP), aided and integrated with a collaborative C2 platform. The use of the TIM was expected to result in some improvements in planning and execution, as compared to traditional ways of conducting C2 processes.

The *first* expectation was that overall planning tempo through the whole chain of command would increase as a result of an enhanced ability to plan in parallel, as well as simplifications to the process such as development of only one COA. This expectation was only partly supported by the results of this study. Also, because only one level of command chain participated fully in the study, it was difficult for time gains to be conclusive. However, some important findings should be discussed. Although the Battalion used up all four hours of planning time, they were able to identify their preferred COA very

early in the process. No participant expressed the need for more than one COA to be developed for comparison. However the time saved early on was subsequently used to detail and refine the plan, instead of releasing it earlier. Possibly, the four hours allocated was too short to produce a high quality plan and the Battalion felt it necessary to invest effort in improving plan quality. Early identification of a COA should be available at all hierarchical levels of the command chain with the use of TIM, resulting in a considerable amount of time gain without a loss of plan quality.

The *second* expectation was that TIM should result in better overall plan and execution quality. This was partly supported by the results. Quality of the produced plan was comparably high despite a team of relatively junior and inexperienced staff. The level of shared situation awareness and the insights shown considering the importance of different injects during the execution indicates that TIM was indeed helpful in creating shared situation awareness. This perception was also enhanced by the low need for clarification during the execution phase where the level of verbal communication between the staff members was strikingly low. The high level of situation awareness could also be attributed to a strong will from the participants to comply with the demands of the exercise. However it was observed that the level of idea generation and sharing was only average (not elevated compared to normal). Possible reasons could be that idea generation is more a result of experience as well as personality and cultural factors, rather than the

existence of tools and processes to be followed. In addition, the training did not specifically highlight the need for divergent thinking. Overall, it appeared that the features of MissionMate together with the KBP made it possible for staff to maintain a high level of shared situation awareness.

Third, there was the expectation that TIM, being a naturalistic process, should be regarded as a good model for planning and execution under realistic battlefield conditions. This expectation was at least partly supported by the results. When the participants were asked about their experience using the KBP, mostly advantages were mentioned, such as increased planning tempo, more time to work out Ops and Support plans, and increased collaboration among planners. One important suggestion to improve the KBP was to allow finalisation of support plans to take place before Wargaming.

So how valid are these results? TCX 1 involved a real Battalion staff interacting with real Brigade staff, solving a traditional task in a realistic scenario with a realistic amount of information and uncertainty. The Battalion staff comprised officers of varying levels of experience, and was a relatively new unit that had not worked together for long. While this is a reasonably “normal” profile of a Battalion, one caveat to the experiment was the little training and hence system unfamiliarity of the participants.

Most of the findings were in line with expectations – based on the above justifications, these results may be generalised to other Army Battalion

staffs. It is likely that with more training in the usage of TIM, there would be further improvements in decision speed and possibly decision and execution quality. Hence, while results showed that TIM did indeed have several advantages compared to traditional C2 methods, more research on this model is warranted.

Future Work

It would be interesting to perform a comparison between a command chain using the TIM and another utilizing a traditional C2 model. Such a comparison would need to involve at least three levels of command in order to explore if and how TIM enhances team creativity, contributes to shared situation awareness in a C2 team, and results in superior quality of execution. It is intended for some of these discoveries to be part of the upcoming TCX2, slated to take place in Sweden in early 2006.

Authors’ Note

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- ³⁷ MissionMate is a C2 Knowledge System built on a distributed architecture using a thin client and service-oriented concept where C2 applications (or services) can be accessed anywhere on the network via a browser.
- ³⁸ Ex Wallaby is an annual Armour and Guards exercise conducted at Shoalwater Bay Training Area, Queensland, Australia.
- ³⁹ Cheah, M., Chew, L., P., Tan, C., P., Command, Control, and Information Systems in the Age of Knowledge Centricity, CCRP, San Diego, (2004).
- ⁴⁰ The TOP is a GIS-based whiteboarding application that supports collaboration and parallel planning, which in turn comprises the concept of TeamSight, together with communication tools such as video conferencing and chat. TeamSight enables the distributed Command Team to co-author a plan on a virtual map-based whiteboard, allows members to oversee each others' developments in real-time and allows discussions on plans in a distributed mode, thereby increasing team insight generation.
- ⁴¹ Ecology Space is a collaborative mind tree that helps the team to create, share and edit textual information to supplement the GIS overlays being drawn. An analogy to the Ecology Space is a collaborative Microsoft Powerpoint where the notes and graphic portions are sharable.



