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Editorial Board

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c o n t e n t s

Editorial

It has been a celebratory period for us in the last 3 months—we commemorated SAF Day on 1st July 2014 and our nation's independence on 9th August 2014. Unfortunately, we also cannot forget that World War I (WWI) commenced on 28th July 1914 and that World War II (WWII) began on 1st September 1939 with Germany's invasion of Poland and the subsequent declarations of war against Germany by France and Great Britain. So, while some of our articles in this issue cover contemporary topics like new media, deterrence strategies and SAF's networked capabilities, we have also included articles with a historical perspective—one discussing the successes and failures of the German Armed Forces and the Imperial Japanese Forces in WWII, another on the Battle of the Atlantic and the third on the NATO Air Campaign over Kosovo which took place in 1999.

In the article, "*The Viability of Deterrence Strategies By Non-Nuclear States*," MAJ Wee Eng Peow explores the issue of deterrence by non-nuclear states. He states that deterrence has always been a subject of concern for countries. In the event of a war, the military prowess of a small state might not be able to defend itself against a stronger opponent. The introduction of nuclear weapons could serve to protect a smaller state but the consequences it can bring to the nation and their aggressors are irreversible. MAJ Wee explains how Singapore as a non-nuclear state can achieve deterrence through conventional strategies and managing diplomatic relationships while ensuring that her sovereignty is not compromised.

The article, "*Overcoming the Support Challenges in Network Centric Warfare—An Engineering and Logistical Perspective*" is by ME5 Koh Boon Yeow. In this article, ME5 Koh discusses the benefits of a high-tech network-centric system that would better position the Singapore Armed Forces (SAF)

to develop, enable and sustain capabilities required for its transformation journey to a 3rd Generation Force. The article highlights the key challenges in the management of a Networked System of Systems (NwSoS), as well as a framework to overcome these challenges. According to ME5 Koh, the NwSoS will empower warfighters and commanders with greater communications capabilities but, he emphasises that this would only be successful in translating these aims into reality if engineers maintain and manage the system's capabilities well, and if the organisation sharpens its work processes to develop its overall and human capabilities in the operation of the system.

In "*The 'CNN Effect' and the 'New Media'—Its Value and Challenges to Governments and Its Military in United Nations Peace Keeping Operations*," MAJ Edwin Ong Eng Kuan takes a critical look at the 'CNN Effect' and the 'New Media' and discusses its tremendous impact not just on an organisation but even on the peace and security of a nation. MAJ Ong highlights that the advent of consumer mobile devices such as smart phones and portable tablets, and the technological advances in image and video capturing capabilities and internet connectivity have magnified the 'CNN Effect.' However, MAJ Ong feels that a clearly communicated positioning and policy by the military and its government will be able to negate this impact. He concludes that so long as there is a clear positioning of strategic policies and professional conduct of the military in operation, the media impact will remain limited.

MAJ Ho Wan Huo's article, "*The NATO Air Campaign Over Kosovo—A Study of Coercive Diplomacy*" examines the theoretical promises of airpower, provides a background to the crisis in Kosovo and explains that airpower was crucial but not singular in leading to the capitulation of Slobodan Milosevic, then President of the Federal

Republic of Yugoslavia. In his article, MAJ Ho states that the breaking of Milosevic's will and the moment of his capitulation will be taken as the definition of success. MAJ Ho also adds that as Operation Allied Force—which was what the North Atlantic Treaty Organisation's (NATO) air campaign over Kosovo was called—was an application of coercive airpower, he will address the efficacy of airpower in this context of coercive diplomacy and not within the realm of conventional war.

The fifth article, "Success and Defeat in the Second World War" is by MAJ Dzul Fazil. During WWII, many nations from all over the world were divided into two major alliances — Germany, Japan and Italy forming the Axis Powers and the Allied forces led by the 'Big Three,' i.e. Great Britain, the Soviet Union and the United States. In this article, MAJ Dzul firstly, analyses the strategic failure of the Wehrmacht, i.e. the German Armed Forces and the Imperial Japanese forces in WWII. Secondly, he examines the importance of having both tactical and strategic success as crucial factors to winning a war. Lastly, he explores the factors that allowed the Wehrmacht and the Imperial Japanese forces to succeed in their early conquest and the reasons why they failed at the very end.

In the article "*Strategy In The Battle For the Atlantic,*" LTC Rinson Chua Hon Liat critically examines whether it was the success of the battle of the Atlantic which ultimately led to the decisive victory of the Allied Powers in WWII. In his article, LTC Chua addresses why the Battle for the Atlantic offered opportunities for the Allies to implement strategies and invade Europe successfully. He also highlights both the Allies and the Germans' strategies, which would become the decisive factor for the Allies to win the war. He points out that victory in the Atlantic could only determine the survival of Britain, but could not assure an Allied victory in Europe. LTC Chua concludes that it was the disjoint between strategy and resource allocations on the part of Germany that ultimately led to her defeat in the battle and contributed to the outcome of WWII in Europe.

POINTER would like to bid farewell to two key members of the *POINTER* Editorial Board. We wish to thank COL Yong Wui Chiang and CWO Joseph Koa for their full support. *POINTER* has benefitted from their insightful observations on a wide variety of military subjects. *POINTER* would also like to extend its warmest welcome to ME7 Shue Pei Soon and CWO Tang Peck Oon as they join the *POINTER* Editorial Board. We would also like to welcome Bille Tan who joins *POINTER* as its new Assistant Editor. Welcome, Bille!

We also bid a fond farewell to PTE Alvin Ng. We thank him for all his contributions and wish him the very best in his future endeavours.

The *POINTER* Editorial Team

The Viability Of Deterrence Strategies By Non-Nuclear States

by **MAJ Wee Eng Peow**

Abstract:

Deterrence has always been a subject of concern for countries. In the event of a war, the military prowess of a small state might not be able to defend itself against a stronger opponent. The introduction of nuclear weapons could serve to protect a smaller state but the consequences it can bring to the nation and their aggressors are irreversible. This essay argues how Singapore as a non-nuclear state can achieve deterrence through conventional strategies and managing diplomatic relationships while ensuring that our sovereignty is not compromised.

Keywords: Deterrence Strategies; Conventional Force; Nuclear Weapons; Conventional Military Forces

INTRODUCTION

The question of the viability of deterrence strategies by non-nuclear states seems to suggest in itself that deterrence strategies involving nuclear weapons are more viable than those without. There is no doubt that one hydrogen bomb today can easily destroy an army of soldiers or, for that matter, an entire city. But powerful as they may be, nuclear weapons come with a lot of ramifications, from state alienation to a tradition of non-use, costs of acquisition and maintenance, security of storage and nuclear fallout. That said, nuclear weapons will continue to play an important role in deterrence strategies, so long as they still exist.

This essay argues that deterrence strategies by non-nuclear states are still viable while, conversely, deterrence strategies by nuclear states are not always effective. In order to determine the viability of deterrence strategies of non-nuclear states, it is necessary to first consider the roles that nuclear weapons play. Understanding the conditions under which nuclear weapons help or hinder aggression will aid in determining whether nuclear weapons improve or impair deterrence. The essay will highlight how nuclear acquisition can act as a nuclear counter-weight and an offset to conventional superiority, and also how deterrence can be achieved through non-nuclear means. To support generalisations made in the essay, various examples are drawn from the experiences of current nuclear powers as well as non-nuclear states facing nuclear and non-nuclear adversaries.

DEFINING DETERRENCE AND VIABILITY

For the purpose of this essay, we will adopt John Mearsheimer's definition of deterrence as the ability to "dissuade an opponent from initiating an aggressive action because the costs and risks of doing so do not justify the perceived benefits."[1] The important point to note here is the comparison of costs and benefits, before an aggressor initiates an action.

Merriam-Webster defines the term 'viable' as "capable of working, functioning, or developing adequately." Here, we must note that a 'viable' strategy is essentially one which is capable of working *adequately*, but not necessarily the *best* strategy. In other words, we can interpret that a deterrence strategy is viable so long as the state is able to dissuade an opponent from initiating a major offensive action to threaten her sovereignty.

Mushroom cloud of the atomic bomb dropped on Nagasaki by the United States Army Air Force (USAAF) B-29 Superfortress Bomber on 9th August 1945.

At this point, we also introduce the theory of Rational Deterrence.[2] The theory hinges on the fundamental assumption of *rationality*. Rational deterrence theorists posit that states will resort to war only when the expected net benefits of mounting a challenge to the status quo exceed the expected costs of overcoming the other state's defences. This theory further substantiates the point that rational states would not initiate an aggressive action, if the net benefits do not justify doing so. Therefore, to determine the costs of resorting to war, we must also take into account the effects of political and economic outcomes, not just military losses.

Based on the theory of Rational Deterrence, it is logical to exclude irrational actors when examining the deterrence factor of state actors. Irrational actors will include states which are ruled by psychopathic dictators or non-state actors such as terrorist groups. The motives of these actors to carry out acts of aggression are sometimes inexplicable and often for the purposes of fulfilling a personal vision, gaining attention or sympathy, showing dissatisfaction, or simply out of radicalism or individual heroism,

their inclusion will skew the results of mainstream deterrence.

Based on these definitions, we will interpret the term 'viability of deterrence strategies' to mean deterrence strategies used by a state actor to adequately dissuade other rational state actors from carrying out acts of aggression to threaten her sovereignty after weighing the costs and benefits of doing so.

NUCLEAR DETERRENCE

Earlier, we determined that deterrence encompasses an element of cost-benefit analysis, the result of which helps a rational aggressor decide whether to act or not. Building on this understanding, we rationalise that the acquisition of nuclear weapons by a state actor is, therefore, to raise the cost of aggression to the highest level possible. If this level of cost is intolerable to the aggressor, then he will not act, and hence deterrence is achieved.

Interestingly, while the theory sounds perfectly logical, in practice, the deterrence created by the 'absolute weapon' has been, paradoxically, less than absolute.[3] There are many reasons why nuclear deterrence has not worked as intended, amongst which some are aggression-related while others simply point to the disregard of nuclear deterrence.

The acquisition of nuclear weapons by a state actor is, therefore, to raise the cost of aggression to the highest level possible. If this level of cost is intolerable to the aggressor, then he will not act, and hence deterrence is achieved.

In order to determine the viability of deterrence strategies by non-nuclear states, we must first analyse the role played by nuclear weapons in both deterrence

and aggression, which are essentially two sides of the same coin.

> *"The strong do what they will and the weak suffer what they must."*
>
> *Thucydides[4]*

This familiar quote from Thucydides is essentially the mantra of those committed to *Realpolitik*, where politics is "based primarily on power and practical considerations, rather than ideological notions or moralistic premises."[5] By the same token, it is arguable that nuclear weapons are a modern manifestation of such coercive and amoral nature.

As a Nuclear Counter-weight

The race towards nuclearisation was sparked off by the first atomic bombs used by the United States (US) on Japan in the Second World War (WWII). Fortunately or unfortunately, the world was introduced to a weapon which was more definitive and absolute than any other conventional weapon. Its use on Hiroshima and Nagasaki forced the Japanese to surrender almost immediately, ending years of conventional fighting in the Pacific. Precisely because of this finality, both the Soviet Union (USSR) and subsequently China were convinced that their opponents would continue to use or threaten to use nuclear weapons to force them to accede to their demands, so long as they did not possess the ability for nuclear retaliation.

The Cold War era saw the entry of the USSR and China into the nuclear club, along with the United Kingdom (UK) and France. Notably, the two biggest producers of nuclear weapons were the United States (US) and the USSR. Together, they accounted for 98 percent of the approximately 128,000 nuclear weapons produced in the past sixty years.[6] What is interesting for us to note is that although the prowess of the hydrogen bomb has developed up to a thousand times more powerful than the original Hiroshima atomic bomb, no nuclear states had used it against an adversary since WWII.

To this end, we assert that nuclear weapons had induced 'nuclear peace' during the Cold War. Because both the US and the USSR possessed mutual second-strike retaliation capability, there could be no clear-cut nuclear victory for either side. Essentially, this is the balance brought about by nuclear parity. On the flip side, it is also the cause of fear for a nuclear holocaust. As described by the former US Secretary of State Madeleine Albright, the nuclear threat was like "each night we knew that within minutes, perhaps through a misunderstanding, our world could end and morning never come."[7]

An Offset to Conventional Superiority

Next, nuclear states can also use nuclear threats or attacks to offset the conventional superiority of an opponent. In situations where the military powers of two opposing states are too far apart, nuclear acquisition can make up for the lack of conventional deterrence from the militarily inferior state.

Conventional deterrence, however, has its limitations and need to be complemented by diplomacy, political alliances, and economic co-operations to be more effective in deterring an aggressor.

The conventional superiority of the US has been the target of offsetting nuclear deterrent threats. It is understood that Chinese nuclear weapons are intended to prevent US conventional power from being brought to bear in any conflict over the status of Taiwan. Similarly, the nuclear threat posed by Pyongyang "helps compensate for the inferiority of North Korean conventional forces vis-à-vis those of the US and South Korea (ROK)" and might "deter the alliance from trying to topple the Kim regime in the event of war."[8]

NON-NUCLEAR DETERRENCE

Earlier, we examined the roles played by nuclear weapons. We established that the purpose of nuclearisation has been to serve as a counterweight in the case of superpowers and as an offset to conventional superiority for some smaller states. However, thus far, we have not observed, by action or by threat, any rational state relying on the apocalyptic nature of nuclear weapons to further an expansionistic ambition.

In fact, precisely due to the apocalyptic nature of nuclear weapons, resorting to their use has become a decision of genocidal magnitude and not a matter of operational employment. Most, if not all, nuclear-armed states preach a non-use and/or no-first-use policy. This non-usability underscores Muthiah Alagappa's assertion that "total war between nuclear weapon states can serve no conceivable political purpose," as both parties would suffer "irreparable damage" which can take many years to recover, if possible at all.[9]

In the 2010 Nuclear Posture Review, President Obama also highlighted that the long term goal of the US is the "complete elimination of nuclear weapons."[10] With this as the backdrop, we see that even the world's most highly nuclear-armed state is reversing its nuclear posture to reduce and eventually eliminate its nuclear arsenals. From a practical standpoint, even before this review, we already observed that conventional military forces were involved in most of the military conflicts in the past half-century, regardless of whether the opponents possessed nuclear capabilities or not.

Some notable examples where conventional military forces were used against a nuclear adversary were the Berlin Blockade and the Korean War. In the 1948 Berlin Blockade, the Russians blockaded the US and her allies out of Berlin at a time when the US had "absolute hegemony in nuclear weapons and the means to deliver them" to Russian targets.[11] Similarly, in 1950, the North Koreans and Chinese attacked the American army in Korea when neither North Korea nor its allies had any nuclear retaliation capabilities.[12] These examples all point to the tradition of non-use or 'nuclear taboo' as a result of the catastrophes of Hiroshima and Nagasaki,[13] and the importance of a conventional military force.

In the context of non-nuclear deterrence, we observe that the geographically or numerically disadvantaged side tends to commit more efforts and devotes a larger budget to building up a credible deterrent force, as in the case of Singapore and South Korea. But relying on military might alone may not be sufficient to deter aggression and ensure the survival and sovereignty of these states. In the following sections, we will examine in greater detail how deterrence is obtained by these states.

Conventional (Military) Deterrence

Edward Rhodes posits in his study that "conventional deterrence is much less likely than nuclear deterrence to result in a robust, stable stalemate. Conventional deterrence efforts yield a fluid and competitive strategic interaction that buys time during which underlying disputes or antagonisms can be resolved."[14] This view highlights the usefulness of conventional forces while undermining that of nuclear weapons in 'traditional' conflicts.

Rhodes further argues that "threats to deny potential adversary its objectives are more likely to be effective than threats to punish or retaliate."[15] This supports the proposition for deterrence by denial over deterrence by punishment or retaliation (including using nuclear means). In order to convince the enemy that his aggression will be denied, the use of conventional military forces is necessary to obtain that deterrent effect. Singapore is a case in point.

Singapore devotes around 6% of her annual Gross Domestic Product (GDP) to build and maintain a credible Singapore Armed Forces (SAF).[16] Singapore's defence policy centres on diplomacy and deterrence, and is aimed at protecting her sovereignty and

territorial integrity.[17] To achieve deterrence, Singapore makes known clearly its defence spending, equipment procurement, and intention to defend her interests by force, if necessary. We can establish, at least empirically, that in the past half-century since her independence in 1965, no major acts of aggression had been mounted on the city-state.

Similarly, in the case of the South Korea, (ROK), their military is ready to "exact swift, immediate punishment against the North for any provocative act it may seek to perpetrate".[18] While the ROK military seems credible, some may argue that it is her close alliance with US that has kept North Korea at bay. Although the US may assist with nuclear retaliation, it is posited that the next Korean War, if any, would still be fought by conventional forces, judging from the devotion of both sides to conventional military build-up. In the same vein, we question if North Korea would have taken bolder offensive actions in the past 60 years if not for a strong conventional military force to protect the interests of South Korea. Conventional deterrence, however, has its limitations and need to be complemented by diplomacy, political alliances, and economic co-operations to be more effective in deterring an aggressor.

Politics and Diplomacy

War is not an end in itself. War, as defined by Clausewitz, is "an act of force to compel our enemy to do our will" and it is "merely the continuation of politics by other means."[19] By the same token, if differences can be settled through politics, it would not be necessary to go to war. Hence, politicians play a key role in averting military actions by practising diplomacy and forging political alliances in peacetime.

Diplomacy emerges when polities with distinct identities need to establish regular exchange relations while keeping their own identities. Therefore, diplomacy mediates and reflects a particular combination of universalism and particularism.[20] Essentially, this is what Singapore is trying to achieve for diplomacy.

Through close allies, non-nuclear states can also obtain some form of nuclear retaliation capability by seeking the protection of a nuclear-armed state.

Forums such as ASEAN Defence Ministers Meeting (ADMM), as well as ADMM-Plus and its Expert Working Group (EWGS) the ASEAN Regional Forum (ARF), the International Institute of Strategic Studies (IISS) Asia Security Forum (also known as the Shangri-La Dialogue), the ASEAN Chief of Armies Multilateral Meeting (ACAMM), and ASEAN Air Chiefs Conference (AACC) allow Singapore to discuss key issues and challenges on defence and security with its regional and extra-regional counterparts. Taking the lead in driving these forums also allows Singapore to exert its soft power to build diplomacy and foster practical security cooperation with the participants.

In addition, the SAF actively practises defence diplomacy with her neighbouring armies through frequent bilateral and multilateral exercises, personnel exchanges, contributions to regional Peace Keeping Operations (PKO) and Humanitarian Assistance and Disaster Reliefs (HADR) operations, such as PKO in East Timor and HADR mission to assist Indonesia in the aftermath of the 2004 Boxing Day Tsunami.

Through close allies, non-nuclear states can also obtain some form of nuclear retaliation capability by seeking the protection of a nuclear-armed state. Known as a nuclear guarantee, it is a commitment by one state to carry out nuclear retaliation on behalf of another. The US, for example, extends her nuclear deterrence to Japan, essential for the latter's commitment to and efforts for global nuclear disarmament and not start its independent nuclear weapons programme.[21]

Economic Co-operations

Political and economic motives are often closely intertwined. While the more outward aspect is nearly always political, the fundamental and more important cause of conflict is economic.[22] In the past, a country

may wage war to acquire a rich contiguous territory or distant colony for the purpose of economic or natural resources. In modern times, however, this is less likely as the economic systems of countries are built not only on tangible resources but also non-tangible industries, such as service, finance, and knowledge-related industries. Hence, economic co-operations usually occur more at the policy level, where free trade agreements, tariff policies, and restrictions on foreign direct investments are negotiated. Essentially, it is fair to assert that the more the economic co-operations in a dyad, the more dependent they are on each other in terms of economic survival and attracting foreign investments and the less likely one would be disposed to attack the other.

Again, using Singapore for example, she is an active member of the Association of Southeast Asian Nations (ASEAN) and ASEAN Economic Community (AEC). To ensure that her success is not posing a threat to the neighbouring countries, Singapore leverages on ASEAN as a platform to promote bilateral and multilateral relations. AEC allows the members to anchor on one another's strengths and widen the network and reach to regional and global markets. Leaders of member states would frequently hold talks to take stock of their co-operations and propose new ideas to deepen and broaden the co-operations. Such co-operations would deliver important trade and economic benefits to all member states while reinforcing bilateral and multilateral trades and investment linkages, resulting in closer integration of the economies of these states in the long run. Through this approach, Singapore develops and maintains friendly ties with her neighbours while continuing her success without inflaming a sense of resentment.

The case of Singapore illustrates the ability of a non-nuclear state to leverage on economic co-operations to turn her potential, aggressors into partnering members of a 'regional company', thereby deterring them from destroying their own 'money spinner'. In addition, such forums also allow for diplomacy building, settlement of differences or disputes by a peaceful manner and even renunciation of the threat or use of force.[23]

CONCLUSION

Nuclear weapons and deterrence strategies have been inextricably linked from the start of the nuclear era. But that does not imply that deterrence can only be achieved through the acquisition of nuclear weapons. In many instances, we have witnessed how non-nuclear states deterred aggression against nuclear as well as non-nuclear adversaries. It is therefore observed that conventional military forces still have a role to play in the nuclear age. At the same time, we also observed that deterrence strategies are most effective when they include other non-military aspects, such as political alliances, diplomacy, and economic co-operations.

While we acknowledge the role of nuclear weapons in deterrence, we also recognise that the effect of nuclear acquisition depends largely on who is acquiring the weapons, for what reason, and within what strategic context. Using examples of nuclear states, I have highlighted how nuclear acquisition can act as a counter-weight to a superpower and an offset to conventional superiority. On the other hand, I also used some examples of non-nuclear states to illustrate how deterrence can be achieved without resorting to nuclear weapons.

To reiterate, it is theorised in deterrence literature that a rational aggressor will only act if the benefits of resorting to war outweighs the costs of doing so. While it is true that the highest level of military deterrence is probably obtained by the possession of nuclear weapons, we argued that the costs of waging war should not be limited to military losses alone, but also to consider the losses of political alliances and economic co-operations. These considerations together form the deterrence 'package' offered by non-nuclear states.

In conclusion, this essay has argued that deterrence strategies by non-nuclear states are still viable while, conversely, deterrence strategies by nuclear states are not always effective. Non-nuclear states can rely on conventional deterrence, political

alliances and diplomacy, and economic co-operations to bolster the deterrence effect. The limited nature of modern wars, the tradition of non-use of nuclear weapons, and the fear of nuclear retaliation from nuclear guarantors can result in the failure of nuclear states to deter non-nuclear adversaries from mounting conventional wars on them. Under such circumstances, conventional forces and nuclear weapons will continue to find their own space to assert their roles in the military, without negating the viability of either in terms of deterrence. 🌐

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MAJ Wee Eng Peow holds a Master of Computing from the National University of Singapore and a Master of Science in Strategy and a Graduate Diploma in Defence Studies from the Nanyang Technological University.

He graduated from the 43rd GKS CSC as a distinguished graduate and went on to study at NTU under the SAF CE Masters Programme.

MAJ Wee is a Commando Officer by vocation and is currently holding the appointment of Deputy Head Intelligence Branch, HQ Commando.

Overcoming The Support Challenges In Network Centric Warfare—An Engineering And Logistical Perspective

by **ME5 Koh Boon Yeow**

Abstract:

Network Centric Warfare (NCW) affirms the improvements in efficiency in the transmission of intelligence between units during a military operation. The essay discusses the key challenges in the management of a Networked System of Systems (NwSoS), as well as a framework to overcome these challenges. The NwSoS will empower warfighters and commanders with greater communications capabilities, but this would only be successful in translating these aims into reality if engineers maintain and manage the system's capabilities well, and if the organisation sharpens its work processes to develop its overall and human capabilities in the operation of the system. This framework would better position the SAF to develop and sustain capabilities for its transformation journey into a 3rd Generation Armed Force.