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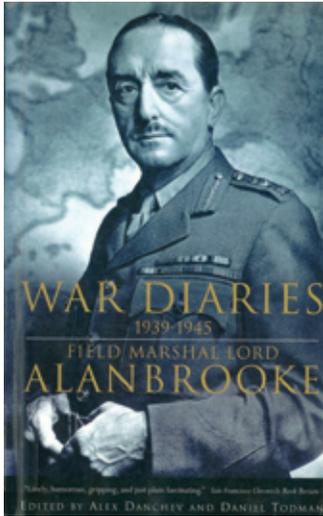


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BOOK REVIEW



Field Marshal Lord Alanbrooke War Diaries: 1939-1945 Edited by Alex Danchev and Daniel Todman

by Mr Toh Ee Loong

Visitors to London will find a trio of statues along Whitehall, just across from Downing Street and in front of the United Kingdom's Ministry of Defence. On the left is Montgomery, victorious over the Germans at El Alamein, and on the right is Slim, who turned defeat into victory over the Japanese in Burma. Set between these two famous soldiers is someone much less well known and who had not won a famous victory in the battlefield – Alanbrooke. Yet Alanbrooke's statue is set higher than those of his counterparts. His plinth also carries the lofty epithet of "Master of Strategy".



Aside from this official accolade on his memorial, Alanbrooke has also been described as "probably the greatest Chief of the Imperial General Staff (CIGS)¹ ever produced by the British Army" in the chapter by Alex Danchev (who also co-edits the *War Diaries*) in John Keegan's edited volume, *Churchill's Generals* (1991). It was Alanbrooke's

tenure as CIGS, serving as Churchill's principal military advisor, from which his reputation is derived. The *War Diaries*, available for the first time in their complete and unexpurgated² form, gives us an intimate insight into the making of grand strategy at the highest levels of the British and Allied commands.

At a massive 721 pages, the book was a surprisingly enjoyable and smooth read for this reviewer. The first section deals with Alanbrooke prior to his appointment as CIGS and sets the context of his work – the defeat of the British Expeditionary Force, the collapse of France and the subsequent scramble to fend off a possible invasion while the Soviet Union and United States had yet to enter the war. Subsequent sections (by calendar year until shortly after the conclusion of World War Two) are considerably more interesting as Alanbrooke begins to grapple with the conflict on a truly global scale and deals with Churchill, other members of the War Cabinet, the other Service leaders in the Chiefs of Staff Committee (COS) and their opposite numbers among the Allies on a regular basis. All the major events of the rest of the war, including the fall of Singapore³, are also given his pithy treatment and effectively summarised within a paragraph or two. Students of military history can also benefit from another perspective on significant strategic controversies of the time such as opening up the Western front first via Southern Europe and Italy versus an earlier D-Day landing in France and the broad front versus narrow front against Germany.

Though some may find it tedious to read daily entries on routine meetings and updates on the progress and macroview of the war, Alanbrooke also provided some controversial insights on many puissant personalities. The *War Diaries* have gained notoriety for his liberal employment of invective and unbridled criticism against other generals and admirals, like Alexander, Mountbatten, Patton, Marshall, Eisenhower, as well as of politicians,

particularly Prime Minister Winston Churchill with whom he worked extremely closely. Given how history tends to put leaders of victorious powers in a positive light, the *War Diaries*, with the perspective of a peer, paints many of these leading figures in a very different light. Alanbrooke tried to downplay (but, significantly, not retract) most of his harsh words by explaining that the diaries were an outlet for his frustrations and written at the end of often wearying days.

However, for this reviewer, it was precisely the daily rhythm of the diaries, resounding with their writer's personality, which gave the *War Diaries* its compelling feel. Unlike many memoirs, which tend to be written some time after events as well as often ghost-written, the *War Diaries* clearly show the strains, frustrations, uncertainty and agonising that accompany strategic decision-making, especially that of the scale that concerns national survival and probably the fate of the world. The immediacy of the entries, written on a daily basis, effectively filters out much of the certainty arising from the benefit of hindsight that one tends to find in most memoirs. The main cautionary note about reading the diary as history is an obvious one – it is written from only one person's point of view. Thus any serious student of military history will need to balance Alanbrooke's almost overbearing intellectual arrogance against other primary and secondary sources.

Those interested in coalition warfare will also find much food for thought through Alanbrooke's record of historical events and personalities. The British had to balance their interests

with those of their indispensable allies. Alanbrooke was distrustful of the Soviet Union and frequently alarmed by what he perceived to be the inexperience, strategic shortsightedness and naiveté of the Americans and it seems that his feelings were only reinforced by the major Allied conferences at Tehran, Casablanca and Yalta. One possible takeaway is how relations between allies are often underpinned, reinforced and lubricated by strong personal relationships – Alanbrooke highlights the contributions of Field Marshal Sir John Dill who was Head of the Joint Staff Mission in Washington D.C. He managed to win the confidence of the Americans to such a degree that following his death on 4 November 1944, he was posthumously awarded an unprecedented joint resolution of the U.S. Congress appreciating his services and buried in Arlington National Cemetery.

As CIGS and Chairman of the COS, Alanbrooke was the consummate staff officer who provided clear and responsible professional advice. He had the courage to contradict his formidable political master, and vehemently if need be, in the course of strategic deliberations. Churchill himself recalled how “When I thump the table and push my face towards him what does he do? Thumps the table harder and glares back at me.”⁴ Students of civil-military relations⁵ have, in the *War Diaries*, much ready case study material on how Alanbrooke did his utmost to defend and protect his field commanders from excessive political interference and micro-management. Much of Alanbrooke’s frustration also came from trying to dissuade Churchill from what he considered to be

wild adventures and strategic blunders, such as early operations to retake Norway or seize Northern Sumatra. The diary entries also show that the line between policy and strategy is a very fine one indeed. While Alanbrooke was always the obedient soldier and servant of His Majesty’s Government, his professional expertise and personal authority over the senior leadership of the British Army meant that he and his fellow Service heads could, and did, indeed heavily influence and structure the choices available to their political masters.

Besides the practical descriptions of how the COS functioned as a Staff and Command organisation, Alanbrooke also summarised its roles and responsibilities in his afternote for the 20 January 1945 entry.⁶ It was illuminating to see the historical roots and practice of joint and integrated warfare. One might even posit that, since World War Two, there has been no significant innovation in the ideas of joint warfare among the major armed forces – only that technological advancement now allows the promise of old ideas to be tested.

As CIGS, Alanbrooke was not a field commander. Despite being sorely tempted, he refused an offer to take over Near East Command as he felt that he had succeeded in winning Churchill’s trust and acceptance of his advice, a stark contrast to his predecessor, Dill. At his recommendation, Alexander was appointed instead and went on to oversee Montgomery’s famous victory over Rommel at El Alamein.⁷ Later, Churchill repeatedly promised him command of Operation Overlord (D-Day) but political realities meant that the appointment would go to an American instead.⁸ Nonetheless, Alanbrooke was

still recognised as a military officer of the highest leadership ability. An anecdote, by Anthony Powell, quoted in the introduction, described the electric effect he had on the officers and men around him while *The Economist* said, “In his demanding and abrupt efficiency, he knew when to scold, when to encourage, when to protect. Men admired, feared, and liked him: in that order, perhaps. He became, in particular, the conscience of the Army.”⁹

In conclusion, post-modern approaches to history which would probably de-emphasise the significance of the diary of a dead white imperial/colonial-era aristocratic male which concentrated on the narrow military and official concerns. Nonetheless the publication of the *War Diaries* should be celebrated – the diary, as a daily record of events and thoughts, is a fast disappearing form of historical record. Unlike blogs, diaries also tend to be private and often not intended for public consumption, thus allowing its author to put down his most intimate thoughts and feelings. Alanbrooke has done this and we can benefit from reading his *War Diaries* as students of military and strategic history, civil-military

relations, coalition warfare, leadership or simply the art of writing coherently and cogently. 

Endnotes

- 1 From 1908 to 1964, the Chief of the Imperial General Staff (CIGS) was the title of the professional head of the British Army.
- 2 Previous versions, *The Turn of the Tide* (1957) and *Triumph in the West* (1959), were heavily edited by Arthur Byrant.
- 3 Alanbrooke, pp229-30, 235.
- 4 Winston S. Churchill, *The Second World War* (London: Cassell, 1948-54), Vol.II, pp233-34.
- 5 “Civil-military relations” is used here in the conventional parlance referring to relations between the civil-political authorities and its own military, often in the context of the balance of power between the two. See, for example, Samuel Huntington’s *The Soldier and The State* (1957), Eliot Cohen, *Supreme Command: Soldiers, Statesmen and Leadership in Wartime* (2002). There has been a tendency among some SAF officers to use this term to refer to military relations with civilians and civilian authorities of other states, especially in the context of humanitarian assistance.
- 6 Alanbrooke, p648.
- 7 Alanbrooke, pp293-4.
- 8 Alanbrooke, pp80-2, 441-2. Churchill confirms this in his *Second World War*, Vol.II, p171 and Vol.V, p76.
- 9 Danchev & Todman (eds), pxiv-xv. Quoted from Anthony Powell, *The Military Philosophers* (London: Fontana, 1971), pp57-8 and “Statesman and Soldier”, *The Economist* (23 Feb 1957).