Keywords: Networking Technology, Wireless Communications, Necessary Cross-Domain Skills and Competencies

INTRODUCTION

Network Centric Warfare (NCW) has been affirmed as the new basis for fighting and winning a country's future wars in this millennium. It has promised to change the future of warfare, provide operational commanders with near-instant access to force intentions, locations, tactics and other significant war-fighting information. Commanders will also be able to control their forces and deploy their weapons with a high degree of precision. Over the past twenty decades after Operation Desert Storm, many militaries in the world have invested heavily in the integration of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, driven heavily by the rapid advancement of computing and communications technology.

"The NCW concept is a technologically based process designed to harness the power of the Information Age by exploiting technological advances

to achieve dominance in the information domain."[1] It can trace its origins to 1996 when Admiral William Owens introduced the concept of a 'system of systems,' and described "the serendipitous evolution of a system comprising of intelligence sensors, command and control systems, and precision weapons that enabled enhanced situational awareness, rapid target assessment, and distributed weapon assignment."[2] In the same year, the Joint Chiefs of Staff of United States (US) Department of Defense (DoD) released *Joint Vision 2010*, which introduced and applied the military concept of full-spectrum dominance against adversaries from peace operations to conventional war through information superiority. Since then, the concept of information superiority has continued to evolve and grow in importance, and figures prominently in the sequel document, *Joint Vision 2020*, published in 2000. Under this vision, the US has invested a Global Information Grid (GIG), an overarching technical framework to
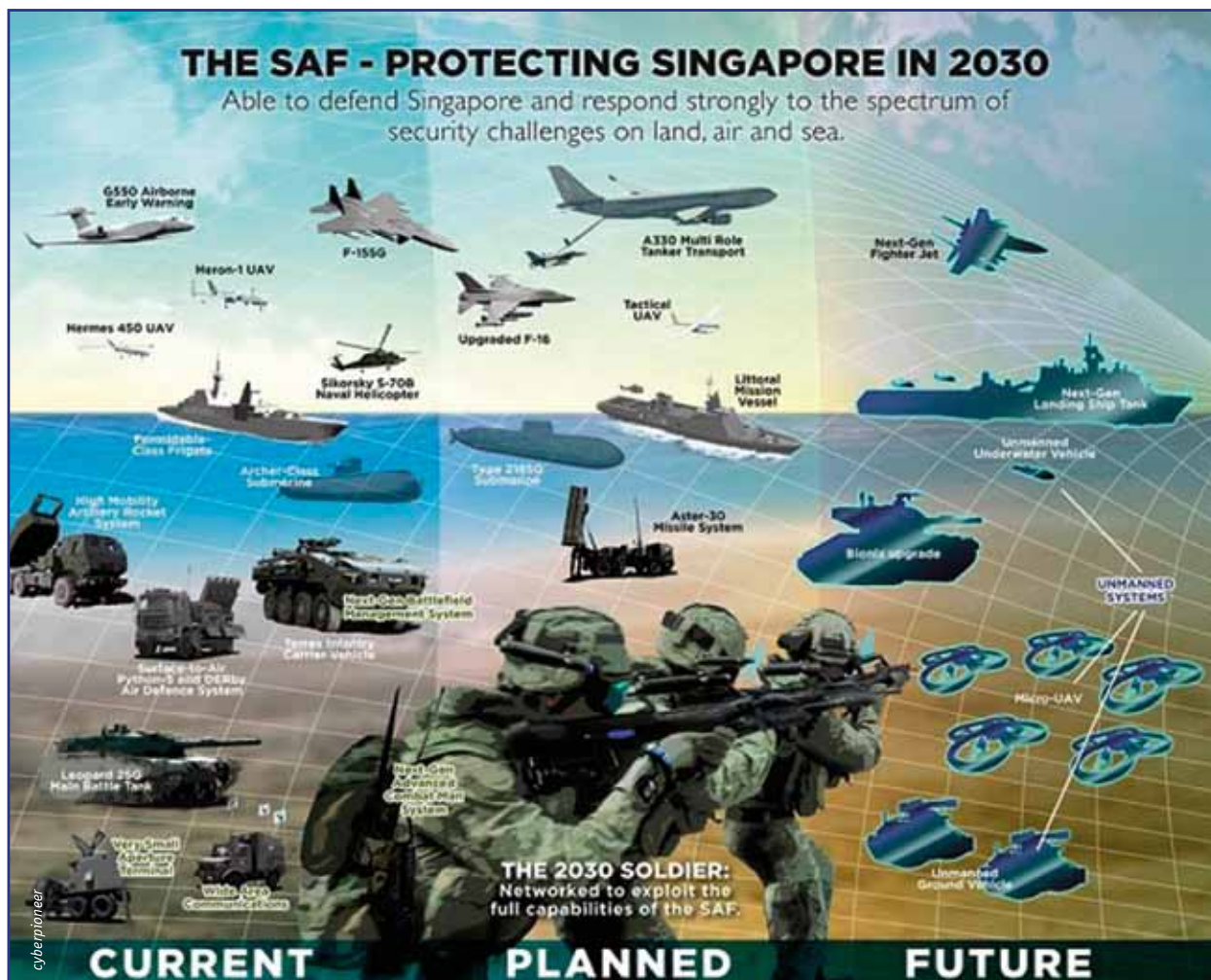
SAF plan to develop their network centric and integrated warfare. In the future, pilots, soldiers and sailors will be able to 'see, speak and orchestrate responses' together.

support US network-centric operations. "The GIG is the globally interconnected, end-to-end set of information capabilities for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policy makers, and support personnel. Most of the advanced weapon platforms, sensor systems, and command and control centres are currently linked via the GIG."[3] The GIG can be classified as a Networked System of Systems (NwSOS), which is a collection of task-oriented or dedicated C4ISR systems that pool their resources and capabilities together, connected by network and communications technologies, to create a more complex system or capability which offers more functionality and performance than simply the sum of its constituent systems.

"*With less than half of the ground forces and two-thirds of the military aircraft used 12 years ago in Desert Storm, we have achieved a far more difficult objective … In Desert Storm, it usually took up to two days for target planners to get a photo of a target, confirm its coordinates, plan the mission, and deliver it to the bomber crew. Now we have near real-time imaging of targets with photos and coordinates transmitted by e-mail to aircraft already in flight. In Desert Storm, battalion, brigade, and division commanders had to rely on maps, grease pencils, and radio reports to track the movements of our forces. Today, our commanders have a real-time display of our armed forces on their computer screen.*"[4]

Former US Vice President Richard Cheney

At the top management level, there is a need for senior leadership to be aware of information technology as a transformation enabler in doctrine and operations and to set a clear and committed vision to drive cultural change, so as to take full advantage of C4I technology.

However, the introduction of networking technology into warfighting systems has proven to be relatively challenging, somehow more complex and more long-drawn than the industry experience after the millennium.[5] Military networking, between constituent systems or platforms, is far more arduous than industry networking due to the heavy dependence on wireless communications, the high demands for security, the longer system life-cycles as well as the greater degree of interoperability issues. In particular, the engineering and logistical demands to develop and sustain these NwSoS are not trivial. The successful integration of these systems with minimal interoperability and security issues requires substantial efforts in testing and validation during the developmental phase. Even if the capability is achieved, there will be supporting challenges during the operations phase to ensure the reliability, availability and supportability of these networked capabilities. Processes for managing NwSOS need to be amalgamated and coordinated at the capability level instead of the traditional platform level, as achieving the capability involves the cooperation of many stakeholders from various platforms. Moreover, technical exploitation

cyberpioneer

SAF personnel on board the frigate's Combat Information Centre on constant vigilance to ensure effective communication with the naval helicopter.

must be a continuous process as C4ISR systems (predominately made up of commercial off-the-shelf (COTS) products, services, and technologies) are subjected to rapid obsolescence. Another key challenge is how to ensure that personnel have the necessary cross-domain skills and competencies to deal with the complexities of these networked capabilities. Therefore, there is a need to tackle these challenges holistically and systematically. To realise the full potential of networking technologies in militaries, a holistic framework to support an NwSOS is crucial. This essay is divided into two major parts. First, it covers the key challenges faced in the management of an NwSoS. Second, it suggests an overarching framework using a three-prong approach to sharpen the Singapore Armed Force's (SAF) support in NwSOS engineering, maintenance and system management, for the achievement and sustenance of each NwSOS operation and capability.

CHALLENGES

Achieving NwSOS capabilities have resulted in dramatic improvements in the operational effectiveness of militaries. The leverage provided by a common tactical situational picture and the rapid decision-making ability associated with it can dramatically change the pace, nature, and geographical range of engagement, providing the enabled forces with a much improved capability. However, there are several challenges to achieving the effective exploitation and sustenance of the potential offered by network technology. Under the US DoD's *Joint Vision 2010*, the Computer Science and Telecommunications Board (CSTB) of the National Research Council (NRC) formed the committee to review DoD C4I Plans and Programmes. The committee highlighted three major challenges: "interoperability, information systems security and DoD process and culture involving C4I."[6] These three challenges are broad ranging and fundamental, and serve as important considerations for developing initiatives within the SAF to best support its NwSOS capabilities.[7]

By embracing the development of a high-tech network-centric system, the SAF has to appropriately consider the challenges highlighted and establish a holistic plan to develop a set of initiatives to support its NwSOS capabilities. These areas include that of engineering, maintenance and logistical support.

INTEROPERABILITY

Joint, dynamic and systematic operations are key necessary fundamentals of Network-centric warfare. Therefore, ensuring operational interoperability of forces and technical interoperability in an NwSOS are key operationalisation milestones. Interoperability is defined in the military context as "the ability of systems, units, or forces to provide services to, and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together."[8] While achieving universal operability may not be possible and required, a high degree of interoperability provides the operational dynamism and effectiveness required, and enhances the 'force multiplier' effect during conventional warfare and peacekeeping missions. Interoperability at the technical level is essential to achieving operational interoperability in an NwSOS. However, achieving and sustaining technical interoperability among systems are often challenging, and require extensive rigour of integration testing and validation. There are four key challenges identified.

First, as most militaries often contain a mix of legacy and new systems, as well as heterogeneous equipment from different manufacturers using proprietary technologies, the type of communications technology employed in these systems could be vastly different, making successful integration a laborious task. This is compounded by the phenomena of rapid
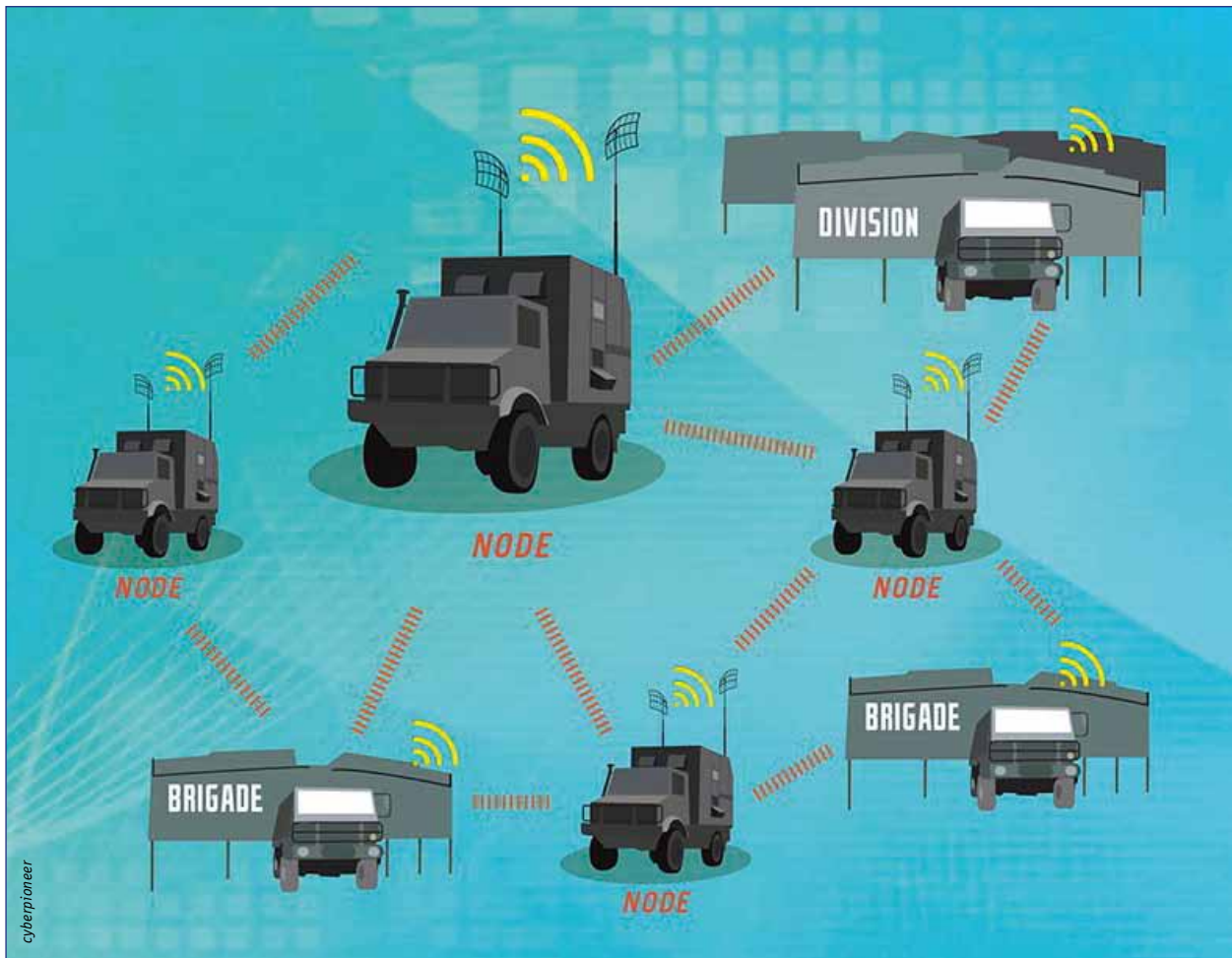
The SAF's communications hardware goes digital as it gets upgraded to cater to the increasingly demanding communication needs of the 3rd Generation fighting force.

technological change, especially on COTS equipment, which makes sustenance of any NwSOS capability challenging due to faster obsolescence.

Second, there are often inadequacies of interoperability standards and lack of governing bodies to set policies and govern the information exchange among systems.

Third, systems integration testing to ensure interoperability poses practical difficulties due to a lack of availability of equipment, especially if there is a shortage of systems that replicate essential elements of the operational system and all integration testing must be performed on operational systems.[9]

Fourth, the lack of synchronisation of timelines for developing interdependent systems within an NwSOS may lead to interoperable issues. "If two systems are to be pairwise interoperable, design decisions in developing one system may have an effect on the development of other systems. If the first programme is significantly delayed, the other programme may have to proceed without those decisions being made, with the likely result that interoperability in the end may be severely affected."[10]

As a result of all these challenges, there is a need to build supporting systems and tools to facilitate interoperability testing, as well as establish technical standards and procedures in the architecture to ensure interoperability despite changing technologies.

SYSTEMS SECURITY

"The cyberspace domain is growing in complexity and influence, highly connecting commercial, governmental and private equipment, networks and systems."[11] All countries in the information age realm are becoming increasingly more susceptible to hostile activities in cyberspace. The importance of Network and Computer Technologies (NCT) in militaries will provide a larger impetus for any adversary to attack those systems through cyber-attacks. During World-Wide Threat Hearings in early 2009, US Director of National Intelligence Admiral Blair stated "our information infrastructure is... becoming vulnerable to catastrophic disruption in a way that the old analog decentralised systems were not. Cyber systems are being targeted for exploitation and potentially for disruption or destruction by a growing array of both state and non-state actors."[12] Successful cyber-attacks on military systems can be disastrous, with severe negative strategic and psychological implications to a country. As a case in point, the cyber-attacks against Georgia during the 2008 South Ossetia War represented a strategic challenge to a country's national security. One such example of cyber-attacks included the replacement of the websites of the Parliament of Georgia as well as the Georgian Ministry of Foreign Affairs by images comparing Georgian president Mikheil Saakashvili to Adolf Hitler.[13]

In May 2009, President Obama characterised the cyber threat as "one of the most serious economic and national-security challenges we face as a nation."[14] According to William Lynn, Deputy Secretary of Defense, "(the) cyber threat to the Department of Defense represents an unprecedented challenge to our national security by virtue of its source, its speed and its scope."[15]

Cyber-attacks could be direct or indirect, and likely to be asymmetric ones that exploit a country's vulnerabilities.[16] "The vulnerabilities can be generally classified into four areas – unauthorised access to data, clandestine alteration of data, identity fraud as well as denial of service. Denial of service is, in the view of many, the most serious vulnerability, because denial-of-service attacks are relatively easy to carry out and often require relatively little sophistication."[17] There are several key challenges to Information Security. One of them is the asymmetry between Defence and Offence. Cyber offense is easier and faster than cyber defence, as effective defence must be successful against all attacks, whereas an attacker needs to succeed only once.

Another challenge is the increasing use of COTS technology on networked systems for reasons of cost competiveness and interoperability. COTS components are generally classified to have multi-functions, but highly complex with a large number of software bugs. This increases security risks as the security mechanisms available in COTS products are controlled by the developers of these products, and system architects may be unaware of some of the weakness in the software building block components. Moreover, because technology is advancing at such a rapid pace, the militaries and the defence industries must constantly develop new techniques to prevent intruders from disrupting our operations.

There is therefore a need to deeply understand the intentions of one's adversaries and develop effective and evergreen defensive strategies, to protect the confidentiality, integrity and availability of information.

CULTURE AND COMPETENCY

While both C4I interoperability and C4I security are more technical and operational in nature, instilling the right culture and developing key competencies among the supporting personnel are important aspects to exploit the leverage afforded by C4I technology to its fullest potential. The organisational

structure, purpose and policies must align with the network centric support strategy to cultivate the necessary culture and competencies. Leadership emphasis and persistence are important factors to shape the right culture.

At the top management level, there is a need for senior leadership to be aware of information technology as a transformation enabler in doctrine and operations and to set a clear and committed vision to drive cultural change, so as to take full advantage of C4I technology. Leaders must ensure that personnel have the necessary knowledge, skills, and values to maximise these changes. Moreover, there is a need to institute the right processes and linkages to coordinate capability development thrusts and foster the right culture for jointness and interoperability. Focus groups must be formed to tackle issues faced in NwSOS, so that they can respond rapidly and effectively to cross-domain situations. As systems are highly networked, there is need for the supporting personnel to develop the necessary skills set and cultivate the 'soft competencies', such as adaptability, team excellence and macro thinking. They will have to overcome the constraints of the 'platform' centric approach and embrace a common purpose and vision to deliver integrated operational capabilities by bridging stove-piped constituent system operating procedures and mindsets.

PROPOSED FRAMEWORK: A 3-PRONG APPROACH

The SAF is embarking on a transformation towards a network-centric, dynamic and integrated warfighting concept, and a large part of SAF's capabilities are networked, leading to complex NwSoS. By embracing the development of a high-tech network-centric system, the SAF has to appropriately consider the challenges highlighted and establish a holistic plan to develop a set of initiatives to support its NwSOS capabilities. These areas include that of engineering, maintenance and logistical support. Many militaries in

the world, including the SAF, have gained significant experience and knowledge in supporting standalone platforms. However, with the new generation of systems being highly networked together, there is a need for the SAF to review the old methodology of support and focus on 'Capability' rather than on 'Systems.' This essay suggests a 3-prong approach: *Developing support systems, formulating the right processes and structures, and nurturing people.*

DEVELOPING SUPPORTING SYSTEMS

Due to the criticality and complexity in operating and managing each NwSOS, it is important to develop a set of NwSOS supporting systems that will sharpen its operational capability, ensure the safety of operation and provide information assurance. These systems are largely categorised into three types: Integration/Validation, Monitoring and Control & Cyber Defence Systems.

First, to perform C4I integration testing, validation and verification during initial project development or subsequent capability enhancements, it is worthwhile for the SAF to invest in relevant test and integration facilities to replicate essential elements of the operational system in an NwSOS. Integration and Standalone Software Tests can be conducted using these facilities instead of using the actual operational systems, and this will greatly reduce the time and costs to uncover interoperability issues before the operational release of a NwSOS capability. Moreover, performance boundaries of the capability can be tested using these facilities without compromising safety.

Second, logistics responsiveness can be increased dramatically by developing a monitoring and diagnostic system for each NwSOS, and perform functions such as real-time monitoring of the operational status of the entire NwSOS, configuration control, analysis of network performance and network optimisation. This greatly shortens the logistics Observe-Orient-Decide-Act (OODA) cycle by allowing operations and logistics

planning cycles to occur almost concurrently instead of sequentially. With an OODA cycle faster than the adversary, we will be able to effectively disrupt the adversary's OODA cycle, resulting in an important strategic advantage.

Third, the strategy of Proactive Cyber Defence must be deployed to guard against cyber-attacks on the SAF's computers and networks. It comprises of prevention, detection, defence as well as recovery from cyber-attacks. Supporting systems need to be acquired to reduce the vulnerabilities of cyber-attacks. Some of the required functions include "collecting, analysing, and disseminating strategic intelligence about threats and systems, monitoring indications and warnings of impending attacks, testing for security weaknesses in fielded and operational systems."[18]

FORMULATING THE RIGHT STRUCTURES AND PROCESSES

To ensure interoperability and instil a strong supporting culture, there is a need to strengthen the way the SAF has been supporting stove-piped systems. This can be achieved by bringing together the right expertise and representations from the constituent systems to tackle networked capability management issues. An integrated system management team can be formed to integrate various operating, maintenance, system management and engineering agencies as a team for supporting the NwSOS capability. The team will be entrusted with the responsibility to manage the NwSOS capability in a holistic and integrated manner. The main focus will be on ensuring and optimising interoperability of the constituent systems to ensure high availability and continuous operations of the required networked capabilities. The structured setup of the team with clearly defined roles and terms of references provides a common platform for cross-disciplinary exchange and sharing of knowledge, endearing teamwork and instilling collective ownership of the NwSOS. Through this collective ownership,

complex system failures due to tight coupling and interdependencies between constituent system that falls within ill-defined boundaries or "grey" areas can be tackled and resolved in a collaborative and synergistic manner.

In April 2012, the SAF inaugurated the C4I community to bring together the entire C4 network and intelligence elements, which previously existed separately across the Services, with the mission to support and grow the networks that provide the SAF with its edge in information superiority.

There is also a need to formalise a safety and governance body to formulate policies to define the NwSOS safety, information assurance and performance qualification framework, as well as tools and testing methodologies to guide all NwSOS integration testing, verification and validation for the SAF. Besides forming an integrated systems management team to manage all NwSOS issues, it is important for the Republic of Singapore Air Force (RSAF) to have an informal medium for sharing and exchanging of ideas, good practices and useful lessons learnt with regards to the engineering, maintenance, security and operations aspect of NwSOS. The formation of an NwSOS Community of Practice may be beneficial for stakeholders from various constituent systems to develop a common experience, construct a shared meaning and create an opportunity to develop professionally and personally.

NURTURING PEOPLE

Besides having the right processes, the increased sophistication of C4I capabilities demands a more proficient level of NwSOS competency among our personnel. In April 2012, the SAF inaugurated the C4I community to bring together the entire C4 network and intelligence elements, which previously existed

separately across the Services, with the mission to support and grow the networks that provide the SAF with its edge in information superiority.[19] This reflects the SAF's strong emphasis on developing NwSOS professional skills in its people by building expertise and knowledge.

There is a need to identify the deep expertise and competencies required to support the SAF's networked capabilities. Therefore, an NwSOS Expertise Map can be crafted to map out the expertise areas required. The expertise domain of the NwSOS Competency is segregated into three different expertise domains: *Architecting, Engineering and Operating* the RSAF NwSOS. In Architecting domain, the competencies required pertain to dictating the network architecture, network design and future development of the NwSOS. One of their primary concerns will be to ensure that each NwSOS continues to have enough capacity to meet increasing operational demands, and to ensure that the new systems integrated are interoperable with the existing ones. In the engineering domain, the competencies required pertains to providing critical NwSOS governance functions such as NwSOS Safety Assessment and Hazard Analysis, NwSOS Integration Testing, Verification and Validation and the NwSOS Information Assurance Strategies.

Concurrently, competencies to provide core engineering functions such as reliability enhancements, technical investigations and capability improvements for the NwSOS are required in this domain. This expertise will include systems knowledge in the constituent systems, as well as the specific network and information assurance technologies enabling the network capabilities. In the operating domain, in-depth knowledge of how the NwSOS is configured, how the network equipment is customised for the military and the characteristics of the constituent systems is critical. Therefore, operating personnel must have key skills and competencies in the network monitoring, configuration control and security management, and network performance analysis, contingency and recovery solutioning and cyber defence planning. This operating expertise is usually built up through actual experience in handling, implementing engineering solutions to problems in ensuring and sustaining the delivery of the NwSOS capabilities. An NwSOS Professional Competency Roadmap for different groups of supporting personnel can be developed based on the expertise areas identified.

Moreover, there is also a need to develop broader domain-based engineering and maintenance competencies across the constituent systems. This can be achieved by actively deploying personnel who have acquired deep expertise on their active domains/platforms to other types of domains/platforms. Moreover, identifying and sponsoring suitable personnel to pursue higher education in Network, Communications or relevant fields will aid the anchoring of deep NwSOS expertise in the SAF.

CONCLUSION

NCW aims to empower warfighters and commanders with a significantly improved sense-and-respond capability via a NwSOS. However, translating these aims of NCW into capability-enhancing reality for the SAF will not be easy. An interoperable, secure, responsive and reliable NwSOS forms the cardinal requirement for success and, the SAF must focus on sharpening its work processes, developing its organisational and people competencies, and enhancing systems' capabilities in the area of NwSOS engineering, maintenance and system management, to reap the full benefits of NCW. This suggested framework would better position the SAF to develop, enable and sustain capabilities required for its transformation journey to a 3rd Generation Force. 🌐

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ME5 Koh Boon Yeow is an Air Force Engineer by vocation and is currently the Commanding Officer of 819 SQN. He was awarded the Local Study Award and graduated from National University of Singapore with a Bachelor of Electrical Engineering (Second Class Honours (Upper)). He was subsequently awarded the SAF Postgraduate award to pursue a Masters of Science (Communications Engineering) from the Nanyang Technological University. He graduated from the 44th Command and Staff Course, Goh Keng Swee Command and Staff College in 2013

The 'CNN Effect' and the 'New Media'—Its Value and Challenges to Governments and Its Military in United Nations Peace Keeping Operations

by **MAJ Edwin Ong Eng Kuan**

Abstract:

With technological advancement in communications, news media, dubbed the 'CNN Effect' is now able to broadcast live from anywhere on the globe. The 'New Media' creates both positive and negative impacts which can affect the reputation of an organisation and even the peace and security of a nation. In any military operation, news media must be actively engaged to influence homeland public opinion that the risks involved are calculated and necessary to further its national interest, win support of the stakeholders of the country in conflict, in order to achieve the desired objectives and end-state of transiting from conflict to peace and garner influence with the international community that the participating country is playing its role as a responsible global citizen.

Keywords: New Media; Technology; Affect the Reputation; Appropriate Management

INTRODUCTION

"Once the commitment is made and the soldiers go, the minicams will be there, and we must prepare the troops for the roll (and the role) of the CNN video. If policy makers and military leaders hold no vision of the human face of our commitments, if they tell no stories from the heart of the how, and the why of our military actions, then others will do it for them, and the results may not be to their liking."

Frank J. Stech[1]

With technological advancement in communications, news media, dubbed the 'CNN effect' is now able to broadcast live from anywhere on Earth. This has set United Nations Peace Keeping Operations (UNPKO) into a global theatre, where decisions and actions of the strategic policy makers and military commanders are scrutinised 24/7 before a live camera that never blinks. With the emergence of 'New Media' such as Short Message Service (SMS), YouTube, Wikipedia, Facebook, Twitter and Internet Forums, this effect has

been amplified. "Yet exactly what those effects are, when they are likely to be seen, and even whether they exist at all is the subject of intense debate."[2]

"The 'CNN Effect' and 'New Media' can be viewed as a double-edged sword, both as a strategic enabler and a potential operational risk."[3] In UNPKO, winning the hearts and minds of the people, at home, in the international community and the country in conflict is of paramount importance. This can only be achieved through the means of global media communication to influence the people. With this, it can be argued that the role of both the news media and the 'New Media' are essential to achieve mission success in UNPKO.

In this essay, I will firstly clarify what the 'CNN Effect' and 'New Media' mean and state its influence on governments and its military. Secondly, I will move on to discuss the military-media relationship and highlight the media effects in UNPKO. Thirdly, I will elaborate on the value and challenges of media effects

in UNPKO. Finally, I will attempt to deliberate on how it matters to the SAF.

THE CNN EFFECT

"CNN is the sixteenth member of the UN Security Council."
Former UN Secretary General Boutros Boutros-Ghali [4]

"The phrase 'CNN effect' encapsulated the idea that real-time communications technology could provoke major responses from domestic audiences and political elites to global events."[5] This statement highlights the suggested impact of the 'CNN Effect'. According to Associate Professor Steven Livingston, there are at least three distinct conceptual understandings of CNN effects: (1) "a policy agenda-setting agent," (2) "an impediment to the achievement of desired policy goals" and (3) "an accelerant to policy decision-making."[6] (Table 1 provides an outline of these effects).

CNN EFFECTS	DESCRIPTION
Agenda Setting Agency	An emotional, compelling coverage of atrocities or humanitarian crises may reorder foreign policy priorities. Some examples are: Somalia, Bosnia and Haiti.
Impediment	Two types: 1. An emotional grisly coverage may undermine morale, result in government attempts to sanitise war and limit access to the battlefield. 2. A global, real-time media may constitute a threat to operational security.
Accelerant	Media may shorten decision-making response time and television diplomacy is evident. During times of war, live, global television offer potential security-intelligence risks, But, the media may also be a force multiplier and a method of sending signals. This is evident in most foreign policy issues which receive media attention.

Table 1: Conceptual Variations of CNN Effect.[7]

Policy Agenda-Setting Agent

"To put it another way, media-as-agenda-setting-agent argues that the choices and selections of national interests are too heavily weighted in favour of what happens to get covered by CNN or other media."[8] Steven Livingston suggested that the 'CNN Effect' does not influence every national interest, but rather selected national interest that happens to be covered. Does the news media set its own agenda or do policy makers or even the public influence it?

"Media reports can give a false impression through a tendency to 'tunnel vision'—to report on only what is seen through a camera lens."[9] News media is after all, reporter and organisation biased; it has the ability to frame events and report according to its own agenda to influence the public. A case in point is the role of Qatar based, international news channel, Al Jazeera. "For years, critics have assailed what they see as anti-Semitic, anti-American bias in the channel's news content. In the wake of 9/11, Al Jazeera broadcast statements by Osama bin Laden and reported from within the ranks of the Taliban, earn a reputation as a mouthpiece for terrorists."[10] Nevertheless, there is little doubt that policy makers have the ability to exploit the news media as in the case of the Communist leadership in North Korea. There is also

cause to believe that the public drives the news media to cover events that interest the people. After all, the goal of the news media is monetary driven and this can only be attained through high viewership. There is no doubt about the agenda-setting impact of the 'CNN Effect' but exactly how great is its impact?

News media is after all, reporter and organisation biased; it has the ability to frame events and report according to its own agenda to influence the public.

In the wisdom of Kofi Annan, then Secretary-General of the UN, "When governments have a clear policy, they have anticipated a situation and they know what they want to do and where they want to go, then television has little impact. In fact, they ride it."[11] It is critical to note that the agenda-setting effects of the 'CNN Effect' differ under different conditions. Warren P. Strobel reinforced this by stating, "The findings suggest that the news media's impact is highly dependent on the nature of the proposed intervention and the degree to which government policy is in flux, and that this impact may decline over time."[12] This was illustrated in the case of the 1994 Rwanda Genocide. Although the media coverage of the Rwanda events was more intense than that of Somalia in 1993, the American government did not intervene. This was due to the Clinton administration's new position on engaging in peace operations that was shaped after the Somalia experience, including the potent criterion of having an 'exit strategy' from operations.

To sum it up, a clearly communicated positioning and policy by the military and its government will be able to negate the agenda-setting impact of the 'CNN Effect'. This is succinctly articulated by Warren

P. Strobel, "The effect of real-time television (and news media reports in general) is directly related to the unity, coherence, and communication of existing policy. If there is a policy vacuum or if officials are searching for a new policy, media reports can have a decided effect. Conversely, media reports have little or no effect on a policy that is widely and strongly held within an administration, has been well communicated, and has congressional and public support."[13]

Impediment to the Achievement of Desired Policy Goals

There are at least two types of news media-related policy impediments: (1) 'as an emotional inhibitor' and (2) 'as a threat to operational security.'[14]

The enormous negative coverage of the Vietnam War exemplified how the 'CNN Effect' had served as an emotional inhibitor, undermining the American public support for the campaign and at the same time, eroding the morale of soldiers. In 1993, the same impact was evoked in the UN Operations in Somalia (UNOSOM II), when "the gruesome images of the naked body of one dead United States (US) Special Forces crewman being dragged through the streets of Mogadishu, plus a video of the shaken Chief Warrant Officer Michael Durant forced—via Congressional pressure—President Clinton's announcement of a phased US withdrawal from the Somalia UN operation."[15]

The news media's role in the Manila bus siege best supports the idea of the 'CNN Effect' as a threat to operational security. "When the assault on the bus was carried out, footages of the Special Weapons And Tactics (SWAT) teams were shown by various television networks starting from the time the assault teams were deployed, the positions they took and the attempts to breach the bus."[16] This posed serious operational security risks to Special Forces, be it police or military.

Wikipedia (User: Sakuradate [CC BY - SA3.0])

The bus in which the hostages were held in the 2010 Manila Hostage Crisis.

The hostage taker had full situational awareness of the activities by the SWAT teams on the television in the bus and this deprived the element of surprise for the SWAT teams. The element of surprise is essential in any military operation to ensure its mission success and safety of the combatants and civilians.

Accelerant to Policy Decision-Making

"Here it is, the nexus of media power and foreign policy, where television's instantly transmitted images fire public opinion, demanding instant responses from government officials, shaping and reshaping foreign policy at the whim of electrons. It's known as the 'CNN Effect'.[17] This statement highlighted how the speed of telecommunications has hastened the time

available for policy makers and military leaders to conduct an analysis of the situation and make sound decisions. This was illustrated in UNOSOM II (1993), when a US Army Cobra helicopter overflying Mogadishu fired a tube-launched, optically-tracked, wire-guided (TOW) missile at a Soviet-made rocket launcher near one of the populace's enclaves. In the subsequent daily briefs to the news media, the US Army media spokesperson, Major David Stockwell reported the incident and was challenged by the media with a video showing two missiles being fired instead.[18] The political and military bureaucracies are organisations that are hierarchal in nature. In the eyes of the public, the time required for policy makers and military leaders to make sense of the situation is considered overlong.

The 'CNN Effect', in this instance, has turned the policy making game and military campaign into a battlefield where stakeholders must be viewed as capable of managing situations and taking a stand.

THE NEW MEDIA

"Some traditional means of communication have become less relevant, and the rise of Web 2.0 confronts us with a fresh set of challenges and opportunities."

Lieutenant General William B. Caldwell IV [19]

"Broadly defined, new media are those consumer level digital devices and the forms of instantaneous, interactive communication they make possible because of their integration with global communications networks."[20] The advent of consumer mobile devices such as smart phones, portable tablets and computers, and its technological advances in image and video capturing capabilities and internet connectivity have magnified the 'CNN Effect' into the 'CNN Effect Plus.'[21] Citizens are recording images and videos of events as it happens and transmitting it to the news media, enabling television networks to cover events without its reporters on site. This in turn, places soldiers under constant public scrutiny to uphold the image of its military organisation and government. Beyond enhancing the news media's reach, the 'New Media' has introduced additional platforms for information sharing.

The 'New Media' has empowered virtually anyone to broadcast information through outlets such as the internet and mobile networks.

"People around the world are now both consumers and contributors. The open-ended and even democratic nature of the new media allow users to bypass traditional gatekeepers such as editors and producers."[22] The 'New Media' has empowered virtually anyone to broadcast information through outlets such as the internet and mobile networks.

Operational security risk became inherent within militaries and governments as in the case of the Israeli soldier revealing details of a military operation on Facebook.[23] The way diplomacy is conducted has changed, since the Wikileaks episode and yet its motives remain debatable.[24] The impact of communication applications on mobile networks can no longer be ignored. This was demonstrated by the role of BlackBerry Messenger (BBM), where it was instrumental in coordinating the 2011 London Riots—it was free, instant, a part of a much larger community than regular SMS, covert and more importantly, untraceable by the authorities.[25] However, the strength of the 'New Media' lays not in its connectivity to the people as a platform beyond the news media.

"With Social Media, you need to build a community or get involved in an existing community to get your message out. With traditional media, there is no community building."[26] With the emergence of Social Media such as Facebook, Twitter and Internet forums, "web-users are not only able to post their comments on news sites but also write and publish their own thoughts while participating in real-time discussions online."[27] This in turn, led to like-minded people forming online communities and initiating social movements. It has an immense influence in shaping public opinion and has "played a central role in shaping political debates, as observed in the Arab Spring."[28]

UNDERSTANDING THE MILITARY-MEDIA RELATIONSHIP

"We are, simultaneously, both your supporter and your detractor. By virtue of that characterisation we will remain, under the best of circumstances, allies in separate trenches."

U.S. Army Major David Stockwell [29]

Singapore Army Facebook Page

A Facebook post of the Singapore Army which garnered about 5,400 likes and 468 shares shows how 'New Media' reaches out to a wide community that is able to participate in real-time discussions.

On the Media and the Military

"The military want to control, as much as possible, everything on the battlefield or area of operations. On the other hand, the reporters want unfettered access to all aspects of the operation. Commanders worry over leaks of information that might compromise an operation. Keeping secrets is anathema to a reporter. Exacerbating these divergent tendencies are the different personalities the two professions attract. The military attracts people who follow rules; the media attracts those who thrive on 'less is more' when it comes to establishing rules for reporting."[30] The military interest is in the safety of its soldiers, operational security and success of the mission, while the media's interest is in the public's right to know and the reporting of timely news. The characterising of the tense relationship between the military and the media is not unique to any one country or society. The differences between two professions in organisational structure, institutional culture and professional ethos are universal and are constantly divergent.

Is there a relationship between the military and the 'New Media'? Can there be a relationship when the stakeholders in the 'New Media' are ever-changing?

It is clear that it is impossible to control the media content in the unregulated internet world, where web-users are both the consumers and contributors. Engaging online communities will require the same clear positioning and communication of policies as with the news media. In addition, engaging 'real-time' online discussions will require the military and policy makers to remain clear headed and not convey an incorrect position of policies and situations.

MEDIA EFFECTS IN UNPKO

"You have to have the pictures."

~ Roy Gutman, Pulitzer Prize-winning reporter for Newsday.[31]

In the context of a UNPKO, the impact of the media (both 'CNN Effect' and the 'New Media') is dependent on the stability of the mission situation. "Put another way, the more fragile the peace the peacekeepers are there to protect, the greater will be media and public interest."[32] The media will be constantly looking for interesting events that may be extraordinary, disgraceful, scandalous or even heinous. A series of mischief to disrupt elections of the country in conflict will not excite the news media as much as an heinous act of killing a massive number of people by a suicide

bomber, such as the case of Iraq's parliamentary elections day.[33] Likewise, the capture of rebels and progress in the security of a country in conflict will not generate as much headlines as a disgraceful act of prison wardens on the Prisoners of War (POW)—a case in point was the notorious Iraqi prison, Abu Ghraib.[34]

Hence, it can be argued that the media effect in UNPKO serves as an 'impediment to the achievement of desired policy goals', where it is largely an 'emotional inhibitor'. Warren P. Strobel reinforces this by stating "the potential for media impact is far greater once a mission has begun than it is prior to the decision to intervene. The media has a stronger effect of pulling a peace operation out of a crisis-ridden country than they do in pushing one in."[35] As long as policy makers have a clear positioning of policies on its country's involvement in UNPKO, the media impact is limited. However, there will be exceptions, such as to the super powers like the United States, where it has a global responsibility to lead in times of need. It is only upon the commencement of the mission and deteriorating stability that will place pressure on policy makers and its military to balance between maintaining the desired end states for the country in conflict and protecting its national interests.

In UNPKO, where the core business of the peacekeeper is to maintain the cease-fire truce and oversee the transition from conflict to peace, there may be instances of requiring the peacekeeper to be involved in the latter parts of peace enforcement and peace-making, as well as the early stages of peace building.[36] Nonetheless, the risk on operational security is relatively low as the focus of peace keeping is on fostering support and building trust between the international community, peacekeepers and the local populace, which requires openness and unbiased reporting and sharing of information.

VALUE OF THE MEDIA IN UNPKO

As explained earlier in this essay, the role of the 'CNN Effect' is essential to any military operation and that includes UNPKO. The news media must be actively engaged to: (1) influence homeland public opinion that the risks involved are calculated and necessary to further its national interest (2) win support of the stakeholders of the country in conflict, in order to achieve the desired objectives and end-state of transiting from conflict to peace and (3) garner influence with the international community that the participating country is playing its role as a responsible global citizen. Beyond engaging the news media to achieve strategic goals, reporters from the news media can serve as an avenue for intelligence at the tactical level. The reasons are, "first, they may be in country before operations begin, as in Haiti, Bosnia, and Somalia. This gives them important first-hand knowledge of the people, its culture, the landscape, and events leading up to the operations. Second, reporters can sometimes move about the area of operations more freely than uniformed military can."[37]

Beyond engaging the news media to achieve strategic goals, reporters from the news media can serve as an avenue for intelligence at the tactical level.

Likewise to the 'CNN Effect,' the 'New Media' is able to achieve the same strategic outcomes as discussed earlier and may even accomplish it better with its capability to conduct 'real-time' online discussion. Beyond traditional news reports that are communicated to the public, weblogs and 'Social Media' such as YouTube allow stories to be told at a personal level, putting a 'face' to it. The 'New Media' also allow peacekeepers to communicate with their families, sustaining their morale for the mission.

CHALLENGES OF THE MEDIA IN UNPKO

With the focus on information openness to achieve transition to peace, the operational security risk is low. However, it still presents ample opportunity for any adversaries to collect intelligence such as the case of elections, where the location of polling booths and poll accounting centres are easily known. More often than not, the challenges of UNPKO is not on the media, but rather on the negative actions of the peacekeepers that will most definitely be captured by the news media or transmitted through the 'New Media.'

Unique to the characteristics of the 'New Media' is the empowerment of any web-user with unregulated posting of information and the unprecedented speed of information sharing. This presents a challenge for reputation and damage control to the military and its government as the 'truth' may be distorted by web-users to undermine the mission's efforts.

HOW IT MATTERS TO SAF

"The mission of MINDEF and the Singapore Armed Forces is to enhance Singapore's peace and security through deterrence and diplomacy, and should these fail, to secure a swift and decisive victory over the aggressor."[38] One of several means to achieve deterrence and diplomacy is through the SAF's participation of UNPKO. The media's positive portrayal of the SAF as a credible armed forces in UNPKO is two-fold: one that builds deterrence and diplomacy against would be adversaries and allies respectively, and one that strengthens homeland support, bonding the social fabric with the military.

CONCLUSION

"Once you've got all the forces moving and everything's being taken care of by the commanders, turn your attention to television because you can win the battle or lose the war if you don't handle the story right."[39] This statement by Colin Powell epitomises the role of the media in military operations. It is of paramount importance to strategic policy makers and military leaders to actively engage both the news media and the 'New Media' to achieve the desired strategic end-states in UNPKO. The challenges of the media in UNPKO missions are not what the media does, but rather what the military and its government do. So long as there is a clear positioning of strategic

One of the SAF's New Media outlet, which also includes a Facebook, Twitter, YouTube and Flickr account

policies and professional conduct of the military in operation, the media impact will remain limited. ⊕

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MAJ Edwin Ong Eng Kuan is a Guards Officer by vocation and is presently in Infantry Combat Training Center 2 (ICTC 2), Infantry Training Institute (ITI). His previous postings were in Army Training Evaluation Center (ATEC), and 1st Guards Battalion. He was also Officer Commanding in 3rd Guards Battalion, Officer Instructor in Lakiun Camp, Brunei, Staff Officer in G2 Army and Platoon Commander in 3rd Guards Battalion. He holds a Diploma in Quality Engineering from Temasek Polytechnic, Singapore.

The NATO Air Campaign Over Kosovo—A Study of Coercive Diplomacy

by **MAJ Ho Wan Huo**

Abstract:

This essay will restate the theoretical promises of airpower, provide a background to the crisis in Kosovo and explain that airpower was crucial but not singular in leading to the capitulation of Slobodan Milosevic, then President of the Federal Republic of Yugoslavia. In this paper, the breaking of Milosevic's will and the moment of his capitulation will be taken as the definition of success. As Operation Allied Force was an application of coercive airpower, this paper will address the efficacy of airpower in such a context of coercive diplomacy and not within the realm of conventional war.

Keywords: NATO, Airpower, Capitulation, War on Kosovo, Operation Allied Force

INTRODUCTION

The North Atlantic Treaty Organisation's (NATO) air campaign over Kosovo—Operation Allied Force, which commenced on 24th March 1999, concluded on 3rd June after a sustained air bombing campaign over 78 days. Slobodan Milosevic, then president of the Federal Republic of Yugoslavia (FRY), had decided to accept NATO's conditions for terminating the conflict over Kosovo. With his capitulation achieved without NATO casualties, it seemed that airpower had finally fulfilled the promises by classical airpower proponents over 90 years ago in the 1920s, such as Giulio Douhet, Hugh Trenchard, Billy Mitchell and also those by contemporary airpower proponents such as John Warde.[1]

The campaign had been described as "one of history's most impressive air campaigns."[2] Another account declared that Milosevic's capitulation had marked "one of the biggest victories ever for airpower," finally vindicating the long-proclaimed belief of airpower proponents that "airpower alone can win some kind of victory."[3] On a similar note, Javier Solana, Secretary General of NATO for the duration of Operation Allied Force, claimed that "the air campaign achieved every one of its goals."[4]

However, these sweeping claims that, for the first time, airpower was able to force a political outcome or victory unaided by other military services require thorough study.[5] Did the air campaign alone bring Milosevic to the negotiation table and eventually accepting NATO's conditions of surrender? Or were there other factors involved beyond the costs imposed by the air campaign?

This essay will argue that airpower used in Operation Allied Force was a necessary condition but was not sufficient on its own, to cause Milosevic's capitulation.

The essay will: (1) restate the theoretical promises of airpower, (2) provide a background to the crisis in Kosovo and (3) explain that airpower was crucial but not singular in leading to Milosevic's capitulation. Here, the breaking of Milosevic's will and the moment of his capitulation will be taken as the definition of success. As Operation Allied Force was an application of coercive airpower, this essay will address the efficacy of airpower in such a context of coercive diplomacy and not within the realm of conventional war.[6]

However, these sweeping claims that, for the first time, airpower was able to force a political outcome or victory unaided by other military services require thorough study.

THEORETICAL PROMISES OF AIRPOWER

Douhet, Trenchard and Mitchell asserted that independent air force and airpower on its own is strategically important to win wars, while other forms of military power such as the army and navy would be reduced to secondary roles.[7] Douhet, especially, had the absolutist concept that the air force alone, is strategically sufficient to achieve victory,[8] the army and navy would only play an adjunctive role such as homeland defence.[9] The Douhetian view argued that airpower is war-winning, not just war-shaping, game-changing, and not just rule-changing.