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FEATURED AUTHORS

Alex Danchev and Daniel Todman



Alex Danchev

Alex Danchev is Professor of International Relations, Director of Research and Chair of Research Committee at the School of Politics and International Relations, Faculty of Law and Social Sciences, in the University of Nottingham. Previously, he was Professor of International Relations and Head of the School of Politics, International Relations and the Environment at Keele University, where he was also the Dean of the Faculty of Social Sciences and a member of the University's Senate and Council. He was educated at University College, Oxford; Trinity Hall, Cambridge; and King's College, London.

Prof. Danchev served a number of years as an Officers' Education Tutor



Daniel Todman

of the Royal Army Education Corps in the British Army, and lectured in the Political and Social Studies department of the Royal Military Academy at Sandhurst. John Keegan once described him as “one of the two most brilliant people [he] taught at Sandhurst.” He has held the Visiting Senior Research Fellowship in War Studies at King's College, London, been a Senior Associate Member of St. Anthony's College, Oxford, and was a Woodrow Wilson International Center for Scholars Fellow in Washington D.C. He is also a fellow of the Royal Historical Society and of the Royal Society of Arts, and is a long-standing friend of the Tate in London where he has been a member of the Acquisition Committee of the Patrons of New Art.

Danchev has written extensively on strategy and diplomacy in the Second World War, and on more recent international conflicts in the Falklands, the Gulf, and the Balkans. His research also covered the Anglo-American “special relationship” and transatlantic relations and more recently, the Iraq War of 2003, and the subsequent inquiries of Lords Hutton and Butler. His current research is on the interconnections of art and politics, and the use of literary works and fiction in scholarship.

Danchev is also renowned for his political and military biographical writing. His biography of the philosopher-statesman *Oliver Franks Founding Father* (Oxford University Press, 1993) was on the Observer’s “Books of the Year” list. His biography of military strategist Basil Liddell Hart, *Alchemist of War* (Weidenfeld & Nicolson, 1998) was listed for the Whitbread Prize for Biography and the Samuel Johnson Prize for Non-fiction. His edition of the Alanbrooke diaries (Weidenfeld & Nicolson, 2001) was listed for the W.H. Smith Prize for Biography and became a non-fiction bestseller. His most recent biography is of the pioneer cubist, Georges Braque, in the belief that works of art and the imagination have more relevance to worldly affairs than is commonly recognised. He also writes regularly for the Times Literary Supplement and is a contributor to the Oxford Dictionary of National Biography.

Danchev’s early focus on the Anglo-American “special” (or perhaps “unequal”, as he would term it) relations is best seen in his works *Very Special Relationship: Field Marshal Sir John Dill and the Anglo-American Alliance 1941-44*

(Brassey’s Defence Publishers, 1986) – his PhD thesis – and *Establishing the Anglo-American Alliance: the Second World War Diaries of Brigadier Vivian Dykes*. More recently, *On Specialness: Essays in Anglo-American Relations* (Macmillan Press, 1998), which includes his various articles in *International Affairs*, *Diplomatic History*, and chapters in various books. This body of work spans war and post-war history, focuses on the broad transatlantic dynamic and on the intricacies of individual personalities, even to present concerns – a more recent article in *RUSI Journal* (April 2003) was entitled “Greeks and Romans: Anglo-American Relations after 9/11”. The increasingly political overtone of his work on the topic of Anglo-American relations is perhaps not unrelated to his opposition to the Blair administration and its involvement in the Iraq war, as he has written of in the concluding essay of his compilation *The Iraq War and Democratic Politics* (Routledge, 2005), jointly edited with John MacMillan.



Daniel Todman is Lecturer in Modern History at Queen Mary, University of London. He studied at the London School of Economics and Political Science, and afterwards at Pembroke College, Cambridge, where he wrote his doctoral dissertation on “Representations of the First World War in British popular culture from 1918-1998”. He taught in the War Studies department of the Royal Military Academy at Sandhurst, before joining Queen Mary, where he teaches courses on the shaping of contemporary Britain, the First and Second World Wars, and the cultural legacy of conflict.

He specialises in the social, cultural and military history of total war in the twentieth century. His blog “Trench Fever: the thoughts, links, and projects of a First World War historian” has been online since August 2005.