These classical airpower proponents believed that inflicting high costs on the industrial and economic systems of an adversary should lead to political concessions.[10] Douhet believed that the air force was the only service that could directly break the adversary's will to resist through a more rapid application of force, without the need to grind down armies and navies slowly before going to the true centres of gravity (COG).[11] Douhet continued to say that this was achieved through strategic bombings of 'vital centres,' especially cities—population centres that contain the capacity to manufacture war materiel.[12] Trenchard also supported the belief that air attacks aimed at the source, as opposed to the manifestations of an adversary's strength, would both restore decisiveness to warfare, and produce a much faster and more humane decision.[13] Mitchell, though downplaying the idea of attacking civilian or population centres with airpower, also emphasised targeting the adversary's war-making capacity such as vital industrial and infrastructure centres so as to undermine their capability to resist, causing capitulation.[14]

On the same note, contemporary airpower theorist Warden postulated that although engagement of the adversary's military may be a means to an end, the engagement is never an end in itself and should be avoided under most circumstances.[15] Instead, as it is the leadership of the adversary that decides to accommodate the wielder of airpower (coercer), and therefore a way to think about defeating an adversary is to attack the concentric circles from 'inside out.'[16] That is, disable the most important centre of gravity first and work outward to less important rings. (See Figure 1) Aircraft, by their very nature, could provide a very fast, long-range and flexible tool for commanders.[17] Given these characteristics, airpower can conduct parallel attacks against an adversary that can hit simultaneously, segments of all five rings.[18] Moreover, airpower is able to penetrate into the adversary's depth to target its system more easily, with lower risks and costs as compared to land and naval power.[19]
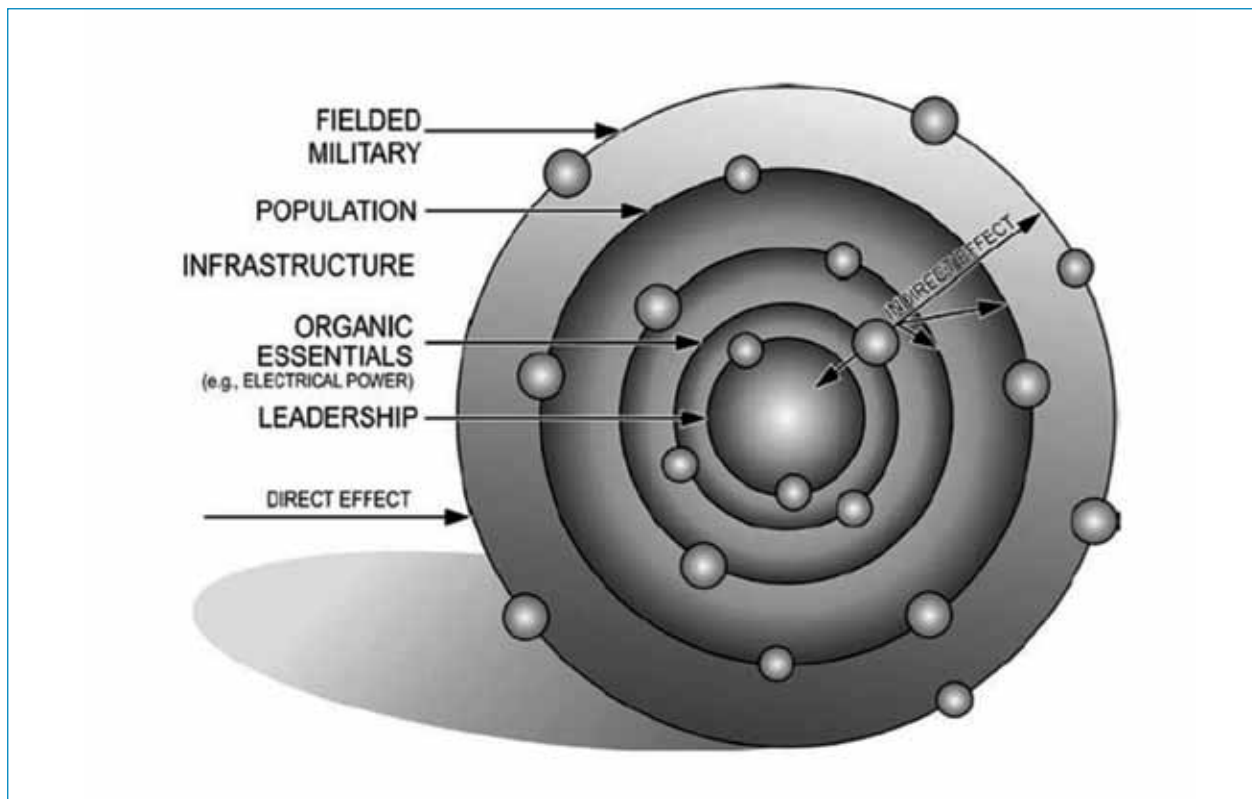
Figure 1: Warden's Strategic Ring Theory—Attacking all 5 Rings Leads to Total Paralysis.[20]

THE CRISIS IN KOSOVO

In the fall of 1998, Serbian military units loyal to Milosevic began attacking ethnic Albanian villages in the Serbian province of Kosovo to extend Serbian control over the former Yugoslavia. (See Figure 2) Determined not to allow a repeat of the 1992 Bosnian crisis, NATO resolved to stop Milosevic from carrying out the ethnic cleansing of Kosovo.[21] This is an effort similar to the Responsibility to Protect (R2P) initiative to be established by the United Nations (UN) later in 2005.[22]

A diplomatic solution to the Kosovo crisis was proposed by NATO on 29th January, 1999 at Chateau Rambouillet, France but talks broke down.[23] In early March 1999, when Milosevic rejected all proposals from United States (US) Ambassador Richard Holbrooke for a peaceful settlement, NATO decided to strike with an air campaign that was broken down into phases due to

political pressures to minimise any collateral damage and to minimise NATO casualties.[24]

The three phases of this combined, multinational air campaign were as follows: (P1) Anti-aircraft defence elements were targeted, as were their command and control centres, (P2) A set of military targets south of the 44th parallel (See Figure 2) were hit, (P3) The strikes were not limited to purely military targets, even in downtown Belgrade.[25] By doing so conformed to escalation dominance in coercive diplomacy but not a traditional military campaign.[26]

As such, Operation Allied Force is airpower used in a coercive diplomacy effort to impose the political will of NATO. This is different from the conventional war context to annihilate as NATO was not trying to destroy Milosevic but to force him towards NATO objectives for reasons of regional stability and humanitarian assistance.[27] In addition, the Kosovo crisis is considered a limited war—limited means,

Figure 2: Boundaries of Serbia, Bosnia-Herzegovina and Kosovo during the Balkan Crisis.[28]

limited objectives, instead of the total war as seen by the classic airpower proponents in the World Wars.[29] Nevertheless, the bottom-line measure for success remains the same in either cases—the ultimate attainment of victory through the breaking of an adversary's will to resist.

AIRPOWER WAS NECESSARY AND CRUCIAL

Airpower had allowed NATO to strike directly at Milosevic's COG and break his will to resist without the long-drawn effects typical of the other coercive or military means. The cumulative effect of airpower on Milosevic's COG—his eventual hold on power,
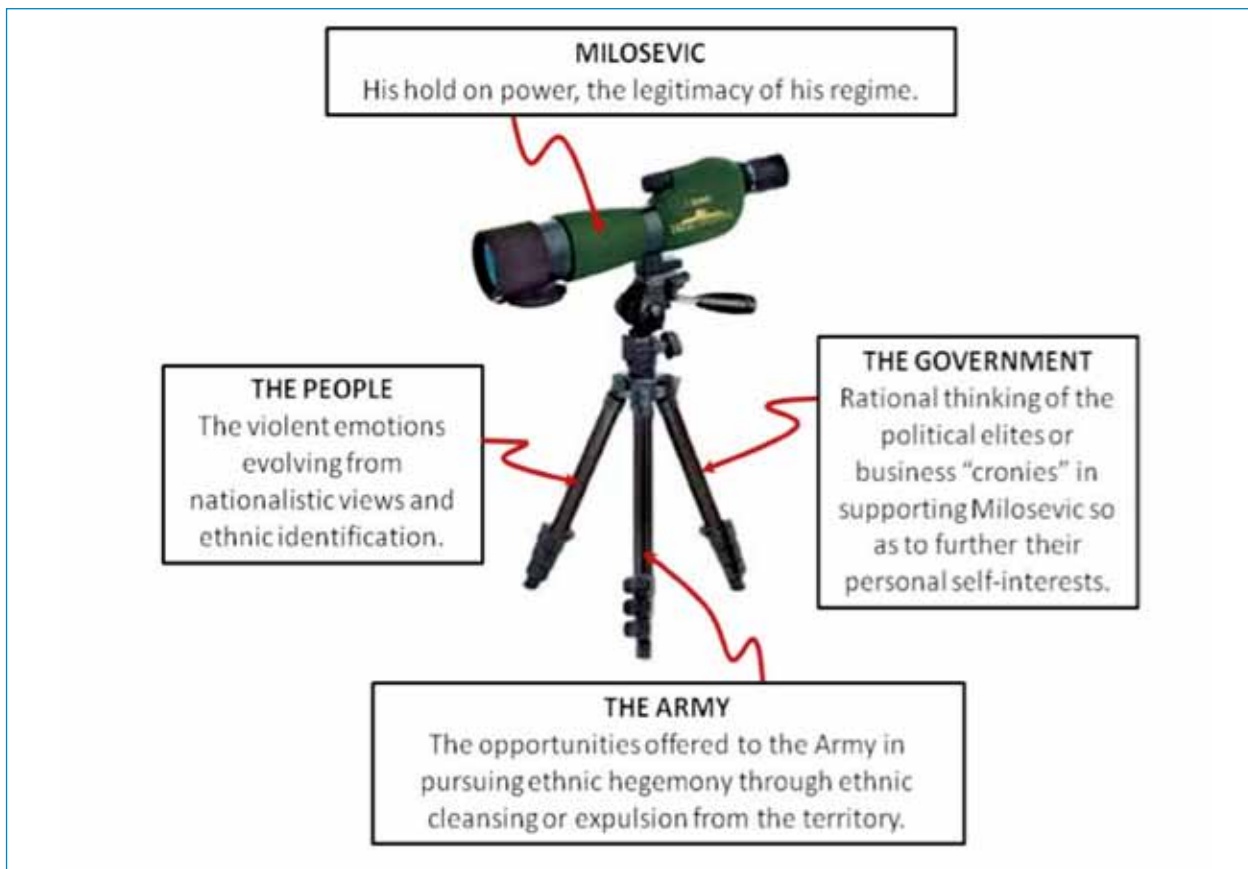
Figure 3: Milosevic's Power Base as Compared to a Camera Balanced on a Tripod.

coupled with the future threat that airpower posed to his regime had weakened Milosevic's will to resist and influenced his eventual decision to capitulate.[30]

Milosevic's hold on power (power base) could be holistically viewed to be leveraging on the Clausewitzian "remarkable trinity" of people (emotion), government (policy) and the Army (chance).[31] (See Figure 3) Similar to a camera that is supported by a tripod, any blows (adverse effects) on one or more of the tripod legs (trinity components) would cause the tripod to tilt and eventually fall (erode Milosevic's power base and contribute to his propensity to capitulate).

Milosevic Lost the Popular Support of his Trinity to the Air Campaign

The air campaign in Kosovo had headed for what Douhet had foreseen—that airpower decide wars by inflicting maximum distress on civilian populations, which are inherently more vulnerable than military capabilities to the destructive power of modern technology.[32] In addition, NATO had also tended towards Mitchell's ideas by targeting Serbia's infrastructure centres so as to reduce their citizens' quality of life and undermine their determination to resist, causing capitulation. As acknowledged by NATO officials, the air campaign over Kosovo was aimed in part at damaging the quality of life so that suffering citizens would start questioning the intransigence of their political leadership.[33] However, NATO did not deliberately and directly target civilian population centres per se, which was what Douhet insisted was necessary.

The continuous targeting of dual-use infrastructures in Serbia by airpower had imposed hardships,[34] especially from the nationwide loss of electrical

power, and provoked the Serbian people to stage anti-war demonstrations in Milosevic's 'heartland' calling for him to bring an end to the bombings by accepting NATO's terms.[35] Moreover, Serbians had eventually become convinced that NATO's bombing errors on civilians were not errors but were part of a psychological warfare campaign to "demoralise the people."[36]

In addition, targeting the assets of the political elites and "crony" business owners,[37] most of whom also owned some of the dual-use infrastructures, sent a clear message that the "Alliance would now hit the business interests of Milosevic's family and friends" prompting them to persuade Milosevic to bring an end to the bombings by surrendering.[38]

The first sign of a crack in the political leadership's unity occurred on 25th April, when Deputy Prime Minister of Yugoslavia, Vuk Draskovic, who previously supported Milosevic's policies on Kosovo, publicly urged the government to seek a compromise with NATO.[39] In addition, as a sign of the decreasing support from the Serbian military, Serbian military leaders had begun sending their families out of Yugoslavia, reflecting possible concern among top-echelon commanders that Milosevic had risked them and the Army's well-being and safety in choosing to resist NATO.[40]

Finally, as the air campaign ensued, it became increasingly apparent to the Belgrade leadership that the NATO attacks on infrastructure targets were doing significant additional damage to a Serbian economy that was already in serious decline due to years of sanctions and trade dislocations.[41] By June, the Belgrade government was unable to pay the salaries of army reservists who had been called up for service during the conflict.[42]

These anti-war actions exhibited by the trinity that formed Milosevic's power base, coupled with the damage to the economy, indicated to him that he was fast losing the popular support of his people, political

elites and the Army. Fear and anxiety about the bombings had begun to outweigh Serbian nationalist sentiments and angry defiance.[43] Moreover, he realised that the coming winter would greatly magnify the hardships of the Serbian citizens and reckoned that capitulating and stopping the air campaign could be "the best moment to buy him support so as to remain in power as long as possible."[44]

Milosevic Expected Unconstrained Bombings If He Does Not Capitulate

Milosevic had feared that any unconstrained bombing NATO would bring to bear, if he does not capitulate, would cause massive devastation to Serbia. As such, Milosevic calculated he could best survive in power if Serbia was at least still partially stable and functioning. Most importantly, Milosevic also feared that it might risk his continued hold on power if he subjected the country to further months of severe hardships from the air campaign.[45]

From Milosevic's viewpoint, there were a few reasons to perceive unconstrained bombings as credible. (See Figure 4)

Operation Allied Force had been conducted in phases that entailed the intensity of bombings to increase with every phase.[46] This was done because NATO had to be particularly concerned with acting in any manner that might be construed as inhumane.[47] To this extent, military force was to be used as a stick and was construed largely in terms of a limited coercive use to compel Belgrade to accept a negotiated solution.[48] This was contrary to the classical proponents of airpower who called for the maximum destruction of the adversary's COG in the most rapid application of airpower rather than half measures.

However, this gradual escalation as part of NATO's coercive diplomacy strategy may be a blessing in disguise, as it had caused the Serbian leadership to perceive that a Serb rejection of peace terms would provide NATO with the license to engage in even

Wikipedia (User: PANONIAN)

● - Sites in Kosovo and southern Central Serbia where NATO aviation used forbidden munition with depleted uranium during 1999 bombing

Map of the designated strikes by NATO during the Kosovo Crisis in 1999.

more massive and unconstrained bombings of Serbia. This was directly aligned to what John Warden had propounded about conducting multiple escalatory strikes with airpower on the leadership ring to cause all types of second and third order effects, creating pressures between rings and forcing eventual capitulation. (See Figure 1)

With all future wars being only limited wars, the manner in which the air campaign in Kosovo was conducted suggested that gradualism and utilising the prospect of mounting aggregate costs to influence adversary decision making, may be here to stay if US intend to fight in any wars together with coalition partners for marginal or amorphous interests.[49]

1	The escalating pattern of NATO attacks as new targets were being attacked with mounting regularity after the NATO summit of 23rd to 25th April.
2.	The evidence that NATO was postured for a greatly expanded air campaign by increasing the number of strike aircrafts and acquiring additional bases in neighbouring countries including Hungary and Turkey.
3.	The fact that NATO leaders had warned of devastating attacks. For example, General Klaus Naumann of Germany who observed the Milosevic was running the risk "that his entire country would be bombed into rubble."
4	The (mistaken) conviction that NATO was already purposely attacking civilian targets, signalling a lifting of NATO's target limitations used to safeguard against collateral damages. Moreover, one might surmise that even the inadvertent Chinese embassy bombing played an indirect part in inducing Milosevic to capitulate.
5.	The fact that is was Russian Prime Minister Viktor Chernomyrdin who predicted massive devastation from the bombing as the likely consequence of a failure to reach sttlement.

Figure 4: Factors that Caused Milosevic to Perceive that Unconstrained Bombings as Credible.[50]

Moreover, it was still unclear whether 'going downtown' —attacking targets in Belgrade, immediately and swiftly as proposed by classical airpower theorists might have served to dampen rather than intensify Serb fears of NATO escalation. In fact, going downtown on the first night of Operation Desert Storm in 1991 did not produce early war termination.[51]

CONFLUENCE OF OTHER FACTORS HASTENED CAPITULATION

This segment of the essay posits that airpower, together with the confluence of other factors such as the loss of Russia as an ally of Serbia (diplomatic and international support), NATO's cohesiveness (strategy of the coerced to counter-coerce), the correct choice of COG (centripetal force holding the system) and the perceived threat of ground invasion (effects of joint operations) led to the breaking of Milosevic's will and his eventual capitulation.

Loss of Russia as Ally and Feeling of Isolation due to Indictment

One likely factor behind Milosevic's decision to surrender was the fact that the actions taken by Serbia in Kosovo, such as ethnic cleansing and other crimes against humanity had stripped it of any remaining vestige of international support—including, in the end, its principal backers in Moscow.[52] Once Milosevic realised that Russia had joined the West in pressing for a settlement of the Kosovo standoff, he knew that he had lost any remaining chances of winning. This was because losing Russia meant to Milosevic that his hope of playing the 'Russia card' against NATO, as what had happened when Russia objected to the air campaign during the 1992 Bosnian crisis, would definitely not happen again during the Kosovo crisis.[53]

Another contributing factor was the sense of isolation from the international community that Milosevic must have felt when he was indicted as a war criminal by the UN tribunal only a week before his loss of Moscow's support.[54] Even if this indictment did not give Milosevic pause in and of itself, it surely closed the door on any remaining chance that Russia might change course and resume its support for him.

With the International Court of Justice handing down an indictment for war crimes and clear signals from Russia that it would not stand beside Serbia against NATO forced both Milosevic and the Serbian people to recognise the extent of their isolation.[55] This isolation felt by Milosevic is magnified by other

factors such as the raising threat of ground invasion to be described in the latter segment, as well as waning public support and increased public suffering as the bombing continued, and the cumulative negative economic effects of the bombing.

NATO's Unity versus Milosevic's Strategy = No Opportunity for Army

The Belgrade regime's inability to undermine NATO's persistence and cohesion through shooting down NATO aircrafts, intensifying ethnic cleansing and extracting the fullest propaganda value from collateral-damage incidents had shaped Milosevic's decision to accept NATO's terms for war termination on 3rd June.

Initially, there is no doubt in Milosevic's mind that NATO possessed superior forces but he doubted the international community's commitment to peace in Kosovo, the willingness to fight for it and the unity of the Alliance.[56] Therefore, Milosevic had hoped that the Serbian military might be enough to break the Alliance and bring him a strategic victory. However, ethnic cleansing by the Serbian military had proved counterproductive to the Serb cause as it strengthened rather than weakened NATO's unity and resolve. In addition, Russia had assisted NATO by having declined to upgrade Serbia's 1970s-vintage air defence system, for modernised anti-aircraft technology would have downed more aircraft and tested coalition solidarity as casualties mounted.[57] As a result, the opportunities that the Serbian military (the Army) needed in order to keep Milosevic in power did not materialise, contributing to the erosion of his power base (See Figure 3) and eventually his will to resist broke as he had exhausted all possible strategies to achieve victory.

Yugoslavian Army General Headquarters building damaged during NATO bombing.

Had NATO not remained unified, Russia not joined hands with NATO in the diplomatic endgame, and the alliance not begun to develop a credible threat of a ground invasion, Milosevic might not have capitulated so easily.[58] When coercion is conducted through a coalition, success or failure is likely to be a function of coalition unity. A unified coalition will be able to withstand the application of higher levels of force and will also likely issue more credible threats.[59] The potentially disruptive effects of coalition fissures on coercion means that even relatively minor actions by the adversary can have enormous strategic implications on coalition unity.[60] Also known as the 'coercive paradox,' the more formidable airpower or any other instrument of coercion, the more likely adversaries are prepared for it. Adversaries will prepare for it operationally and will avoid strategies that are susceptible to denial by airpower.[61]

Correct Choice of Milosevic's COG Contributed to Capitulation

The correct choice of targeting dual-use infrastructure in the later part of the air campaign ensured that Milosevic's COG was affected, thus tilting his will to resist and pushing him towards capitulation. Belgrade itself did not come under attack until later in April, in part because of the disagreement between the Supreme Allied Commander General Wesley Clark and his air component commander Lieutenant General Michael Short on the targets of the air campaign.[62] Clark had determined the Serb ground forces, Milosevic's strength, as the possible COG to end the conflict, while Short had advocated 'going downtown' and concentrating on infrastructure within Belgrade.[63]

After the cease-fire, Clark admitted that the attempted attacks against dispersed and hidden Serbian military forces in Kosovo caused the latter little significant pain or inconvenience.[64] That suggests, by elimination, that whatever the US Army may believe was Milosevic's most critical vulnerability, the bombing of Clark's target priorities in the Serb military was not what mainly swung his decision to capitulate.[65]

Therefore, choosing the correct COG before commencement of an air campaign is very important; one should not over generalise the variety of adversary regime types and decision making apparati. Casualty sensitivity and other elements of 'cost' usually vary from country to country. Some governments are more willing to sacrifice their people and are less receptive to popular complaints about casualties.[66] These gaps sometimes occur because of 'mirror imaging' the coercer's vulnerabilities onto its adversary.[67] As in the case of the Kosovo crisis, NATO could have viewed that casualties inflicted on the Serbian military would have caused Serbian domestic pressure on Milosevic to stop the war.

Operation Allied Force demonstrated the strategic deficiencies of not taking a joint air-land approach to military operations.

Moreover, according to Clausewitz, "war is a chameleon."[68] Since the character of war changes, the method to stop a war will also change according to the situation and context. This means that the correct choice of COG in Kosovo might not work for other conflicts at a different time, place and adversary. This shows that there are deeper thoughts and complexities to what has been promised by classical airpower proponents who advocated that bombing vital centres will bring capitulation through breaking of the adversary's will.[69] For the Kosovo campaign, the correct COG—Milosevic's power base, was eventually chosen via the targeting of dual-use infrastructure, contributing to the success of the air campaign.

Milosevic Perceived a Threat of Ground Invasion

Among the many considerations that converged to produce Milosevic's eventual capitulation, his perception, rightly or wrongly, of an eventual NATO ground intervention could be the most discomforting to him over the long run.[70]

Initially, President Clinton's insistence that ground troops would not be used in the operation probably put Milosevic in a frame of mind that he might be able to hold out for at least a draw and maybe a win against NATO, even though he knew he was up against a much superior player.[71] Milosevic doubted NATO's willingness to incur costs for the sake of the Kosovars especially after what happened to the US in Somalia (1993) where they withdrew under American domestic pressure after incurring casualties.[72] As a result, the Serbs responded with an accelerated ethnic cleansing campaign in an attempt to outlast NATO in the test of wills.

Although a NATO ground offensive was not employed, there have been open discussions by member nations about its possibility due to the perceived failures of the air campaign to force Milosevic's hand. This, coupled with an apparent growing willingness by NATO to gather peacekeeping forces in the region, probably influenced Milosevic to believe that a ground invasion was possible if he continued to resist.[73] For example, some indications to Milosevic could be when NATO engineers on 31st May began widening and reinforcing a key access road from Durres to Kukes on the Kosovo-Albanian border so that it could support the weight of a main battle tank.[74] Beyond that, Milosevic might have gotten wind of a secret NATO plan for a massive ground invasion code-named Plan B-minus, which was slated to be launched the first week of September if approved by NATO's political leaders.[75] In support of this plan, Britain had agreed to contribute the largest

single national component up to that time (50,000 troops) to an envisaged 170,000-man contingent, the United States would have contributed at least 100,000.[76]

Finally, in a sign that such indicators of a ground invasion might have begun to affect Milosevic's risk calculus, Serbian military units were reported in mid-May to be preparing for a possible showdown with NATO on the ground by establishing defence along likely attack routes from Macedonia and Albania and fortifying the border, a change in effort from ethnic cleansing and expelling ethnic Albanians.[77]

Operation Allied Force demonstrated the strategic deficiencies of not taking a joint air-land approach to military operations.[78] Renouncing the use of a land component from the very start had violated the most enduring axioms of military practice; the importance of achieving surprise and the criticality of keeping the adversary unclear as to one's intentions. Had Milosevic been left guessing about the probability of a land invasion, he could have capitulated earlier because he as President, almost certainly would have questioned whether ethnic cleansing in Kosovo could possibly be worth the immense damage Serbia would suffer in an all-out war with NATO.

Throughout history, data points had shown that airpower was never sufficient on its own to achieve victory. During World War II (WWII), strategic bombings of Japan by the Americans had been aided by both the US Navy and US Marines in securing the necessary bases in the Pacific for the projection of airpower, while Germany capitulated due to the pressures from both the Eastern and Western front, coupled with the destruction of German war materiel industries by airpower. Similarly, Operation Line Backer I & II, North Vietnam in 1972, Operation Desert Storm, Iraq in 1991 and Operation Deliberate Force, Bosnia in 1995 had all succeeded due to the presence

of ongoing ground operations by the US Army, coalition ground forces and Croatian Army respectively.[79] Therefore, Milosevic's capitulation during the Kosovo crisis due to the threat of a ground invasion was not unprecedented nor an exception.

Things are not as simple as Douhet and Other Proponents Promised

Airpower is but one element of the broader concept of military power and the two cannot be separated. In short, there is no airpower strategy apart from military strategy as the air force and the other services complement one another. Moreover, combat power is the sum total of all the armed forces operating in cooperation with one another. Therefore, the various forces available, air and surface, should act together to achieve decisive results.[80] In the even larger picture, the military is but one of the tools of national power as explained below.

According to Clausewitz, "war is only an extension of policy."[81] There are many ways to coerce or force your opponent to do your will and this can be broadly represented by the Diplomacy, Information, Military, Economics (D.I.M.E.) framework for national power.[82] If

Airpower is but one element of the broader concept of military power and the two cannot be separated. In short, there is no airpower strategy apart from military strategy as the air force and the other services complement one another.

there had been no air campaign, Milosevic would have taken even longer than the 78 days to capitulate or even not capitulate at all.[83] In the larger sense, airpower did not succeed by itself but was reinforced by the usage of other components in D.I.M.E. by NATO. (See Figure 5)

Therefore, the wielder of force or coercer should see airpower as one of the tools (M—military) that he can use to cause his adversary's capitulation but not to weld as the only tool. Doing so would have negated the possibility that the adversary's will to resist might break faster if combinations of other tools (D, I, and E) are used.

From the coercer point of view, there is also the need to understand the adversary that is being coerced. This is so because the success of coercion depends on negating the strategies of the coerced.[84] This strategy, most probably military strategy, can be broadly represented by the Political, Economic, Social and Technological (P.E.S.T.) analysis framework. How had Milosevic's strategy in Kosovo been shaped by macro-environmental factors can be broadly summarised in the table below (See Figure 6).

Coercive Action Taken	Tool Utilised
Diplomatic pressure on Serbian political elites by NATO through negotiations	**D** - Diplomacy
Withdrawal of Russian support of Serbia as an ally.	**D** - Diplomacy
Indictment of Milosevic and his political elites as war criminals.	**I** - Information
Cohesiveness of NATO and support from the international community.	**I** - Information
Perception of unconstrained bombings and ground invasion as portrayed to Milosevic.	**I** - Information
Conducting PSYOPS in Kosovo.	**I** - Information
Leveraging on the Media and the CNN Effect.	**I** - Information
Air Campaign and strategic bombings—Operation Allied Force	**M** - Military
Ground Invasion/NATO Joint Operations/Peace Enforcement Operations	**M** - Military
EU's economic sanctions and trade embargos on Serbia	**E** - Economic

Figure 5: *Tools of Coercive Diplomacy as Applied during the Kosovo Crisis.*

Marco-environmental Factors	Strategy Adopted
Political-Identification and securing of Belgrade's National Interest. Hope for continual hold on power by the incumbent government for personal interests. Milosevic had major stakes in Kosovo as his rise in power resulted from his exploitation of Serbian nationalist sentiments and the promotion of Serbian hegemony in Kosovo. Moreover, Kosovo provided Milosevic's rulling party with sufficient seats to give it near parliamentary majority.	Resistance to NATO's air campaign to show the Serbians his regime's commitment to defend Serb sovereignty and hegemony in Kosovo.
Economical - Deteriorating economy due to EU's economic sanctions and trade embargos on Serbia.	Force NATO to offer better terms by gaining a strategic victory through discrediting NATO.
Social - Strong nationalistic views and ethnic identification. Vast majority of Serbs had a strong attachment to Kosovo which they consider 'the cradle of Serbia's identity.'	Ethnic cleansing and expulsion to secure Serbian majority in Kosovo and to provide leverage against NATO.
Technological - Militarily weaker than NATO. Lack of upgraded air defence weapons from Russia.	Removing troops and equipment from fixed targets. Hiding troops and equipments so as to avoid attacks from the air. Usage of decoys. And conservative use of air defence equipment to avoid detection by NATO.

Figure 6: *Macro-environmental Factors as Applied on Milosevic's Strategy during the Kosovo Crisis.*

Therefore, even if a particular target belonging to the adversary is destroyed successfully, the change in behaviour sought—the true object of coercion—may still fail to occur if the adversary has not been studied holistically to understand his COG. Understanding this relationship between a target's destruction and the desired outcome is difficult and requires insights into culture, psychology and organisational behaviour—not as simple as propounded by Douhet.[85]

To sum up, both in total wars and especially in limited wars, the wielder of force or coercer not only need to understand the tools of power (D.I.M.E.) that he has and their utility in different situations or contexts. The wielder or coercer will also need to know the dynamism of his adversary's strategy against himself and how this strategy is driven by macro-environmental factors (P.E.S.T.).

CONCLUSION

Airpower used in Operation Allied Force was necessary and crucial in breaking Milosevic's will to resist and driving him towards capitulation. This is so because the air campaign was: (1) causing a magnitude of damage to Serbia's infrastructure and economy that, if allowed to continue, might eventually threaten the regime's survival, (2) creating stress, hardships and costs for members of the ruling elite and Serbian citizens prompting them to stop supporting Milosevic and (3) giving Serbian leaders the perception that unconstrained bombing and therefore compete destruction of Serbia will follow if Milosevic did not surrender. However, it was only with the confluence of other factors such as: (1) NATO remaining unified, (2) Russia joining hands with NATO in the diplomatic endgame, (3) the alliance beginning to develop a

credible threat of a ground invasion, (4) correct choice of Milosevic's COG by NATO commanders and (5) failure of Milosevic's strategy to counter-coerce, that Milosevic's eventual capitulation was accelerated and realised.

Douhet and other classical proponents had promised that airpower alone will win the war. However, as could be seen in Kosovo, Milosevic did not do so initially when the bombing started. He waited out, hoping to turn the tables. It was only when other factors are incorporated into his calculus that he capitulated. In other words, airpower was a necessary factor but not sufficient enough on its own to break Milosevic's will and cause capitulation.

Although the advancements in technology had made it easier for the wielder of force or coercer to strike and target as compared to WWI and WWII, wars of the present and the future will be limited wars and therefore, many other factors will come into play. Not only is the proper selection of the adversary's COG crucial, the correct combination of tools such as D.I.M.E have to be chosen by the coercer in order to achieve success in negating the adversary's strategies which are shaped and influenced by macro-environmental factors such as P.E.S.T. Moreover, in order to achieve success, the utility of Joint Operations (air, land and sea) need to come into play for any war. Therefore, complexities and the need to look deeper have made the fulfilment of promises propounded over 90 years ago difficult to achieve. ⊕

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1   Byman, Daniel L. & Waxman, Matthew C., "Kosovo and the Great Air Power Debate." *International Security* 24, no. 4 (2000), 5-38.

2. Drozdiak, William & Swardson, Anne, "Military, Diplomatic Offensives Bring About Accord." *Washington Post* (1999).

3. Ricks, Thomas E. & Squeo, Anne Marie, "Kosovo Campaign Showcased the Effectiveness of Air Power." *Wall Street Journal* (1999).

4. Solana, Javier. "NATO's Success in Kosovo" *Foreign Affairs* 78, no. 6 (1999), 114.

5. Stigler, Andrew L. "A Clear Victory for Air Power: NATO's Empty Threat to Invade Kosovo", *International Security* 27, no. 3 (2002/2003), 124-157.

6   Coercion is the use of threatened force, including the limited use of actual force to back up the threat, to induce an adversary to behave differently than it otherwise would. Byman, Daniel L., Waxman, Matthew C. & Larson, E. *Air Power as a Coercive Instrument*. Project Air Force – RAND (1999), 10.

7. Mets, David R. *The Air Campaign: John Warden and the Classical Airpower Theorists* (Hawaii: Hawaii: University Press of the Pacific, 1999), 22.

8. Douhet, Giulio. *The Command of the Air*, trans Dino Ferrari (1942; reprint, Washington D.C.: Office of Air Force History, 1983), 23, 28

9. Ibid., 140.

10. Therefore, a major selling point among the classical airpower proponents was that wars were probably inevitable. In that case, only the air force had the ability to take the offensive and overfly the assumed bloody stalemate on the ground to bring the future ordeal to a quick, though horrible end – so quick that the total suffering would be much less than any war resembling WWI.
    Mets, David R. *The Air Campaign: John Warden and the Classical Airpower Theorists* (Hawaii: Hawaii: Hawaii: University Press of the Pacific, 1999), 73.

11. Ibid., 12.

12. As Douhet puts it, "Aircraft enable us to jump over the army which shields the adversary government, industry and people, and strike directly and immediately at the seat of the opposing will and policy by devastating certain "vital centres", especially industry and cities.
    Estes, R. "Giulio Douhet", *Airpower Journal* 4, no. 4 (1990), 163.

13. Earle, Edward M. *Makers of Modern Strategy: Military Thought from Machiavelli to Hitler* (Princeton: Princeton University Press, 1943), 22.

14. Mets, David R. *The Air Campaign: John Warden and the Classical Airpower Theorists* (Hawaii: Hawaii: Hawaii: University Press of the Pacific, 1999), 37.

15. Warden had emphasised the precise application of airpower to cause systemic paralysis in an adversary's psychological and physical abilities to resist in order to achieve strategic objectives.

16. Chun, Clayton K. S. "Chapter 21 - John Warden's Five Ring Model and the Indirect Approach to War", in Bartholomees Jr, Boone J., (ed.) *Theory of War and Strategy*. Strategic Studies Institute (SSI) (2010), 318.

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18. These multiple strikes can cause all types of second and third order effects and create pressures between rings. The leadership ring is especially susceptible to such pressures.

19. Airpower allows a nation to conduct parallel attacks since air power transcends geography. Aircraft can simply fly over enemy fielded forces and avoid marching through an enemy. Like other military forces, air power can mass against particular targets and is flexible enough to change targeting within minutes.

20. Chun, Clayton K. S. "Chapter 21 - John Warden's Five Ring Model and the Indirect Approach to War", in Bartholomees Jr, Boone J., (ed.) *Theory of War and Strategy*. Strategic Studies Institute (SSI) (2010).

21. In 1992, war erupted in Bosnia and Croatia, part of the former Yugoslavia, for three and a half years, leaving 250,000 dead and 2 million people forced from their homes. To extend Serbian control over the former Yugoslavia, Serb forces loyal to Milosevic had systemically brutalised Muslims and Croats in Bosnia and Croatia. In the fall of 1998, Serb military units began attacking ethnic Albanian villages in the Serbian province of Kosovo. The NATO alliance, determined not to allow a repeat of the Bosnian tragedy, resolved to stop Milosevic from carrying out the ethnic cleansing of Kosovo.

22. The responsibility to protect (R2P or RtoP) is a United Nations initiative established in 2005. It consists of an emerging norm, or set of principles, based on the idea that sovereignty is not a right, but a responsibility. R2P focuses on preventing and halting four crimes: genocide, war crimes, crimes against humanity, and ethnic cleansing, which it places under the generic umbrella term of, Mass Atrocity Crimes. Badescu, Cristina G. *Humanitarian Intervention and the Responsibility to Protect: Security and Human Rights (Google eBook)* (New York, NY: Taylor and Francis e-Library, 2010), 110.

23. Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*, Project Air Force – RAND (2001), 8.

24. In launching Operation Allied Force, US President Bill Clinton announced that the operation had three primary objectives: (1) to demonstrate the seriousness of NATO's opposition to aggression and its support for peace, (2) to deter Milosevic from continuing and escalating his attacks on helpless civilians by imposing a price for those attacks, and (3) to damage Serb's capacity to wage war against Kosovo in the future by seriously diminishing its military capabilities.
Apple, R. W. "President Clinton's televised address," *New York Times* (1999).

25. Dana, Priest, "United NATO Front was Divided Within," *Washington Post* (1999).

26. Boyer, A. "Leadership and the Kosovo Air Campaign," *Canadian Military Journal* (2002), 39.

27. Infoplease. "Map: Serbia and Montenegro." http://www.infoplease.com/atlas/country/serbiaandmontenegro.html.

28. The NATO nations voluntarily undertook this war. It was not forced on them, nor was it strictly defensive. In that regard, the strategic and political context was wholly unlike those of conventional conflicts like World War II. Clark, Wesley K. *Waging Modern War: Bosnia, Kosova and the Future of Combat*, Public Affairs (2001), 418.

29. Clark, Wesley K. *Waging Modern War: Bosnia, Kosova and the Future of Combat*, Public Affairs (2001), 418.

30. Clausewitz assumed the adversary as a system where its COG exerts a certain centripetal force that tends to hold the entire system or structure together. Therefore, a blow at this COG would throw this adversary off balance or even cause the entire system (or structure) to collapse. In the case of Milosevic, this system made up his will to resist NATO.
Echevarria II, Antulio J. "Clausewitz's Center of Gravity: It's Not What We Thought", *Naval War College Review* LVI (2003), 115.
Our understanding of Milosevic is aided by one overriding constant in his decision process: his propensity to weigh alternative courses of action almost entirely in terms of how they might affect his personal hold on power. The evidence suggests that Milosevic consistently viewed his options with regard to the Kosovo conflict solely through this lens of self-interest.
Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 2.

31. Villacres, Edward J. & Bassford, C. "Reclaiming The Clausewitzian Trinity", *Parameters: The Journal of the US Army* (1995), 4.

32. Crane, Conrad C. "Sky high: Illusions of Air Power," *The National Interest* (2001), 122.

33. Bennett, Philip & Coll, Steve, "NATO Warplanes Jolt Yugoslav Power Grid", *Washington Post* (1999), pA1, A11.

34. Consisted of six types of fixed infrastructure targets – Command, control and communication (C3), electric power, industrial plant, leadership, lines of communication (LOC) and petroleum, oil and lubricants (POL) facilities that served civilian as well as military functions.
Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 66.

35. For example, attacks on power stations resulted in power shutdowns that disabled everything from the air defence command and control network to the country's banking system, to the sudden cessation of the electrical supply to hospitals and water pumping stations. Ibid., 58.

36. For example, the tragic attacks on tractor loads of refugees near Djakova on April 14 or the accidental destruction of a Yugoslav train passing over a bridge just as it was struck by a NATO missile, just to name a few.
Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 101.

37. The possible effects of the bombing on what one might call second-tier Serb leaders are especially noteworthy, in that they suggest that the elite substructure of an enemy's hierarchy may make for more lucrative leadership targets than the "big guys." Unlike the topmost political leaders, these second-tier individuals have "retirement plans," in that they have options to recoup their interests under a new regime. They thus may be more malleable than their bosses, even as they are often critical to their bosses' survival.
Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2003).
Richter, Paul, "Officials Say NATO Pounded Milosevic into Submission," *Los Angeles Times* (1999).

38. In mid-May, the mayors of a few Serbian towns together with their respective "citizens parliament", made up primarily of intellectuals from the respective towns issued statements and sent open letters calling on Milosevic to negotiate a quick end to the war so as to stop the bombing, save the economy and ensuring the return of refugees. Around the same time, additional national opposition leaders in Serbia began to openly urge the Milosevic regime to work harder to achieve a diplomatic solution to end NATO's air strikes. Even the ultranationalist deputy prime minister of Serbia, Vojislav Seselj, announced on 30th May that he was now willing to accept a severely truncated Serb presence in Kosovo by indicating his approval of the Chernomyrdin "proposal to leave at least some Yugoslav security forces inside Kosovo to guard the borders and preserve the symbols of sovereignty". Bombing had therefore made concessions politically feasible.
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39. Erlanger, Steven. "A Liberal Threatens Milosevic with Street Protests," *New York Times* (1999), A13.

40. Williams, Daniel & Graham, Bradley. "Milosevic Admits to Losses of Personnel," *Washington Post* (1999).

41. Central Intelligence Agency, *The World Factbook* (1998), 414.
Erlanger, Steven, "Fruit of Miscalculation", *New York Times* (1999), A1, A17.

42. Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 69

43. Dinmore, Guy, "Daily Life in Belgrade Teeters Under Strikes", *Washington Post*, (1999), A1.

44. Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 106.

45. Ibid., 105.

46. Ibid., 91.

47. This was due to the need to create consensus for the air campaign within the 19-member NATO coalition. Safeguarding human rights and minimising collateral damage were essential to maintain the unity of NATO and the Alliance had to be particularly concerned with acting in any manner that might be construed as inhumane.

48. Allen, Susan H., & Vincent, T. "Bombing to Bargain? *The Air War for Kosovo. Foreign Policy Analysis 7* (2011), 7.

49. Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), xxii.

50. Nardulli, Bruce R., Perry, Walter L., John Gordon IV, Bruce P., McGinn, John G. *Disjointed War: Military Operations in Kosovo, 1999*, Arroyo Center – RAND (2002), 11.

51. Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 129.

52. That became most clearly apparent when Russian President Boris Yeltsin called US President Clinton on 25th April, the last the day of the NATO summit, and expressed his concerns over the escalating air war and offered to send former Russian Prime Minister Viktor Chernomyrdin as his personal envoy to help find a negotiated solution.
Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), 108.

53. In addition, it is possible that Belgrade hoped not only for arms transfers but for even more direct aid.
Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 33.

54. On 27th May, that tribunal charged Milosevic and four of his senior aides, including General Dragoljub Ojdanic, the Yugoslav army chief, and Vlajko Stojilkovic, the interior minister with crimes against humanity for having deported more than 700,000 ethnic Albanians and having allegedly murdered 340 innocents, mostly young men.
Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessmen*t. Project Air Force – RAND (2001), 70.

55. Arkin, William. "Operation Allied Force: The Most Precise Application of Air Power in History." *War Over Kosovo* (ed) Andrew Bacevich and Eliot Coehn (New York: Columbia University Press, 2001).

56. Nardulli, Bruce R., Perry, Walter L., John Gordon IV, Bruce P., McGinn, John G. *Disjointed War: Military Operations in Kosovo, 1999*, Arroyo Center – RAND (2002), 36.

57. Crane, Conrad C. "Sky high: Illusions of Air Power," *The National Interest* (2001), 120.

58. Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), 111.

59. Byman, Daniel L., Waxman, Matthew C. & Larson, E. *Air Power as a Coercive Instrument* Project Air Force – RAND (1999), 103.

60. Ibid., 105.

61. Adversaries are not passive and they regularly try to turn the tables on the coercing power until the latter backs down from its demands. Adversaries often try to impose costs on the coercer by causing casualties that, by themselves, do not impede military effectiveness but cause political turmoil in the coercing power. In additional to operational steps designed to neutralise the threat of escalation, adversaries employ political tactics to offset the coercer's military dominance. A common technique is the exploitation of human suffering.
Ibid., 131.

62. Johnson, David E. *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era*. Project Air Force – RAND (2006), 69.

63. Part of the disagreement may have arisen as result of differences in the manner in which the two branches of the US military perceive the role and tasks of airpower. The US Army, which has the role of fighting campaigns and winning wars, sees the adversary's COG as his "source of strength." In contrast, the USAF, which takes a "targeting" approach to warfare, sees COG as multiple strategic and operational critical points that it can attack with its bombing assets; in line with modern airpower theorists like John Warden with his notion of "concentric rings".
Echevarria II, Antulio J., (2003), p.108

64. Clark, Wesley K. *Waging Modern War: Bosnia, Kosova and the Future of Combat. Public Affairs* (2001), 429.

65. Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001).

66. Byman, Daniel L., Waxman, Matthew C. & Larson, E. *Air Power as a Coercive Instrument* Project Air Force – RAND (1999), 46.

67. For example, US efforts to destroy North Vietnam's fledgling industrial sites largely succeeded, but they had little true effect because the country's economy relied on agriculture and aid from fellow Communist states. Hezbollah, for its part, does not possess an economic infrastructure in any normal sense of the word.
Ibid., 47.

68. War like a chameleon, it blends itself to the prevailing conditions. Nature of war, as in the basic forces leading to it such as the trinity remains unchanged with time but the character of war, as in how we conduct it, changes as influenced macro-environmental factors. As such, since the character changes, the method to stop a war will also change according to the situation and context.
Villacres, Edward J. & Bassford, C. "Reclaiming The Clausewitzian Trinity", *Parameters: The Journal of the US Army* (1995) 2.

69. Sganga, R., Tripodi, Paulo G. & Johnson, Wary R. "Douhet's Antagonist: Amedeo Mecozzi's Alternative Vision of Air Power," Air Power History (2011), 12.

70. Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), 72.

71. Allen, Susan H., & Vincent, T. "Bombing to Bargain? The Air War for Kosovo." *Foreign Policy Analysis* 7 (2011), 7.

72. After sustaining US casualties in Somalia, in a national security policy review session held in the White House on October 6, 1993, US President Bill Clinton directed the Acting Chairman of the Joint Chiefs of Staff, Admiral

David E. Jeremiah, to stop all actions by US forces in Somalia except those required in self-defence. He reappointed Ambassador Robert B. Oakley as special envoy to Somalia in an attempt to broker a peace settlement and then announced that all U.S. Forces would withdraw from Somalia no later than 31st March, 1994.

73. To begin with, Operation Allied Harbour, set in motion as early as 8th April, aimed at putting some 8,000 NATO ground troops into Macedonia to help with refugee aid efforts. More significantly, a 32,000-person NATO Stabilization Force (soon to number 50,000) patrolling Bosnia-Herzegovina, and 7,500 additional NATO troops in Albania deployed to perform humanitarian work there made for an undeniable signal that a NATO ground presence was forming in the theatre. That presence included 2,400 combat-ready U.S. Marines aboard three warships in the Adriatic to provide force protection for the Marine F/A-18s that were operating out of the former Warsaw Pact air base at Taszar. In addition, some 5,000 U.S. Army troops, with a substantial artillery and armour complement, accompanied the 24 AH-64 Apache helicopters that were sent to Albania in late April. There is every reason to believe that this deployment, along with NATO's subsequent decision to enlarge the Kosovo peacekeeping force (KFOR) to as many as 50,000 troops, was assessed by Milosevic as an indication that a NATO ground option was at least being kept open.
Hosmer, Stephen T. *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did*. Project Air Force – RAND (2001), 112.