In his work on the First World War, Todman’s essays in *Command and Control on the Western Front: The British Army’s Experience 1914-1918* (Spellmount, 2005), co-edited with Gary Sheffield, reinterpret British command and generalship and refute the common view of their incompetence. His essay “The Grand Lamasery revisited: General Headquarters on the Western Front 1914-1918” examines the organisational command structure of GHQ and the personalities of its chiefs.

Perhaps of greater interest to Todman than the military aspect of war history are their cultural and social aspects – the subject of his doctoral thesis. We see this in his most recent publication, *The First World War: Myth and Memory* (Hambledon, 2005), where he examines the evolution of public perceptions of the Great War through the past century, and how a distorted image of it emerged and became dominant – the tragic visions of

Siegfried Sassoon and Wilfred Owen’s poetry. In a paper “Oh What a Lovely War: Retelling the First World War in Post-War Britain”, Todman studies the construction and development of war mythology in popular entertainment, and the impact of anti-establishment musical theatre on the genre. He has also written on the commemoration of Field Marshal Sir Douglas Haig – most recently in his paper “Sans peur et sans reproche: The retirement, death and mourning of Sir Douglas Haig 1918-1928” in the *Journal of Military History* (October 2003), where he posits that the scale and character of public and private mourning were the result not only of his wartime victory, but also of his postwar activities and the context of postwar bereavement and remembrance.



Both Danchev and Todman occupy academic niches beyond the limits of individual disciplines, with as much focus on the historical and factual as the literary, the artistic, the cultural. We are enriched by their interdisciplinary focus on the complex nature of war, and look forward to seeing more of their work.

PERSONALITY PROFILES

World War II – Pacific Theatre: Yamamoto versus MacArthur

To commemorate the 60th year of the end of World War II, *POINTER* is profiling some of the great commanders who were involved in this historic event. In this last instalment of a four-part series, the featured personalities are two outstanding commanders from the Pacific Theatre, namely: Admiral Isoroku Yamamoto (1884-1943) and General Douglas MacArthur (1880-1964).



Introduction

Admiral Isoroku Yamamoto was the most exalted Japanese naval commander of World War II. He was the master planner of the stealth attack on Pearl Harbour in December 1941, which provoked the United States' entry in World War II. He was also intimately involved in the Battle of Midway as well as the Battle of Guadalcanal. General Douglas MacArthur has been hailed by some as the most celebrated and distinguished American general of the twentieth century. He was involved in all three major wars that America took part in, namely: World War I, World War II, and the Korean War.

He commanded American and Allied forces in the Pacific during World War II, playing an instrumental role in the Battles of Leyte Gulf and Okinawa. He is also remembered for employing the famed “Island Hopping” strategy in the Pacific Theatre to avoid frontal confrontations and which minimised American casualties.

Yamamoto (1884-1943): His youth and early military career

Isoroku Yamamoto was born in Nagaoka, Japan on 4 August 1884 into a samurai family. At age 17, he was accepted into the Imperial

Naval Academy at Eta Jima. The young Yamamoto was unique among his xenophobic fellow cadets for his admiration of Western culture. In 1904, he graduated as a gunnery specialist. The next year, he was involved in the Russo-Japanese War of 1905 and was injured during the Battle of Tsushima Straits. The following year, the Treaty of Portsmouth was concluded which ended the Russo-Japanese War but it failed to meet the expectations of the Japanese. This created resentment against the western powers, which helped to mediate the Treaty. Yamamoto did not share this resentment and became increasingly concerned about the deterioration of Japanese-American ties.

In 1913, at 29 years of age, he was sent to the Naval Staff College in Tsukiji, which was a clear signal that he was being groomed for higher command. Six years later, Lieutenant Commander Yamamoto was sent to study economics at Harvard University in the United States. Upon his return to Japan two years later, he was promoted to Commander and specialised in naval aviation. He taught briefly at the Staff College before becoming the director of a new air-training centre at Kasumigaura for two years. In 1926, Captain Yamamoto was posted to the Japanese embassy at Washington as the naval attache. He soon became the imperial navy's foremost expert on America. In 1930, he was included in the Japanese delegation sent to London to negotiate a new naval treaty with the United States and the United Kingdom. In the same year, he was promoted to Rear Admiral and appointed Head of Technical Division of Aeronautics Department. In

1933, he was assigned Commander of the First Carrier Division. Throughout his career, Yamamoto was a firm believer in the increasing importance of good aircraft and aircraft carriers and discounted the relative importance of battleships.