74. Priest, Dana, "A Decisive Battle That Never Was," *Washington Post* (1999).

75. Developed by a secret planning team at NATO's military headquarters in Mons, Belgium, Plan B-minus relied heavily on previous plans going back to 12th June, 1998, which featured six land-attack options, including a full invasion of Serbia itself (Plan Bravo, with 300,000 NATO troops). Milosevic was said by a well-placed NATO source to have been at least broadly informed of NATO thinking with respect to it. Indeed, as the UK Ministry of Defence's director of operations in Allied Force, RAF Air Marshal Sir John Day, later commented, "The decision to increase KFOR was militarily right in itself, but it was also a form of heavy breathing on Milosevic and a subtle way of moving to B-minus while keeping the coalition together. It is true that the forces that were being prepared for KFOR-plus were the core elements of what would then have become B-minus, the full ground invasion."
Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), 73.

76. Beaumont, Peter & Wintour, Patrick, "Leaks in NATO—and Plan Bravo Minus," *London Sunday Observer* (1999).

77. Lambeth, Benjamin S. *NATO's Air War for Kosovo: A Strategic and Operational Assessment*. Project Air Force – RAND (2001), 73.

78. Nardulli, Bruce R., Perry, Walter L., John Gordon IV, Bruce P., McGinn, John G. *Disjointed War: Military Operations in Kosovo, 1999*, Arroyo Center – RAND (2002), 7.

79. Byman, Daniel L., Waxman, Matthew C. & Larson, E. *Air Power as a Coercive Instrument*, Project Air Force – RAND (1999), 146.
Nardulli, Bruce R., Perry, Walter L., John Gordon IV, Bruce P., McGinn, John G. *Disjointed War: Military Operations in Kosovo*, 1999, Arroyo Center – RAND (2002), 12.

80. Sganga, R., Tripodi, Paulo G. & Johnson, Wary R. (2011), *Douhet's Antagonist: Amedeo Mecozzi's Alternative Vision of Air Powe*r, Air Power History (2011), 8.

81. Clausewitz, Carl Von. *On War* (ed) Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976).

82.DIME is chosen for this article as it is sufficiently comprehensive and simple for the reader to understand the values from the angle of grand strategy. D.I.M.E. (Diplomatic, Informational, Military, and Economic) – Each of these elements, in and of itself, cannot act as the sole building block upon which a nation achieves and maintains its position as a world power. Each element must be strong and complementary to the others. Used by US policy makers, it was the Carter administration that published the first comprehensive discussion of national power (grand strategy) through an assessment of American power contrasted against the former Soviet Union based on DIME. Subsequently, the Reagan, Bush and Clinton presidencies all supported the DIME construct. While DIME is seldom publicly acknowledged in policy statements, it is used as the baseline for focusing national efforts toward American policy objectives.
Caudill, S. W. *Saving America from Itself – Avoiding the Fallen Empire Syndrome*. US Marine Corps Command and Staff College (2005), 3.

83. Johnson, David E. *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era*. Project Air Force – RAND (2006), 86.

84. Byman, Daniel L., Waxman, Matthew C. & Larson, E. *Air Power as a Coercive Instrument*, Project Air Force – RAND (1999), xiv.

85. Ibid., 129.

MAJ Ho Wan Huo is currently a Staff Officer in General Staff (Operations) and an Operations Officer (S3) in 76 SIB. An Infantry Officer by vocation, he previously served in 1 SIR and Infantry Training Institute. MAJ Ho graduated as a Distinguished Graduate from the 43rd Command and Staff Course at Goh Keng Swee Command and Staff College. He also holds a Bachelor of Engineering in Mechanical and Production Engineering from Nanyang Technological University and is currently pursuing a Master of Mass Communications from the same university.

Success and Defeat in the Second World War

by **MAJ Dzul Fazil**

Abstract:

During the Second World War (WWII), many nations from all over the world were divided into two major alliances – Germany, Japan and Italy forming the Axis Powers and the Allied forces led by the 'Big Three', i.e. Great Britain, the Soviet Union and the United States. Firstly, this essay will analyse the strategic failure of the Wehrmacht, the German Armed Forces and the Imperial Japanese forces in WWII. Secondly, it will also address the importance of having both tactical and strategic success as crucial factors to winning a war. Lastly, it will examine the factors that allowed the Wehrmacht and the Imperial Japanese forces to succeed in their early conquest and the reasons why they failed at the end.

Keywords: Axis; Allies; Military Strategy; Swift and Decisive Operations; Tactically Competent

INTRODUCTION

The Second World War (WWII) is often described as a 'total war' as it entailed entire national economies, industries and whole nations' work forces to support the war. It was a war between two major alliances, the Axis Powers[1] and the Allied forces.[2] Germany and Japan accomplished great success in the initial years of WWII, but subsequently failed to win the war.

Clausewitz defined tactics as the "theory of the use of armed forces in battle" and strategy as the "theory of using battle for the purposes of the war." From these definitions, it can be discerned that by achieving tactical success on the battlefield, strategic victory should ensue consequently. If this was true, then why did the Germans and Japanese fail to be victors in WWII? After all, their tactical and operational prowess overwhelmed the enemies in swift and decisive campaigns in the early years of WWII.

This essay aims to examine the reasons behind the strategic failures of the Wehrmacht and the Imperial Japanese forces in WWII.[3] It argues that tactical

successes on the battlefield devoid of strategy will not necessarily win the war. Firstly, the essay will examine the relationship between tactical/operational success on the battlefield and strategic/war victory. Next, it will discuss why the Wehrmacht and Imperial Japanese forces were successful in their tactical and operational conquests in the initial years of WWII. Finally, it will study the reasons why they ultimately failed in the strategic contest. This essay is limited to selected battles of WWII and does not seek to address the chronological events leading to failures by the Wehrmacht and the Imperial Japanese forces. It is also limited to Germany and Japan as part of the Axis Powers and excludes Italy.

BATTLEFIELD TACTICAL SUCCESS = STRATEGIC VICTORY?

The notion of the complete defeat of the enemy in the battlefield has existed since the Machiavellian era. Wars traditionally ought to be 'short and sharp.' Great military strategists, such as Machiavelli and Napoleon, espoused that wars ought to be ended as quickly as

Wikipedia (User: San Jose)

Map of Japanese military advances, until mid-1942

possible and this could only be achieved by bearing the full force of the military on the opposing enemy armies, even if the enemy is of apparent inferior strength. Jomini argued that pitting one's fighting power on another is inadequate to win battles. Instead, he proposed that the full force should be concentrated at a decisive point to weaken the enemy, thereby defeating him.[4] Combining these two thoughts, we can discern the notion of swift and decisive victory.

Clausewitz highlighted that defeating the enemy's armed forces and his will does not end the war in itself but provides a means to accomplish political objectives. The outcomes of wars are not just influenced by the capabilities of a nation's military forces but also by

other national instruments of power as represented by the Diplomatic, Information, Military, and Economic (D.I.M.E.) framework to form a Grand Strategy.[5] It is important for nations or alliances to develop a Grand Strategy encompassing various instruments of national power, as military power alone is insufficient to win wars.

Military strategy can be defined as the "application of armed forces in attaining national goals." Military strategy and tactics need to operate synergistically to achieve political aims. The relationship between ends, ways and means occurs in both tactics and strategy and in the overall execution of war. At the tactical level, the strategic goals may not be so apparent, but

View of London after the German"Blitzkreg", 29th December 1940

they will always be potentially present. Any military act at the tactical or operational level can directly or indirectly influence strategic aims. However, such tactical or operational endeavours are only successful if "its outcomes advance the strategic plan." Hence, battlefield gains alone, devoid of strategic goals, will not necessarily win wars. In addition, strategy is also affected by other macro-environmental factors – political, economic, social and technological (PEST).[6] It is imperative for military leaders to consider these elements to derive a coherent military strategy so as to achieve the national strategic goals. Additionally, one can also develop strategic options to counter the enemy's strategy based on PEST factors.

INITIAL SUCCESS

War Aims

Hitler wanted Germany to be a superpower by readjusting the regional balance of power in order to gain a new world order.[7] To achieve this, he wanted to establish a German-dominated Europe by controlling Eastern Europe to create *Lebensraum* and secure the notion of racial superiority.[8] This meant ending the threats of war from two fronts: to the West with Poland, France and Britain, and to the East with the Soviet Union. In order to keep the United States (US) out of the war,[9] there was a need to secure a rapid campaign victory by: (1) defeating France and attaining an agreement with Britain, and (2) defeating the Soviet Union.[10]

In the Far East, the Japanese leadership wanted to establish a Japanese-dominated 'Greater East Asia Co-prosperity Sphere,' which meant securing Manchuria, China, Korea and South-East Asia. Lacking in basic resources, the Japanese conquest was mainly economic, which obliged it to take the imperialism road. By 1941, the Japanese had invaded Manchuria and China and that brought about international strains with the Western nations.[11] In order to sustain its economy, Japan had to extend its conquests to include the Dutch East Indies and to push deep into the Pacific to prevent the Americans from its sea and air bases.

Significance of 1940-1942

Between 1940 and 1942, the world witnessed two battles: the invasion of France by the Germans in Western Europe and the fall of Malaya and Singapore by the Japanese in South-East Asia. These conquests brought about an 'aura of invincibility' and confidence to the Germans and Japanese.[12] Using these two battles, the reasons why the Wehrmacht and Imperial Japanese forces were successful will be discussed.

Preparations for War

Both the Wehrmacht and the Imperial Japanese forces emphasised sheer fighting skills and this generated success for them between 1940 and 1942. Their fighting abilities were not just determined by employing weapons but by training, organisation, morale and military verve. Although the Japanese soldiers were substantially outnumbered by the British in Malaya, they were better prepared, led, trained, and fought well.[13] This could have been attributed to the battle experience gained in China. In Europe, the French were also ill prepared to bear the full brunt of the main German attack through the Ardennes. The Germans were pitting their best units against a mediocre French side and they broke through at

German Panzer I tanks near the city of Bydgoszcz, during the Invasion of Poland, September 1939

Houx, Montherme and Sedan with ease. The poor preparations for war by the French and British contributed to the successful invasions of France and Malaya by the German and Japanese forces.

Swift and Decisive Operations

The Germans and Japanese exhibited superior military conduct at the operational and tactical levels, which contributed to their battle successes between 1940 and 1942. Both employed joint and combined arms campaigns effectively, which inevitably devoured their enemies in Western Europe and South-East Asia.

The introduction of the *Truppenfuhrung* manual, during Ludwig Beck's term as Chief of General Staff between 1933 and 1938, guided the German military planning and preparations for war. The manual stressed doctrines of movement, comprising tank forces, artillery and infantry, with tanks as the *tonangebend* in the battle zone.[14] However, it was the younger technocratic officers, influenced by Ludendorff's insistence on victory at any price, who became the advocates of *Blitzkrieg*.[15]

The core of *Blitzkrieg* operations anchored on operational unscrupulousness and management that exploited the fullest potential of success with any available means, specifically the integration of the Luftwaffe (Air Force),[16] to provide tactical air support, and Heer (Army) mechanised forces, to drive its advance.[17] *Blitzkrieg* emphasised the importance of speed by concentrating its forces at a decisive point, bypassing enemy's strengths into the depths. To augment *Blitzkrieg*, the command decision-making processes at the lower echelons needed to be made quickly and executed expeditiously.[18] This was achieved by the principles of *Auftragstaktik*—a term to denote 'directive control'—in which the freedom of decisions and actions was accorded to the subordinate commanders through higher command's intent rather than orders.

The success of the *Blitzkrieg* operations was evident in the invasion of France in 1940, a swift and decisive campaign that ended in merely 39 days, aided by: (1) the ill-preparedness of the French and British forces and (2) the successful deception by the Germans to lure French and British forces to reinforce Belgium while the main attack came through the assumingly impenetrable Ardennes.[19]

Victories in Continental Europe and South-East Asia brought vast spoils to the German and Japanese empires. With the conquests of Malaya and Dutch East Indies, the Allied forces were denied crucial supplies of rubber, tin, oil and bauxite.

Likewise, the Japanese invasion tactics were similar to the Germans. The speed of the Imperial Japanese advance into South-East Asia was tremendous. The most striking feature of the Malayan campaign, which led to the eventual fall of the 'impregnable fortress' of Singapore in slightly less than two months, was the joint and combined arms campaign executed by the Japanese.[20] This was mainly accomplished through effective joint operations, where landings of troops were made on beaches by cruisers and destroyers, and combined arms operations, where the full force of infantry, artillery and tanks were concentrated on enemy airfields. Dive-bombers and fighters were then flown in to shield the main force. The presence of engineers operating together with the advancing forces also allowed the Japanese to quickly eradicate counter-mobility obstacles built by the enemy, and to smoothen the advance towards the South.

Additionally, the Malayan terrain also played a significant part, as it was more suited to the operations by the Imperial Japanese forces than to the

British. The cumbersome British lorries proved to be a hindrance rather than assistance due to the terrain. The British were mainly confined to the roads, while the Japanese were operating unrestrictedly through the dense jungle and rubber or oil palm plantations to by-pass the enemies into the depth. These minor tactics proved to be highly successful as the British were beaten time and time again.[21]

Other contributory factors

In the initial years of WWII, Germany's and Japan's war economies were largely enhanced through the successful invasions of Continental Europe and South-East Asia. Up to 1942, prior to the United States' involvement in the war, the balance of economy favoured the Axis Powers. Victories in Continental Europe and South-East Asia brought vast spoils to the German and Japanese empires. With the conquests of Malaya and Dutch East Indies, the Allied forces were denied crucial supplies of rubber, tin, oil and bauxite. The conquest of France and the Low Countries changed the condition for the Germans in terms of steel, iron ore and foreign exchange. All these inadvertently accorded Berlin and Tokyo a solid economic foundation to continue on with their war efforts.[22]

In summary, the Wehrmacht and Imperial Japanese forces were successful in the initial years of WWII because they were tactically competent in the conduct of battles and operations. However, their success was magnified due to the inadequate preparedness and incompetence of the Western Allies forces to resist the enemies' rapid advance, and the increase in resources from the conquered lands.[23]

STRATEGIC FAILURES

The Wehrmacht and Imperial Japanese forces failed to win the war due to poor development of strategies at both the alliance and military strategic levels. Although they applied the same tactical and operational art from the early years of WWII, they were unable to secure swift and decisive strategic

victories. On the other hand, the Allies won because they possessed coherent strategies to defeat Germany and Japan.

Grand Strategy

There was a lack of unified global strategy between Berlin and Tokyo, as both nations were self-serving and unwilling to lower their own national interests to common strategic objectives. Prior to Operation Barbarossa, Hitler ordered that the Japanese were not to be informed,[24] probably due to his belief that the Soviets would be easy opponents.[25] Although they were urged to attack the Soviets in Siberia once Operation Barbarossa was underway, the Japanese could not be tempted to do so as their immediate concern was the developing crisis with the US in the Pacific. The Japanese could have impacted the German campaign greatly if they had chosen to attack.[26] Similarly, opportunities for the Imperial Japanese Navy (IJN) and the Kriegsmarine to operate together were scant, as the U-boats were based in the North Atlantic while the Japanese surface fleet was in East Asia.[27]

The Grand Alliance was more unified and coordinated. Although they were not allies in any formal sense,[28] the coalition survived through a common interest in the defeat of Germany first followed by Japan.[29] The Allies agreed during the Casablanca Conference in January 1943 on the decisions to: (1) invade Sicily to apply pressure on Mediterranean and (2) pursue the policy of the unconditional surrender of Germany, among other decisions. Although they fought in separate fronts: US in the Pacific, the Soviet Union in Eastern Europe and, Britain and US in the Mediterranean and Western Europe, it was the Allied Systems that kept the coalition functioning together. The systems were run by a centralised staff with broad powers but operated in a "good degree of delegated responsibility". Though the system was not perfect, it worked well to bind the

Instrument	Allies	Axis Powers
Diplomatic	US lend-lease aid to Russia (Herring, 1969). Common interests and strategy between the Allies (Overy, 1995)	Lacked global strategy. Germany was unable to tempt the Japanese to attack Russia when Barbarossa was underway (Warren, 2008).
Information	Employed information warfare. Enhanced Allied Intelligence through the breaking of Japanese Naval and Diplomatic codes, and German Ultra Code (Biard, 2006; McLendon, 1994).	No unified PsyOps, probably due to self-serving interests. Nazi Germany Propaganda in Europe (Miloiu, 2010). Japanese conducted intelligence operations against British in Burma and Malaya (Lebra, 1975).
Military	Allied Strategic bombing of Luftwaffe targets (to gain air superiority before land invasion - Operation Overlord) followed by key installations and infrastructures in 1943-44. Allied strategic bombing led to the decrease of Japan's economy (Overy, 1995).	No common objectives as they all fight separate wars. Failure of the sea blockade in Atlantic paved the way for the utility of Allied national power in the Atlantic (Black, 2003). Failure of the Japanese Imperial Navy paved the way for the utility of Allied national powers in the Pacific (Overy, 1995).
Economic	Germany and Japan's economy crippled by Allied strategic bombing and sea blockade (Overy, 1995). Soviet Union shifted their factories eastwards to the rear areas and torched whatever they couldn't carry; farther away from Germany's hands and gave them the ability to generate war materials (Warren, 2008).	Failed to pool resources together towards common objectives. Both Germany and Japan failed to utilise resources effectively to optimise their economic advantages in the initial years of WWII. Homegrown economic failures; rivalry between businessmen and the military (Overy, 1995).

Figure 1: Instruments of National Power as Applied on the Grand Alliance and Axis Powers.

Allies together. This was primarily because the system was run by a committee, and not by individual national leaders bearing their influence on the system.

The absence of a sound Grand Strategy between the Axis Powers contributed to its eventual defeat. The Axis was so fixated on the military (M) element that they failed to utilise other instruments of national power (D, I and E). On the other hand, the Allies were more successful in doing so albeit conflicting national interests between them, as they were more willing to put aside differences for common goals that led to its ultimate victory. The following table summarises the components in D.I.M.E. used by the Allies, and the lack of them by the Axis Powers (See Figure 1).

MILITARY STRATEGY

Germany and Japan did not have coherent military strategies to defeat their enemies to win the war. As highlighted, strategies and tactics operate synergistically to achieve national aims. Without a lucid strategy, tactical successes alone are insufficient to gain victory in strategic contests. In the next few paragraphs, the failures of the Wehrmacht and the Imperial Japanese forces at the military strategic level will be discussed.

Wehrmacht Strategic Failures

The Wehrmacht failed to produce sound strategic planning during WWII. Most of the strategic planning was conducted via the Schlieffen Convention of

encirclement and annihilation of the opposing armed forces. Here, it was evident that traces of Ludendorff's notions of total war were largely still at play which advocated swift and decisive victories by pursuing complete destruction of enemies at all costs.

Hitler wanted to put Britain out of the equation prior to invading the Soviet Union as he did not want to fight on two fronts.[30] However, Operation Sea Lion proved to be a failure[31] as the *Blitz* failed to break the population's morale or destroy the critical infrastructures, such as airfields, in British cities.[32] The Wehrmacht's leadership had misperceived that the British were fighting a 'people's war' and therefore identified the civilian population as the Centre of Gravity (COG).[33] The bombings, however, were mostly inaccurate, largely due to the poor development of the Luftwaffe, and lacked a systematic focus on the British industries to degrade their war-making capabilities.[34] This dearth of understanding of Britain's COG proved to be a strategic error made by the Wehrmacht's leadership. Furthermore, with the stalemate in the Battle of Britain, Hitler had failed to secure peace in Western Europe so that "he could launch his attack on the Soviet Union without fear of being attacked in the rear". In the end, the *Blitz* concluded as the Germans transferred its Luftwaffe's attention to the eastern front instead.

The Wehrmacht failed to develop a competent Luftwaffe capable of strategic offensive bombings as well as an effective air defence system to protect the Germans' war-making industries against Allied long-range fighters in the subsequent Allied Combined Bomber Offensive (CBO). The Luftwaffe was inadequately developed to support a major conflict due to the failure of the German air industry. Although the Luftwaffe was able to successfully support *Blitzkrieg* operations, it did not have the capability of accurate long-range strategic bombings, which could have led to victory in Operation Sea Lion. With the identification of the Luftwaffe as the COG to gain air superiority by the Allies prior to Overlord, the defeat of the German air force became top priority. The consequences of the CBO came in two folds: (1) it caused the Wehrmacht's leaders to drain the air strength from the fighting fronts, thereby weakening the German resistance in Soviet Union and the Mediterranean and (2) the defeat of Luftwaffe, coupled with a poor air defence system, eradicated the shield against destruction of the Third Reich and its war-making industries. Inevitably, Berlin's economy and resources were considerably weakened to provide any additional assets to the fighting fronts.

The systems were run by a centralised staff with broad powers but operated in a "good degree of delegated responsibility". Though the system was not perfect, it worked well to bind the Allies together. This was primarily because the system was run by a committee, and not by individual national leaders bearing their influence on the system.

The failure to conquer the Soviet Union in Operations Barbarossa was termed as 'the greatest mistake' by Shulman. Hitler's ultimate goal was to secure *Lebensraum* and wanted the Soviet Union at all costs. The plan was to drive the advance swiftly into the interior and thereafter to destroy the Red Army by "a large German encirclement from the Baltic to the Ukraine." Poor intelligence assessments of the Red Army's forces and its combat power led to Hitler taking the Soviet Union venture with an expectation of a swift and decisive victory.[35] However, the attack on the Soviets lacked any clear goal. Time and efforts were wasted on battles of encirclement instead of advancing forward swiftly to achieve the aim of the strategic

campaign. For example, Hitler made a strategic blunder when he diverted his Panzer divisions to perform an encirclement of Soviet forces in Ukraine, instead of concentrating the advancements of the forces towards Leningrad and Moscow. Hitler's insistence to push deeper into the Soviet Union also caused the Wehrmacht to be over-stretched. The vast terrain produced logistical problems, as there was no proper strategic plan to augment the fighting front with sufficient and adequate logistical support.

Additionally, the remarkable recovery by the Soviets played a major role to turn the tide against the Germans.[36] After stalling the Germans' advance into Stalingrad and Kursk, the Soviets were able to conjure their resources together to conduct counter-offensives to drive the Germans back.

Imperial Japanese Strategic Failures

Japan committed the mistake of 'rushing' the US' involvement into the war by raiding Pearl Harbour. The

Wehrmacht	Imperial Japanese Forces	Strategy Adopted by Allied Forces
Political Hitler subjugated the German General Staff; personally directing the tactical moves of the *Wehrmacht*; unwilling to listen to his military advisers; gained confidence in his military expertise in early successes and resolve his will for *Lebensraum* (Black, 2003).	Political Tojo's premiership confirmed the ascendancy of the military in Japanese politics; wanted a quick war due to economic constraints; suprise attack on Pearl Harbor brought absolute war instead of limited war (Fuller, 1962).	Political Strategy to defeat Germany first, followed by Japan (Farrell, 1997). Produced two fronts to defeat Germany; West (Britain and US) and East (Soviet Union) (Overy, 1995).
Economic Battle of Britain drained German resources (Overy, 1995). Over-stretched in resources due to large territories (Warren, 2008).	Economic Constrained by the lack of resources. Dependent on resources of territorial gains (Fuller, 1962). Failed to utilise the reources optimally (Overy, 1995).	Economic Sea blockade to cripple the German and Japanese war productions. CBO targeted German and Japanese ec onomy and reources. Allied manufacturing capacity outdid the Axis (Overy, 1995).
Social People feared retribution and thus accepted apocalyptic war (Geyer, 1986). Signs of public discontent with Nazi Propaganda (Welch, 2004). Assassination plots of Hitler showed discontent within the military (Thomsett, 2007). Heavy bombings by the Allies caused severe impact on German's morale (both soldiers and civilians) (Overy, 1995).	Social Underrated American's resolve to end the war (Black, 2003). Japanese civilian supported war efforts by labour but lacked resources for war production (Kotkin, 2000).	Social *Blitz* on British cities and Pearl Harbor raid justified the war against Germany and Japan. Therefore, public supported the retaliatory bombings and attacks on German and Japanese cities and population (Overy, 1995). Public supported the war production efforts (women contributed to factory work) (Dobie & Lang, 2003)
Technological Poor development of *Luftwaffe* (long-range bombers) and *Kriegsmarine* for major conflicts (Black, 2003). Faulty torpedos from U-boats caused limited damage to British shipping to dent its economy (Warren, 2008). Lack secure communications means (Overy, 1995).	Technological Lacked secure communications means (Overy, 1995). Emphasised 'spirit' of its people over technlgy (Black, 2003).	Technological Battle of the sea won because of technological advances of the Allied Forces - aircraft, radar and radio intelligence (Overy, 1995). Development of bouncing bomb to destroy hydroelectric power in German cities and industries (Whalley, 2002). Development of atomic bombs that were dropped on Hiroshima and Nagasaki to end the war (Overy, 1995).

Figure 2: Macro-Environmental Factors as applied on Wehrmacht and Imperial Japanese Forces Military Strategy and PEST Strategies Adopted by the Allied Forces.

raid was a success because the US planners believed that the Japanese would not be so irrational as to attack them in the first place, a 'mirror-imaging' fallacy.[37] Although tactically successful, it was of a lesser strategic significance as (1) the Japanese failed to destroy the American Pacific Fleet as they were not in harbour, and (2) the Japanese failed to destroy the oil stores that crucially supported the US Fleet. The Imperial Japanese leadership failed to identify and annihilate the strategic targets that would impact their expansion in the Pacific. However, this strategic concept of eliminating the American Pacific Fleet from the equation was gravely flawed to begin with. The Japanese Fleet was significantly superior to the US Pacific Fleet, especially in carriers, cruisers and battleships, which posed insignificant threats to the Japanese in the subsequent invasions in South-East Asia. Hence, the Pearl Harbour raid was unnecessary and irrelevant to begin with.

Nevertheless, the Imperial Japanese leadership was fixated on annihilating the American Pacific Fleet. In the Battle of Coral Sea and Midway Island, the intent was to lure and defeat the US fleet. However, the IJN lost the strategic initiative at sea when they lost their naval air power to the Allies instead.[38] The battle was decisive because: (1) it reduced its carrier strength to such a low level that the Japanese would never be able to catch up with the American production and (2) it ended the prospect of hostile landings in Australia and secured the supply lines from the South. More importantly, the Imperial Japanese leadership failed to consider the consequences and actions to be taken if carriers and pilots were ever lost. Although

the Japanese shipyards provided three more aircraft carriers in 1943, the pilots were almost irreplaceable. The loss at Midway was decisively devastating to Tokyo.

Midway also cost them the vital naval air support in the subsequent Leyte Gulf battles, in which they had to depend only on their battleships and heavy cruisers – a dramatic backward step from the creative manner air power had been used in the raid of Pearl Harbour. Consequently, the IJN no longer posed a threat in protecting the vital sea lanes of communications (SLOC) which prevented the shipping of raw materials back to Japan, and also paved the way for the Americans to project their national power in the Pacific.

Without a sound strategy, the Imperial Japanese Army faced insufficient ground troops for further operations after the first round of victories. Like Wehrmacht, they too were over-stretched in the Pacific. The main bulk of the army was deployed in China and Manchuria and the Japanese leadership was reluctant to divert more troops to the operations in South-East Asia. This persisted even after the Japanese Imperial Navy was heavily defeated in Midway and Leyte Gulf and the possibility of an Allied counter-offensive was evident. As a result, the Japanese were unable to put up a strong resistance to defend its early territorial gains.

The defeat of the Axis should not only be attributed to the failures of the Wehrmacht and the Imperial Japanese forces. The Allied Forces employed successful strategies against the Axis that brought them the final victory. Using the PEST framework, the table below broadly presents the macro-environmental factors that shaped

More importantly, the Imperial Japanese leadership failed to consider the consequences and actions to be taken if carriers and pilots were ever lost. Although the Japanese shipyards provided three more aircraft carriers in 1943, the pilots were almost irreplaceable.

the military strategy failures by the Wehrmacht and the Imperial Japanese forces, and the PEST strategies adopted by the Allies to attain victory in WWII (See Figure 2).

CONCLUSION

The Wehrmacht and Imperial Japanese forces were tactically successful from the onset of WWII up to 1942. This essay has shown that the initial successes can be credited to both the incompetence of the Western Allies as well as the speed, mobility and tenacity of the advance by the Wehrmacht and the Imperial Japanese forces. However, tactical/operational successes alone, devoid of strategic considerations, will not win wars as evident when the Axis lost the strategic initiatives subsequently. The failures can be attributed to the: (1) absence of a Grand Strategy at the alliance level, (2) lack of national strategies to utilise other instruments of national power apart from the military, (3) dearth of military strategies to galvanise the utility of the military means to meet the political goals, and (4) failure to consider the macro-environmental factors that can influence the outcomes of wars.

On the other hand, WWII can also be viewed as a victory to the Allies. The victory can be attributed to the: (1) unified Allied agreement to a Grand Strategy, (2) employment of other instruments of power (D, I and E) to augment the military (M) and (3) the use of PEST strategies to counter the adversary. All these culminated in the defeat of the Wehrmacht and the Imperial Japanese forces in WWII. ⊕

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ENDNOTES

1. Consisting of Germany, Italy and Japan. The Tripartite Pact was signed in September 1940, in recognition of their initial successes (Overy, 1995).

2. Otherwise commonly known as the Grand Alliance. Though there were many nations that declared war against the Axis Powers, the Grand Alliance's leadership was generally held by the 'Big Three': Winston Churchill (British Commonwealth), Joseph Stalin (Soviet Union) and Franklin D. Roosevelt (United States of America) (Edmonds, 1991).

3. Germany's Armed Forces from 1935 to 1945.

4. The decisive point is not just any point of the enemy army itself. It could be any point that can seriously imperil the enemy such as a road junction, a supply base, a river crossing, a mountain pass or the open flank of the opposing enemy (Shy, 1986).

5. The DIME framework is a comprehensive framework to gain a better understanding of the values from the angle of grand strategy. The elements of Diplomatic, Informational, Military and Economic are complementary of each other to form a nation's grand strategy.

6. The PEST analysis "enables specific macro-environment analysis in the strategy formulation process" (Länsiluoto, 2004).

7. Both military and economic balance of power. Germany lacked basic resources and thus set out to seek them beyond its boundaries.

8. Living space.

9. As in World War I, US was a great reservoir of power and as such, there was a need to keep them out of the war.

10. Learning from WWI's experience, the Germans did not want to fight on two fronts at the same time. This was removed by the signing of a non-aggression pact with Stalin on 23 August 1939, whereby the Soviets would join Germany to partition Poland and received German acknowledgement that the Baltic states were a Soviet sphere (Warren, 2008).

11. In the late 1941, US imposed a de facto trade embargo.

12. Coined by a German senior staff general, Gunther Blumentritt (Overy, 1995).

13. In contrast, the British troops were poorly trained and incompetently led (Black, 2003).

14. Tanks as the leading element.

15. Lightning War – term to describe the German's fighting tactics.

16. Germany's Air Force.

17. Germany's Army.

18. Division level and below.

19. Other successful conquests included Denmark, Norway, Poland, Holland, Belgium, Yugoslavia, Greece and to a lesser extent, western parts of Soviet Union.

20. Air power, in the form of bombers, working closely with the army and the fleet.

21. Furthermore, the Pearl Harbor raid by the Japanese on 7 December 1941 contributed, to some extent, to the successful Japanese advance southwards. The battered US naval forces in Hawaii were neither able to hinder nor interfere in the Imperial Japanese invasions into Malaya and Singapore (Warren, 2008).

22. To a certain extent, the Battle of the Atlantic in the early months of 1942, also contributed to the success of the German's invasion of Continental Europe and Japanese conquests of Malaya and Singapore. The Allies lost massive amount of shipping, up to 2.6 million tons between January and April 1942 (Overy, 1995). This greatly decreased the economic power of the Allies. It also kept the British navy fighting at the western front and away from South-East Asia.

23. Referring to France and Britain.

24. The Japanese, too, did not inform the Germans prior to the raid of Pearl Harbor. Although Berlin was surprised by it, they welcomed the attacks and also declared war on the US soon after on 11 Dec 1941.

25. Incorrect intelligence assessments on the strength of the Red Army also cemented Hitler's belief that the Soviets would be easily defeated (Black, 2003).

26. Furthermore, the Japanese chose not to assist the Germans as they had signed a Neutrality Pact with Soviet Union in April 1941, in order to protect their rear while they expand into South-East Asia (Black, 2003, p. 83).

27. Germany's Navy.

28. An alliance of cooperation was initiated by Britain and Soviet Union in May 1942. However, US declined to join into any fixed agreements with either Britain or Soviet Union. Like the Axis, they served their own national self-interests and survived as long as they needed each other to achieve victory (Overy, 1995, p. 3).

29. The agreed grand strategy between the Allies was the 'Germany first' policy in which the primary aim was the defeat of Germany, being the most powerful member of the Axis Powers, first before pursuing Japan.

30. As experienced during World War I; Germany, as part of the Central Powers, had to fight on two fronts: with France in Western Europe and Russia in Eastern Europe.

31. The daylight air campaign and night Blitz in the Battle of Britain (Warren, 2008).

32. Term to describe the strategic bombing of Britain.

33. Strange (1996, p. 3) described COG as the "agents and/or sources of moral or physical strength, power and resistance." In this case, the COG should be directed at the British industries to keep them out of the equation to wage war in the later part of WWII.

34. The Kriegsmarine, specifically its U-boats, was also unsuccessful in diminishing Britain's economy by submarine blockade in the Atlantic (Black, 2003).

35. Term to denote the Soviet Army.

36. Soviet Union's mobilization and military capacity build-up.

37. "Mirror-imaging" is the belief that others would act the same way as you do. In the Pearl Harbor raid, the Americans thought that the Japanese would not attack a superpower whose resources far exceeded them. The Americans also underestimated the technological capabilities of the Japanese Navy to conduct such an attack despite a successful precedent assault on the Italian Fleet at Taranto by Swordfish bi-planes launched from British carriers (Porch & Wirtz, 2002).

MAJ Dzul Fazli Bin Rosli completed his Command & Staff Course at the Goh Keng Swee Command and Staff College in 2013. He graduated from the Nanyang Technological University with a Master of Science degree in Management. He is an Infantry Officer by vocation and is currently the Ops Trainer in Motorised Battalion Training Centre (MBTC) under the ambit of Motorised Infantry Training Institute (MTI).

The Strategy In The Battle For The Atlantic

by **LTC Rinson Chua Hon Liat**

Abstract:

The Battle for the Atlantic, initiated by Great Britain on Germany has been a subject of debate on whether it was the crucial factor that led to the outcome of the Second World War (WWII) in Europe. This essay will address why the Battle for the Atlantic offered opportunities for the Allies to implement strategies and invade Europe successfully. The essay will also examine both the Allies and the Germans' strategies, which would become the decisive factor for the Allies to win the war.

Keywords: Allied Forces, World War II, Battle of the Atlantic, Strategic Failure

INTRODUCTION

The Battle of the Atlantic—the longest naval campaign of the twentieth century, commenced on 3rd September 1939 with the declaration of war on Germany by Great Britain, and ended on 8th May 1945 with the surrender of Germany. Winston Churchill declared the Battle as "the dominating factor all through the war. Never for one moment could we forget that everything happening elsewhere, on land, at sea or in the air depended ultimately on its outcome."[1]

Existing literature has postulated that the victory attained in the Atlantic, albeit costly, was the decisive factor contributing to the outcome of the Second World War (WWII) in Europe. However, given that the outcomes of wars are hardly mono-causal, and that the forces of fog and friction in war could dramatically change the outcomes, it is important that the context in which the centrality of the Atlantic to the outcome of the war in Europe be explained. Therefore, this paper seeks to support the argument that the victory achieved in the Battle of the Atlantic established the springboard for the subsequent Allied invasion of Europe, insofar as the coherent British and allied strategy, coupled with a disjointed German strategy, made the Battle a decisive factor.

The essay will discuss this in several sections. Firstly, the British and German strategies will be discussed. Next, the economic management and industrialisation of the Allied powers and their significance to the Battle will be analysed. The essay will then discuss key points in the German U-boat campaign against Allied shipping. Finally, the essay will examine possible critics of the argument.

NATIONAL STRATEGIES

Great Britain

Great Britain, as her national strategy articulated by Churchill, sought to adopt a defensive posture while rapidly mobilising for war. In a war expected and planned to last three years, the combined economies of Britain and her allies were assessed to prevail against a Germany weakened by Allied blockades. The Atlantic therefore lay at the heart of British strategy. Defeat in the Atlantic would have brought about Britain's defeat through the starvation of the British economy of much needed imports of food and war materials. Therefore, mobilisation of the nation's economy, which would be discussed in a later section, was central to the British strategy. These included measures at the national level to

Officers on the bridge of an escorting British destroyer kept a sharp look out for enemy submarines, October 1941

reduce civilian consumption in order to conserve scant stocks of imported food and raw materials. Victory in the Atlantic was hence a necessary precondition to winning the war in continental Europe by ensuring Britain's continued ability to meet both civil and military needs essential to continuing a prolonged war. However, despite the importance tagged to its merchant fleet, the Royal Navy (RN) was initially unprepared to counter the German U-boat threat. This was largely due to the British confidence, albeit misplaced, in the effectiveness of the Allied Submarine Detection Investigation Committee (ASDIC) sonar and the erroneous perceived ineffectiveness of the German U-boat arm due to limitations imposed after World War One (WWI). Nevertheless, the British recovered from the initial setbacks. Significant resources were poured into research to enhance military measures adopted by the RN. These included research into the effectiveness

of aircraft and surface ship attacks on U-boats, comparisons of convoys and independent shipping and effects of speed on anti-submarine warfare (ASW) effectiveness.[2]

Another key aspect of the British strategy was the co-operative measures, short of an alliance, sought with the United States (US). Despite the US entering the war late, and her interests in the Pacific after the Pearl Harbour attack causing an unlikely 'Germany first' military approach desired by the Allies initially, American assistance in the form of destroyer escorts, escort carriers, repair of naval and merchant shipping and most importantly mass building of merchant shipping made the British defensive strategy attainable and rendered any German hopes of strangling the Allied economies by sinking shipping in the Atlantic totally unrealistic.[3]

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Germany

Germany adopted a continental strategy during WWII, seeking hegemony in Europe through settlement with Great Britain. In *Mein Kampf*,[4] Hitler wrote that "only with England, was it possible, with the rear protected, to begin the new German advance... no sacrifice should have been too great to win England's favour,"[5] expounding the criticality of establishing an at-best friendly, at-worst neutral Britain, in the German strategy. During the negotiation with Britain for the Anglo-German Naval Agreement in June 1935, Germany agreed to the limitations in the developments of her naval power to the order of 35 percent of each category of British surface ships and 45 percent of British submarines as part of Germany's foreign policy, as long as the ratio of 35:100 for total tonnage was adhered to.[6] By recognising British supremacy at sea, Hitler strategised to secure Germany's position in continental Europe before bidding for seapower. Moreover, Hitler was "personally convinced that in the end the western democracies will shy away from precipitating a general war" and the likely outcome of any German-initiated war in Europe would be "a trade barrier, with severance of relations."[7]

With the 'settlement with Britain' strategy in the background, the priority in the development of the German Armed Forces was on the Air Force and the Army. The German Navy (Kreigsmarine), already limited by the amount of surface ships and the prohibition of submarines under the Treaty of Versailles post WWI, was further handicapped by the continued prioritisation of resources for the air force and the army during the war and hence continued to be significantly weak. Although Hitler had approved the Kregsmarine's fleet modernisation plan to be ready by 1944-45, the early decision to go to war with Poland in September 1939 brought the Kreigsmarine into a naval war she was unprepared for. While correctly assessing that the British centre of gravity lies in the Atlantic which provided the sea routes for the vast majority of imports of food and war material, the German naval strategy of sea denial, once it seemed that the settlement strategy was untenable, could not be sustained due to the limited naval assets available to the Kreigsmarine. This was exacerbated with U-boat diversions to the Mediterranean when Germany declared war on Russia. From the German perspective, it could be argued that the importance of the Battle was not accredited with commensurate emphasis and resources, resulting in the German failure in the Atlantic.

INDUSTRIALISATION VS THE BATTLE AT SEA

Given that the British strategy focused on the economic strength of the Allies, the industrial prowess of Britain and the US in the face of German submarine threats and attacks are critical in ensuring a victorious Atlantic war. Beyond merely a battle at sea, the Battle of the Atlantic could be seen as a "gigantic battle of attrition and economic management" between the opposing powers consisting of two of the world's largest industrial empires.[8]

To counter the German strategy of strangling the British will and ability to sustain the war, Great Britain adopted a combination of different economic strategies. To reduce her dependency on imports and conserve existing war supplies, Britain reduced her

German U-boat U-9

need for imports from 60 million tons to 26 million tons a year.[9] The British population expenditure in 1941 was considerably less than it was before the war: 20% less on food, 38% less on clothes, 43% less on household goods and 76% less on private motoring.[10] At the same time, Britain made improvisations to her economic mobilisation. Attractive recruitment measures were put in place to ensure that merchant ships continued to be manned despite the perils and stress of the dangerous duty of the merchant seamen, where an average of one in six perish. Idling industrial capacity, which stood at 10% of Britain's total industrial capacity, were fully utilised by the end of the war. To enhance distribution of the imported materials arriving via the Atlantic to their destinations, bottlenecks inland such as the clearance process of materials, distribution of materials for dispatch and the inland transport networks were improved. Given that the main lines of Britain's railway network left from London, significant improvements in the railway system were made, costing £11.5 million by the end of the war. These railways eventually transported 11% more tonnage of cargo compared to pre-war, and on average over 32% greater distances, despite enemy bombing and loss of workforce to the armed forces and munition manufacture.[11] These represented an equivalent of a million tonnes of extra shipping through the Atlantic.

Besides these, a significant contribution to the British strategy was the enormous capacity of the British and American shipbuilding and ship-repairing industries. In the inter-war periods, the British shipbuilding and ship-repairing industries were considerably weak as a result of the inter-war economic slump causing the closure of about thirty or about 1/3 of existing shipyards. Nevertheless, the requirements of the war revealed the enormous capacity of the British industry. In terms of shipbuilding, production output increased by approximately four times since the commencement of the Battle to a peak in 1943. Table 1 summarises the naval assets built in the Great Britain in the years 1939 to 1945.

Besides naval shipbuilding capacity, the output of merchant shipping maintained at an annual rate similar to the years preceding the war. 1,576 merchant ships were launched between 1940-1945 despite shortages of labour and materials.[12] Besides shipbuilding, the ship-repairing industry also responded to the vastly increased demands in wartime. In addition to regular

	1939	1940	1941	1942	1943	1944	1945	TOTAL
Battleships, Carriers, Cruisers	3	10	11	8	10	6	7	55
Destroyers	22	27	39	73	37	31	22	251
Frigates, Corvettes	5	49	74	30	57	73	28	316
Submarines	7	15	20	33	39	39	17	170
Minelayers, Sweepers,	20	47	92	95	79	39	28	400
Total Ships	57	148	236	239	222	188	102	1134

Table 1: British Warship Building Output 1939-1945[13]

ship overhaul and dry docking, there was the need for damage repairs, both due to enemy actions as well as collisions and groundings. Conversion works were also critical, where commercial liners and trawlers were converted into armed merchant cruisers and anti-submarine patrol crafts or minesweepers respectively.[14] By the end of 1941, some 2,000 conversions had been completed.[15]

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Complementing British internal industrial mobilisation was the strength of the American industrial capacity that provided Britain with much needed supplies, both civil and military. 50 aging destroyers were transferred to the Royal Navy in return for 99-year leases on the then-Dominion naval and air bases.[16] In addition, the Lend-Lease Act also authorised the transfer of 28 motor torpedo boats,

3,000 propelling charges and medium calibre naval guns, gun-mounts and ammunition to arm British merchant ships. 2,400 planes were also shipped to Britain in 1941.[17] An additional US$7 billion of food was subsequently shipped to Britain to alleviate food shortage.[18] Finally, to sustain the merchant fleet transporting cargo from the US to Britain, the US provided about three million tonnes and manufactured another approximately ten million tonnes of merchant shipping up to March 1943 (by which time the German U-boat campaign had sunk around 18.5 million tonnes of Allied shipping in total).[19] The industrial capacity of the US, to manufacture for both her own increasing needs in the Pacific theatre, as well as that of the Allies in the Atlantic and more critically, for the survival of Britain, cannot be overstated in the outcome of the Battle.

GERMAN U-BOAT CAMPAIGN

The German U-boat campaign in the Atlantic represented Hitler's attempt at attacking Britain's centre of gravity once the settlement strategy became implausible. Churchill stated after the war, "the only thing that ever really frightened me during the war was the U-boat peril... It would have been wise for the Germans to stake all on it."[20] Nevertheless, despite sporadic periods of success, the U-boat campaign was not pursued in a manner reflecting its importance in the overall war and as a result, did not lead to eventual victory for Hitler.

At the start of the war, only 57 German U-boats had been built, and only 26 of these were suitable for Atlantic operations.[21] Admiral Eric Raeder, Commandant of the Kreigsmarine, argued that the U-boat programme had to yield 20 to 30 boats a month as soon as possible as it was "of decisive importance for the war against Great Britain" and that such yields could only be achieved by "giving it priority over all other programmes."[22] However, given Hitler's views that securing Germany's continental position was critical before any war against Great Britain, the proposal was put aside "until the Army had taken the most important positions." Only then should "industrial production be diverted to benefit the Air Force and Navy for the war against Great Britain."[23] Nevertheless, the early offensive of the U-boats produced great success, sinking 215 merchant ships and two warships, taking over 1,500 lives, within the first four months of the Battle.[24] This continued in January and February of 1940, with the Germans sinking 85 ships while losing only 3 U-boats.[25] However, the U-boat campaign was not sustained. This was due to the German invasion of Norway on 3rd March, causing the redeployment of U-boats to support the invasion. Consequently, British merchant shipping losses declined.

The period from June 1940 to May 1941 represented another period of U-boat success for the Germans, with the development of the Wolfpack tactics to counter the increased number of escorts. At the same time, the ceasure of escort operations in the mid-Atlantic and the "Black Pit" area in the Central North Atlantic where Allied land-based aircraft could not reach provided ideal hunting grounds for the U-boats. Referred to by U-boat crews as the 'Happy Time', merchant vessels losses amounted to 217 during this period, with only a corresponding loss of 6 U-boats.[26] However, this again could not be sustained due to the lack of boats, their need for replenishment of supplies, and

also rest for the crew. By the end of May 1941, the emergence of continual escorts across the Atlantic by the Royal Canadian Navy, coupled with limitations in the German U-boat force, marked the end of the first Happy Time. The operational limitations of the U-boat force were worsened by the continued neglect of the U-boat construction programme as a result of Hitler's decisions to consider invading Britain, thereby causing the continued prioritisation of resources for the Army. In addition, towards the end of 1941, almost half of the U-boats available at sea in all areas were diverted to the Mediterranean to address problems of Axis shipping losses resulting from the Allied blockade.

The second 'Happy Time' for the German U-boat campaign was from December 1941 to December 1942. Despite the lack of prioritisation of U-boat construction, the rate of construction reached about 12 to 18 a month.[27] Though this was short of the 20 to 30 required by Raeder, it still resulted in the increase in total number of operational U-boats from 37 in May to 120 by the end of 1941, with the number of boats at sea reaching 60 by the end of the year.[28] With the US entering the war after the attack on Pearl Harbour, U-boats were deployed to the eastern coast of the US to attack unprotected shipping and disrupt the transportation of raw materials along the American coast. When Allied anti-submarine defences were enhanced, the U-boat shifted their operation areas southward into the Caribbean and the Gulf of Mexico, and subsequently back to the Mid-Atlantic. During this period, U-boats sunk over 6.25 million tons of shipping, three times that of 1941.[29] However, U-boat losses had also begun to rise from an average of three per month since the beginning of the Battle to an average of about thirteen from July to November.[30] With the exorbitant increase in the cost of disrupting Allied supplies via the Atlantic, and with the need to commit forces to counter Allied landings in North

Africa, U-boats were again diverted from the Atlantic. The offensive arm that the U-boat represented was therefore reduced to delaying the inevitable Allied offensive operations.