The following year, he was appointed as chief delegate of the Japanese delegation to the London Naval Conference of 1934. This conference ended in failure and further strained the deteriorating ties between Japan and the Western powers. Yamamoto was promoted to Vice Admiral in the same year. In 1935, he was appointed Chief of Naval Airforces. In 1936, he was appointed as navy Vice-Minister, a political post that he accepted reluctantly. As the 1930s wore on, the Japanese government became increasingly dominated by right-wing nationalists, who were bent on expanding the Japanese empire. Yamamoto was not one of them as he strongly opposed such expansion which could lead to war with the Western powers. In August 1939, Yamamoto was promoted to Admiral and appointed as the Commander of the Combined Fleet to prepare his beloved naval airforce for the approaching war.

Yamamoto: World War II and the Pacific Front

Yamamoto knew that war between Japan and the United States was inevitable and tried his best to strengthen the capabilities of the Combined Fleet. He reinforced discipline in his forces and instilled a new sense of well-being. In training, he focused on night manoeuvres, ship handling and gunnery training.

Yamamoto had no confidence of winning the coming war with the West, and was especially apprehensive about taking on America in armed conflict, being aware of her huge industrial capacity and national resources. He told Prime Minister Prince Konoye so and added, "...[we] can run wild for the first six months, but after that..." To Yamamoto, the only course of action that gave Japan a possibility of victory was to beat the Americans soundly in early engagements that would demoralise and drive them to the negotiation table.

In early 1941, Yamamoto was tasked to plan for war with the United States. He assessed that a massive pre-emptive strike on the American Pacific Fleet as the only chance Japan had to win the war. Yamamoto had to spend a lot of time and energy getting his war plan accepted by the Japanese military high command as many senior officers had reservations about sending a massive force half way across the globe on a risky operation.

On 7 Dec 42, a Japanese naval force comprising six carriers (with 350 planes), two battleships, nine cruisers, and 27 submarines launched a massive stealth attack on the American Pacific Fleet at Pearl Harbour. Within hours, the entire American Pacific Fleet was in shambles. The Americans lost eighteen warships, 188 aircraft and over 2,500 servicemen in this attack, which would always be ingrained in the collective memory of Americans. Though celebrated as a huge success in Tokyo, it was not the knockout blow Yamamoto had hoped for. All three American carriers were out at sea and escaped intact.

After Pearl Harbour, Admiral Yamamoto proceeded to invade the Solomon Islands and New Guinea, after which he attacked British-controlled Ceylon. Despite these easy victories, Yamamoto knew that he had to destroy the American carriers before Japan had a chance of securing victory. It was in this context that he planned to capture Midway and destroy the U.S. carriers. The Japanese navy ministry was against Yamamoto's plan as it put the entire Combined Fleet at risk in one operation. Yamamoto threatened to resign if his battle plan was not adopted and he had his way.

The Battle of Midway took place from 4 to 6 June 1942. Yamamoto assembled a massive fleet of 250 ships and eight carriers. Yamamoto's plan was complex and it involved splitting the Combined Fleet into eight task groups and two of these groups made a diversionary attack on the Aleutian Islands. This battle was a disaster for the Japanese. They lost four carriers to one for the Americans and 3,500 men died versus 300 on the American side. There were two main reasons for the failure of this plan. First, the American navy had broken the Japanese naval communication code and thus the Americans knew about the attack and its details in advance. Second, there was poor communications on the Japanese side.

After the disaster at Midway, Yamamoto organised what was left of his troops to support the 15,000 Japanese troops being blockaded on Guadalcanal, being well aware of the strategic importance of the Guadalcanal. He failed to expel the American troops who had landed on 7 August 1942.

After suffering heavy losses, he realised that his troops could not prevail over the Americans and made plans for a withdrawal. The actual evacuation plan was a tactical and logistical masterpiece. By this stage, the tide had turned against the Japanese and Yamamoto had realised that the war was a lost cause due to the overwhelming disparity in power between the two nations.

Yamamoto's end came when the Americans discovered that he was going to visit the northern Solomon Islands on 18 April 1943. His visit to the South Pacific was an attempt to boost morale after Guadalcanal. Sixteen P-38 Lightning fighters from the 339th Fighter Squadron were ordered to ambush and assassinate Yamamoto. The American fighters shot down two G4M "Betty" bombers of which one carried Yamamoto. The fascinating career of a great Japanese admiral was thus ended prematurely.

MacArthur (1880-1964): His youth and early military career

General Douglas MacArthur was born on 26 January 1880 in Little Rock, Arkansas to a high ranking military officer. In his early years, he was an unremarkable student, but in 1903 he graduated top of his 93-man class at the prestigious West Point Military Academy.

MacArthur joined U.S. Army Corps of Engineers after graduation. His first posting was to the Philippines, a place that MacArthur would have a lifelong connection with. In 1915, he was promoted to Major. World War I gave MacArthur his first real

brush with fame. He served in France with the 42nd Division and was decorated thirteen times and cited seven additional times for bravery, the most decorated American soldier of World War I. He was promoted to the rank of Brigadier General in August 1918 (the youngest ever in the U.S. Army) and was appointed as Commander of the 84th Infantry Brigade.

After World War I, he was appointed as the youngest ever Superintendent of West Point in its 117-year history. Over his stint of three years, he modernised the curriculum and doubled the size of the academy. In 1922, MacArthur was posted to the Philippines to command the newly created Military District of Manila. The next year, he became the U.S. Army's youngest general. MacArthur had by this time become a partisan general with right-wing political views that he would hold steadfast throughout his life.

In 1930, MacArthur was appointed as the U.S. Army Chief of Staff, once again being the youngest to hold this office. During his tenure, MacArthur tried to modernise the American Army of 135,000 men. However, the Great Depression made the post a trying one.

In 1935, he was invited by Manuel L. Quezon, an old friend and the newly elected President of the Philippines, to be the head of an American military mission tasked with preparing the country for full independence by 1946. Two years later, MacArthur retired from the U.S. Army and stayed in the Philippines as the country's military advisor, becoming a Field Marshal of the Philippine Army.

MacArthur: World War II and the Pacific Front

When negotiations with the Japanese government broke down in June 1941, President Roosevelt recalled MacArthur to active duty as a Major General and appointed him as the Commander of United States Army Forces Far East, based in Manila. MacArthur was given \$10 million dollars to mobilise the Philippine Army and 100 B-17 Flying Fortress were sent to help defend the Philippines. MacArthur deployed most of his troops to protect the two main islands of Luzon and Mindanao. On the same day as the Pearl Harbour attack, the Japanese bombed the Philippines and destroyed half of MacArthur's airforce. MacArthur was criticised for not redeploying his airforce after the raid on Pearl Harbour. The Japanese army then proceeded to invade the island of Luzon and made rapid progress. MacArthur's ill-prepared troops stood no chance and were quickly defeated. By January 1942, MacArthur had ordered his troops to retreat to the Bataan peninsula, where they continued their resistance. On 11 March 1942, MacArthur left his command post on the island of Corregidor for Australia under orders from President Roosevelt, who was determined not to allow America's most famous general to fall into enemy hands. General Jonathan Wainright remained behind with around 11,000 men and managed to hold out till May 1942.

On arrival in Australia, MacArthur made his famous speech – in which he declared his intention to retake the Philippines stating, “I came out of Bataan and I shall return”. The

American forces were re-organised and MacArthur became the Supreme Commander of Allied forces in the Southwest Pacific area (SWPA). He took over control of Australian, Dutch and other Allied forces defending Australia and set up his SWPA headquarters in Brisbane. Admiral Nimitz became the Commander-in-Chief of the U.S. Pacific Fleet and they decided on the need to establish a secure line of communications and supplies from the South Pacific to Australia. This resulted in the battles of Coral Sea and Midway, where the Japanese lost four carriers.

In mid 1942, fighting in the Pacific was concentrated around Rabaul, a Japanese base in the Solomon Islands. In August, Allied forces attempted to land at Guadalcanal and over the next eight months, the opposing forces fought more than fifteen land and sea battles in that vicinity. MacArthur had by this time adopted his famous “Island Hopping” strategy aimed at capturing vulnerable islands through amphibious landings. This strategy was developed to conserve American manpower and resources and avoided frontal confrontations with Japanese troops.

An island that MacArthur had his eyes on was New Guinea. His troops battled the Japanese forces through the dense jungles of New Guinea. By early 1944, 100,000 Japanese soldiers were trapped at Rabaul and the entire Japanese Eighteen Army was surrounded in New Guinea. By September, U.S. troops had control of New Guinea.

In October 1944, General Krueger and the U.S. Sixth Army landed on Leyte,

a strategic island situated between Luzon and Mindanao in what was the first step towards reclaiming the Philippines. This led to the battle of Leyte Gulf which resulted in the destruction of four Japanese carriers, three battleships and ten cruisers. After this huge naval battle, it was clear that the Americans had full control of the Pacific, signalling that future Allied amphibious landings were likely to succeed. By December, American forces had taken over Leyte. Over 3,500 U.S. troops and 55,000 Japanese troops died in this campaign. In January 1945, Allied troops landed in Luzon to face a force led by General Tomoyuki Yamashita. Within a month, MacArthur was already approaching Manila and Yamashita was retreating to the mountains. Manila was liberated in early March and around 16,000 Japanese soldiers died in the battle for Luzon. In March, the U.S. Eighth Army landed in Mindanao and they rapidly reclaimed the island from Japanese troops.

MacArthur's last major amphibious landing in World War II took place at Okinawa. The Battle of Okinawa was fiercely fought and the Allied troops were strenuously resisted by the Japanese. It was the first ground battle on Japanese soil and the Japanese troops were fighting tooth and nail for their homeland. Okinawa was important to the Allies as it was an ideal base from which a major offensive on Japan could be undertaken. Japan had a force of 120,000 men and 10,000 aircraft protecting Okinawa under the overall leadership of General Mitsuru Ushijima. Lieutenant-General Simon Buckner and his 155,000 strong

American force landed on the west coast of Okinawa on 1 April 1945. On 21 June, Okinawa was finally taken over by the Americans. The Battle of Okinawa caused the Americans a high number of casualties, with 49,000 wounded and over 12,000 fatalities. MacArthur had won a significant victory over the Japanese and laid the groundwork for an eventual offensive on the main island of Japan. This however was made redundant by the dropping of the two atomic bombs in August 1945. MacArthur presided over the official Japanese surrender onboard U.S.S. Missouri on 2 September 1945, bringing an end to World War II.

Commentary on both Commanders

A study into the personalities and careers of General MacArthur and Admiral Yamamoto would reveal that they had more differences than similarities. They did have several commonalities. First, both were talented leaders of men and were able to motivate troops to put in maximum effort in all their battle engagements.

Second, both were brilliant strategists and tacticians, who also had a risk-taking, adventurous characteristic. MacArthur was most noted for his daring and well-executed amphibious plan to land his forces 200 miles behind enemy lines at Inchon on 15 September 1950 during the Korean War. Yamamoto's bold stealth attack on Pearl Harbour was also a good lesson in campaign planning. Both war plans (Inchon and Pearl Harbour) will no doubt remain as amongst the most successful war strategies of all times and

will continue to be studied by military students many years from now.

Yet there were many differences between the two men. While MacArthur was gregarious and cultivated many friends in the media, Yamamoto kept a low profile and never played to the gallery. MacArthur served successfully as the American Army's first Public Relations Officer in 1916 and was largely credited for selling the Selective Service Act of 1917 to the American public. Yamamoto on the other hand never courted the media to push his personal opinions, such as his opposition to war with America. MacArthur's close relations with the media also allowed him to make use of the media to booster his personal reputation and public persona.

Yamamoto had throughout his career tried to steer clear of the political arena. Even when he accepted the political position of Vice-Minister of the Imperial Navy in 1936, he did so reluctantly. In contrast, MacArthur was influenced by his paternal grandfather, a key figure in the Washington elite, and had always enjoyed being involved in politics. He was and remained an exemplification of a political general during the Korean War.

Both commanders were opinionated individuals as well as men of strong will. However, their reaction towards political decisions that ran contrary to their views cannot be more different. Yamamoto was always ready to give his frank opinions behind closed doors to his superiors but once a decision had been reached, he would automatically fall in line and do his best to carry

through with the decision. A case in point would be his opposition to war with America. He gave his personal views to his superiors but did his best to strengthen the naval airforce once the decision to move towards war was made. MacArthur, who was egoistical and politicised, would speak out against political decisions that he disagreed with. He would even resort to using the mass media to bring his opposing views to the public. An example was his recommendation to widen the Korean War to include parts of China. When the top brass of the American military and President Truman rejected his suggestion, he brought his unhappiness to the public domain resulting in his dismissal from office in April 1951.

In reviewing the careers of these two renowned commanders of the twentieth century, one would need to examine the contexts of their achievements. While Yamamoto's record comprised almost exclusively of his conduct in World War II, MacArthur had the advantage of being also involved in the Korean War which enhanced his military reputation. However, MacArthur's military successes were achieved within an organisation that was vastly superior to its opponents in material and technological terms. Yamamoto's military achievements were against an opponent that were equally matched initially but which became greatly superior as the war progressed. While MacArthur's military achievements might be more illustrious, these were marred by his political flaws. In contrast, Yamamoto offered a better model of a professional military man who respected the decisions of his political leadership.

Conclusion

In conclusion, the lives of these two icons of the World War II Pacific theatre evolved in a rather unexpected direction. It is rather ironic that Yamamoto, an admirer of America as well as an opponent of expansionistic Japanese policies, became the architect of the most serious attack on American soil before the September 11 terrorist attacks in 2001. It was paradoxical that, MacArthur's outstanding military career would end in ignominy with

his removal from command of the U.S. forces in Korea by his Commander-in-Chief. Life is indeed governed by a strange twist of fate.

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