By May 1943, developments in convoy operations, escort carriers and long range aircraft equipped with radars and high frequency 'Huff-Duff' direction finders further reduced the effectiveness of the U-boats. The continued high losses in U-boats led to the total withdrawal of the boats from the North Atlantic by the end of that same month.

The U-boat campaign was critical in analysing the outcome of the Battle of the Atlantic. The brief successes of the U-boat campaign could not be sustained due to pre-war naval strategies and policies, as well as strategic decisions made during the war. The decisions to commence the war in Poland early, to invade Norway and France (though for the latter it brought about operational benefits to the U-boat campaign in terms of reducing transit time to the U-boat operations area in the Atlantic), the consideration of the invasion of Britain, as well as the opening up of a second front with Russia created immense pressures on the U-boat force, which was already ill-equipped and insufficiently numbered for the naval battle in the Atlantic. Despite recognising the criticality of the U-boats in achieving the strategy of strangling British imports, Hitler was averse to prioritising the U-boat construction programme over requirements of the Air Force and Army, despite being advised by Raeder on several occasions. By the time Hitler, in a special conference on 28 September 1942, expounded his new-found conviction that "the U-boats played a decisive role in the outcome of the War,"[31] it

The U-boat campaign was critical in analysing the outcome of the Battle of the Atlantic. The brief successes of the U-boat campaign could not be sustained due to pre-war naval strategies and policies, as well as strategic decisions made during the war.

was too little support and too late. Hitler had failed to dominate the trade routes in the Atlantic, unable to starve Britain of her supplies, and had failed in his overall strategy. As advised by Colonel Josef Schmid, head of German Air Intelligence, "The war cannot be ended in a manner favourable to us as long as Britain has not been mastered. Economic assistance from particularly the USA, and the encirclement of Germany, must not be permitted to come fully into operation."[32]

CRITICS OF THE ARGUMENT

This essay has argued that Churchill's claim was only valid because of the strategies adopted by the key powers in the Battle, namely Britain and Germany. From the British perspective, however, such an argument may not be valid because a German victory in the Atlantic would likely contribute to the demise of Britain, regardless of the strategy Britain adopts, given her heavy reliance on imports via the Atlantic. Winning the Battle was crucial and vital to Britain, and hence immense resources were provided to ensure that the U-boat threat was nullified. Nevertheless, it would be preposterous to assume that victory in the Battle would translate to victory in Europe. The nature of warfare, with its accompanying friction of war, precludes the ability of historians to conclude decisively what the outcome would have been had singular factors been changed. After all, if the weather and sea conditions on the 6th of June had taken a turn for the worse, or if the Germans had not fallen for the decoy operations, the Normandy landings could have turned out differently, regardless of the Allied victory in the Atlantic. Therefore, victory in the Atlantic could only determine the survival of Britain, but could not assure an Allied victory in Europe.

CONCLUSION

Britain and Germany, key players in the opposing powers of WWII, adopted different strategies in which the Battle of the Atlantic took on differing significance during different periods during the war. For Britain, the Atlantic signified her survival, and hence the necessity to win the war at sea. For Germany, the Atlantic represents her naval strategy of sea denial, after failing to secure a settlement with Britain, as a means to bring Britain to the negotiating table and accept German hegemony. Despite recognising Britain's vulnerability in its sea lines of communications across the Atlantic, Hitler's initial strategy focused largely on securing her continental position in Europe with the wars against Poland, France, Norway and Russia instead of sea denial. As a result, both countries differed greatly in their approaches to according priority and allocating resources to the Battle, whether militarily, in the German U-boat construction programme, or economically, in the British economic measures and support obtained from the US. Despite the U-boat being "the backbone of warfare against England and of political pressure on her," Hitler's reluctance to reinforce initial successes in the Atlantic led to missed opportunities and ultimately sealed the outcome of the Battle.[33] The disjoint between strategy and resource allocations therefore led to the German defeat in the Battle and contributed to the outcome of WWII in Europe. ☒

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LTC Rinson Chua is currently the Commanding Officer of RSS Steadfast, a FORMIDABLE class Frigate. He graduated from the Nanyang Technological University with a Second Class Honours (Upper) degree. LTC Rinson was previously Commanding Officer of RSS Vigour and RSS Fearless, and was a Distinguished Graduate in the 42nd Goh Keng Swee Command and Staff Course.

Book Review
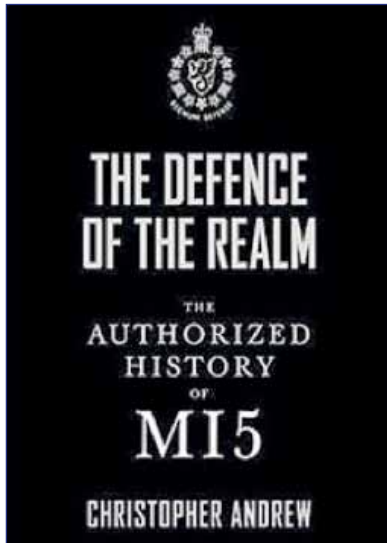
by **Kayson Wang**

Due to the sensitivity of intelligence services, information and history of these organisations are rarely revealed and shared amongst the public. But *The Defence of the Realm* is a rare example where an intelligence service opens up and allows its confidential information to be published. This is an extremely unique read for people who want to study and find out how the famous British Intelligence Service, MI5, was developed during the early 20th century and their different strategic approaches to modern wars since the 1900s. MI5 is the domestic arm of British intelligence as it is responsible for counter-intelligence, counter-subversion, counter-terrorism and security within the United Kingdom.[1]

As people say, you can't judge a book by its cover. With over a thousand pages of pure text and very few pictures, this book might not seem very appealing or interesting. But note that the author of the book, Christopher Andrew, was the only historian in the past 100 years to gain access to write about the history of the service. He received complete access of around 400,000 MI5 files and wrote the book as a memorial of the 100th anniversary of the service.[2] No other intelligence service has ever given an outsider such access, as well as being censor-free of the author's opinion and thoughts. As a result, *Defence of the Realm* is set to be a comprehensively interesting book and a pioneer of intelligence service readings. Andrew's project received major support from the service as MI5's Director-General, Jonathan Evans stated in the Foreword of the book "That openness, by supporting public confidence in us, helps us do our job of protecting national security." He also noted that, "[it] is the most recent and in many ways the most ambitious demonstration...of a commitment to be as open as we can about what we do."[3]

To avoid confusion and dullness, Andrew organised MI5's history into six chronological periods

— from the establishment of the service in 1909 all the way to the modern day 21ˢᵗ century's counter-terrorism, to make it easier to be read and understood. Each part of the book gives an overall description of the time period and emphasises relevant events and general themes of how MI5 operated. Andrew also discussed how MI5 had been changing constantly throughout the century, its improvements, organisation, structure and even downfalls or affairs that had ever struck the service.[4]

In the book, Andrew praised MI5 as an extremely successful organisation, and illustrated MI5 as a flexible community that constantly showed potential to improve in their performance as they were able to keep up to date with new threats and handle different situations efficiently and clinch victory for several major wars in the past century. For example after World War I (WWI), MI5 learned that intelligence was an essential factor in collecting information and anticipating different situations. They recruited batches of spies to monitor the activities of any party that might compromise the British state's security, such as the Communist Party after WWI and the Fascists during the 1930's. What MI5 was praised for was that they started from scratch with a 36-year old Captain called Vernon Kell. For

the first few months of MI5's establishment, they were based in the same room and struggled with minimal resources "to deal with espionage in this country (Britain)."[5] Yet later, when the Committee of Imperial Defence started to emphasise intelligence after WWI, MI5 funding was greatly increased as they grew from a few hundred officers and staff in the late 1930's to roughly 1,500 during World War II (WWII), and then fell back to about 500 and reached its peak of 2,500 during The Troubles and the Cold War.[6] The service's employees worked in shabby, abandoned buildings scattered around Britain in order to keep their privacy and operations under the table. Even today when environment and funding have been greatly improved and increased, the service still remains rather low profile, with luxurious buildings and massive spending prohibited within the service. Another thing Andrew complimented about the service was their emphasis on loyalty despite the hard times and lack of resources. He stressed that the service's employees and workers are all committed to remain in the service for a long time as the chemistry was always high throughout the service. According to Andrew, the service did "Defend the Realm" of Britain for the past 100 years.

The first major challenge to MI5 started in 1917 when WWI broke out. As wartime approached,

the British government became increasingly concerned with spy attacks. During that period, around 200,000 people were being investigated by the service and placed on the watch list by the service. It was an immense amount of work, as all the suspicious personnel were filed into MI5's file index and spy catching became very popular. This was the time when German spies were first categorised and referred to as 'Boche,' which meant German soldier. German spies were then separated into three smaller categories: AA, which meant Absolutely Anglicised, BA, which meant Boche-Anglo and BB which meant Bad Boche. In his book, Andrew had a comprehensive write up of how MI5 tackled the early days' lack of support and funding, and their transformation after numerous trials and errors to finally developing an efficient way of spy catching. Andrew wrote that in the early years, when the service was first formed, the task of spy catching was seen as a challenge and a kind of pride that both countries tried to hold on to and compete with, to see which country possessed more advanced elites.

The first German spy to be captured was Carl Lody, one of the first eleven German spies to be executed after WWI broke out. He was caught when MI5 started intercepting telegrams all over Britain, and they discovered Carl

Lody sending out letters written in German and in encrypted form. This was a huge step for the service as their methods proved to be both successful and effective.

Another notable period that was covered in the book was WWII. In the book, the period was described as the service's peak due to their advancements in technology and the maturity of manpower and organisation. After their experiences from WWI, the service was familiar with the methods of the Germans. As MI5 developed the Double-Cross System, the British were able to decrypt many of the German's wireless codes and intercepted a majority of the German spies who were attempting to sneak into Britain. In addition, the service actually turned many of these German spies into double agents and used them to feed false information back to their superiors. One of the most notable examples was Juan Pujol Garcia, codenamed *Garbo* by the British and *Arabel* by the Germans. Garcia, a Spaniard was originally recruited by the Germans. Eventually, however, he went over to help the Allies because he believed it was "for the good of humanity" after Hitler ordered the massacre of the Jews. Andrew described the transition of Garcia who slowly developed his own network of bogus spies which eventually became a key factor for the Allies to win the war. Before the Allies executed the now

famous Normandy Landing, Garcia's network was able to convince the Germans to shift their attention to Calais instead of Normandy, which resulted in the operation being successful as the Germans lost and took heavy casualties. This part of the book, was in my opinion, the best written—many letters between the MI5 spies and their handler's conversation were revealed here, which gave a different perspective of how we used to look at the history of WWII and the parts that we might have missed out on.

Throughout the book, Andrew not only showed the victorious and positive side of the service but its weaknesses as well. Although MI5 might have triumphed in many instances, Andrew also wrote and acknowledged the downfalls, shortcomings and weaknesses of the service. For example, Andrew wrote about the service's failure in their internal structure and lack of efficiency in their investigations. Sir Roger Hollis, MI5's Director-General from 1956-1965 was suspected of being a Soviet spy due to other double agents' interference. This caused an investigation on Hollis which took a long time and caused great problems inside the service, since the Director-General himself was suspected of treason. Another shortcoming that Andrew illustrated in the book was the Northern Irish conflict named "The Troubles" after 1960s, which

was a political conflict triggered by ethno-nationalism.[7] In that event, the service had a lack of information of what was going on and by the time conflicts broke out, casualties were inflicted and the service had yet to set up operations to suppress the conflict. Andrew criticised MI5 staff for being unfamiliar with surrounding countries, for example, Ireland. But the service did eventually recover and slowly adapted to the growth of international terrorism as they developed various established means to prevent conflicts from breaking out.

Andrew not only referred to over 400,000 archives from the service, he also supplemented the archives with interviews of former Security Service personnel and through other literature and sources to validate his work. This showed that Andrew was meticulous, with the ability to write unbiased accounts of both the good and bad aspects of the service. Despite the openness that MI5 had provided, they still had to censor parts of their archive. Thr *Defence of the Realm* had been inspected by the service itself and other external departments to provide clearance for the book, hence explaining why most endnotes in the book are listed as "Security Service Archives." The Director-General of the service, Jonathan Evans, stated in the Foreword that information had been censored not

only for national security, but also "in a small number of cases, if its publication would be inappropriate for wider public interest reasons."[8] Therefore readers are to trust the information they read, as endnotes would not be able to provide the source of where the information came from.[9]

In the public's perspective, MI5 will always be shrouded in mystery and cloaked with secrets and unsolved cases. In addition, MI5's contributions during the war had been disclosed and revealed to the public. The service employees had taken a vow not to reveal any confidential information during their service, which leaves only rumours and myths of what the service is really about. That is why in conclusion, this is an extremely good and comprehensive collection of research into MI5, with its unique viewpoints backed by exclusive evidence from the service itself. I feel that the book will appeal to everyone who is interested in the history of the world wars, as well as those who are drawn by rumours and interests generated from spy wars.

Overall, Christopher Andrew gives a broad view of what MI5 is truly like, their transformation throughout the last century and the numerous events that had happened, since its establishment. From spy wars to its structure, this book makes a truly remarkable and wonderful read.

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Henry Wilson

by **Alvin Ng**

EARLY LIFE

Sir Henry Hughes Wilson, Baronet, Army Officer and politician, was born on 5 May 1864 at the family home of Currygrane, near Edgeworthstown, County Longford, Ireland. Born to James Wilson and Constance Grace, he was the second son of seven children.[1] Henry Wilson came from a modestly prosperous Protestant family whose fortune was made through a shipping business in Belfast by his great-grandfather, Hugh Wilson. The inheritance was then used to purchase estates and the Wilsons became established landowners.

However, in the long term, the family estate was only large enough to sustain his elder brother. With no prospect of inheriting the estates and stiff competition, Wilson pursued another traditional Anglo-Irish outlet, the Military. However, Henry Wilson failed the entrance exams twice at the Royal Military Academy, Woolwich, and thrice at the Royal Military College, Sandhurst. In addition, the competition in the late 1870's was stiff, with nine applicants for every place at Sandhurst.[2] He eventually entered the army through the Longford Militia, which was called the 'back-door' in those days, and was then inducted into the prestigious Rifle Brigade in 1882 as a Lieutenant.[3]

In May 1887, Wilson was posted to Burma along the Irrawaddy River to assist with imperial policing duties and was seriously wounded in his right eye and became an invalid for almost a year. During that time, he became engaged to Cecil Mary Wray (1862-1930). However, as an impecunious junior officer he did not have enough money to marry her. Wilson resolved to secure some sort of advancement in the army in order to marry his fiancé and thus began working for the Staff College entrance exams which he passed in May 1891.[4]

THE RISE OF WILSON

Henry Wilson's successful completion of the two-year Staff College course in 1893 promoted him to the rank of Captain and it sparked a promising army career that began to soar. He forged ahead as one of the most competent staff officers of his generation, becoming the youngest staff officer of the intelligence department in 1894. In June 1897, Wilson assumed the position of Brigade Major of the 2nd Brigade and sharpened his staff-work skills.

However, Wilson had hoped for a chance of 'real' soldiering and this materialised when he received mobilisation orders and appointment as Brigade Major of the Light Brigade to South Africa. The battle at Spion Kop and Wilson's idea of diverting artillery, allowed troops to cross the river at Trikhardt's Drift without impediment.

Therefore, the Light Brigade as a whole sealed its status as the best brigade.[5] Wilson's performance and contributions in the war were significant and this impressed his Brigade Commander Major-General Neville Lyttelton. Wilson was then appointed Assistant Military Secretary to Lord Roberts, the Commander-in-Chief in South Africa and remained with him for a year in the War Office and Staff College.[6]

WAR OFFICE

In the War Office, Wilson served as Assistant Adjunct-General for military education and training as well as Assistant Director of Staff Duties. The strong relationship with Lord Roberts, otherwise known as Field-Marshal Earl Roberts, proved to be valuable in his career advancement. Lord Roberts recommended Wilson as Commandant of the Staff College. In October 1906, Henry Wilson succeeded Henry Rawlinson as

Commandant of the Staff College with the rank of Brigadier-General. With that, Henry Wilson rose from the rank of a Captain to Brigadier General in 5 years and 1 month.[7]

The position as Commandant gave him the power to put theory into practice and potentially influence the staff 'doctrine' of the army. He envisioned the college to be a 'School of Thought' and stressed the importance of administrative competence. He was recognised as a spell-binding lecturer who transformed the college into an effective, modern 'war school' which helped to prepare the British army for war in 1914.[8]

POLITICAL STANCE

He became Director of Military Operations (DMO) in August 1910, one of the three directorates alongside Staff Duties and Military Training within the department of Chief of the Imperial General Staff.[9] His role as DMO was probably the highlight of his career where his devoted alliance and strategies with the Anglo-French started to bear fruit.

It was in this position that Henry Wilson aimed to strengthen the relations of Britain with the Anglo-French against a potential war with Germany. He began plans for an expeditionary force to be deployed when war was activated. In addition, his knowledge of the French language and customs gave him an unparalleled and favourable

position to the French militaries and political elites.

Wilson was passionately committed to the political union between Ireland and Great Britain. His unwavering belief in the alliance with France saw him refining his ideas to convince the Committee of Imperial Defence on 23rd August 1911.[10] Chaired by the Prime Minister and political elites, the eloquence and superior research of Wilson impressed the politicians who ruled in favour of the War Office. His stellar performance at the meeting catapulted him into closer relations with cabinet ministers and senior politicians. He was consistently consulted by the Secretary State of War and attended meetings with the Committee of Imperial Defence (CID).

In November 1913, Henry Wilson was promoted to Major-General and started dabbling in politics.[11]

CURRAGH INCIDENT

The Curragh Incident of 20th March 1914, also known as the Curragh Mutiny, occurred in Curragh, County Kildare, Ireland. Wilson supported Ulster Unionist opponents of the Third Irish Home Rule Bill, which was due to become law in 1914.[12]

The Curragh was an assault on British democracy as well as Irish self-government. Henry Wilson was

noted as being 'anti-establishment,' which smeared his image in the eyes of Liberal politicians.[13] It was this incident that impeded his career advancement.

In August 1914, war eventually broke out and the successful mobilisation of the expeditionary force to France was his greatest military achievement. He became Sub-Chief of the General Staff and the British Expeditionary Force (BEF) under Sir Archibald Murray. Together, they displayed a lacklustre performance during the Retreat of Mons.[14] This worsened Wilson's chances of military advancement. Murray's health broke down and Sir John French, Commander of the BEF was looking to replace Murray with Wilson. However, Wilson's involvement in the Curragh incident dashed his chances of becoming Chief of General Staff.

In January 1915, Sir William Robertson became Chief of Staff and Wilson was appointed Chief Liaison Officer to the French headquarters.[15] It amplified his position within the French military circle as he could superintend and facilitate high-level liaison with the French.

THE FALL OF WILSON

At the end of 1915, Sir John French was replaced by Sir Douglas Haig as the Commander of BEF. Douglas Haig, however, liked Wilson and praised him for having a brilliant mind. Haig gave Wilson command of the 4th Corps, a position of corps commander encompass the third level of the

high command of the BEF.[16] Wilson's years as a corps commander is said to illustrate his incapability as a fighting soldier, given that he had little regimental soldering experience. He was said to be a brilliant staff officer but not a great Commander.

This can be assessed in his poor performance in May 1916 when he temporarily took charge of the First Army. A surprise German attack captured three-quarters of a mile of his line near Vimy Ridge and a planned counter-attack with extra troops was rejected. His command began to wither away and his corps was transferred as a reserved army. By October 1916, Wilson had no more corps under his command and he saw his career floundering.

Fortunately, Lloyd George's appointment as Prime Minister jolted Henry Wilson's career back on form.[17] Lloyd George used Wilson as an alternative source of military advice and appointed him as Liaison Officer with French General Georges Nivelle. However, misfortune struck again when Nivelle's Offensive at Chemin des Dames failed and brought the house of cards down.[18]

TWIST OF FORTUNE

All through 1917, Wilson pressed Lloyd George to improve the co-ordination of allied policy makings. He managed to convince Lloyd George to create a Supreme War Council (SWC) on 7th November

1917.[19] The SWC would supervise policy at high levels and to watch over the conduct of war on the Western Front. This was much to the delight of Wilson, given his intimate knowledge with the French Army. Wilson then wangled his way to become the British Permanent Military Representative on 1st December 1917.[20]

In January 1918, Wilson developed a scheme (backed by Lloyd George) for a combined general reserve of troops and this sparked a debate as to who should command it. Lloyd George seized this opportunity to replace William Robertson with his vehement objections to the scheme and appointed Wilson as Chief of Imperial General Staff (CIGS) on 18th February 1918.[21]

CHIEF OF IMPERIAL GENERAL STAFF

Wilson was now at the forefront of the British Military and strategic policy making and saw the Prime Minister on a regular basis. Wilson maintained good relations, sharing war strategies with the cabinet ministers and political elites, in which Robertson believed that civilians should not be in the loop. Henry Wilson displayed exceptional political skills and helped Lloyd George in drawing up the "Fontainebleau Memorandum" in March 1919, which laid down essential guidelines for a peace treaty with Germany.[22]

His role as the government's chief military adviser and his unequalled reputation in France to

oil the wheels of the Franco-British alliance helped win a victorious war against Germany. He turned out to be the most successful CIGS of the war and indeed, no other high-ranking soldier in the British Army could have made such a significant contribution both at home and to the Franco-British alliance.

In July 1919, at the age of 55, Wilson was promoted to Field Marshal, becoming the second youngest non-royal Field Marshal (after Wellington) in the history of the British army. He was the only man ever to rise from the lowest to the highest rank in the British army. A week later, Wilson was made a Baronet (a hereditary knighthood) and received a grant of 10,000 pounds.[23]

SHELVED ASIDE

The end of European hostilities ushered in a new and uncertain road for Britain. After the peace conference in 1919, Lloyd George turned his attention towards domestic and foreign reconstruction. Therefore, the value of Wilson began to decline and again his career deteriorated.

Wilson was especially focused on the fate of Ireland. He was annoyed that the cabinet appeared to be abdicating their responsibilities in Ireland, while believing that the violence in Ireland should be calmed by martial law. The Irish Civil War

broke out as the Irish Republicans demanded an independent state. It was eventually won by the Irish Republicans with the aid of the British government.

The cabinet agreed to open formal negotiations with Irish Nationalist leaders which ended in the Irish signing the Anglo-Irish treaty on 6th December 1921. The treaty made Southern Ireland an independent state.

Henry Wilson opposed the treaty and felt it was a betrayal to the Irish State. He was disgusted when Lloyd George decided to negotiate with the Irish Nationalist leaders in mid-1921 and the two barely spoke throughout the rest of his time as CIGS.

Wilson retired in February 1922.

POLITICIAN

Three days after he retired as CIGS, Wilson was offered an unopposed seat in Northern Ireland parliament. His high public profile in support of the Ulster Unionist Regime associated him with violence and oppression in the eyes of Irish Republicans. He wanted to overthrow Lloyd George's government.

It was apparent that Wilson's Irish roots remained important to him and he bitterly regretted partition and the breaking of the union between Great Britain and Ireland.[24]

Sadly, his political career was short-lived. He was assassinated by two members of the Irish Republican Army (IRA) who shot him nine times right at his doorstep. He died at a relatively early age of 58. He was accorded a state funeral and was buried in St. Paul's Cathedral.

CONCLUSION

Henry Wilson rose to the highest of ranks despite not being a 'fighting soldier.' He rendered three very distinguished services to Great Britain. Firstly, it was the excellent planning of the BEF in August 1914. Secondly, his vocal capability was instrumental in the political alliance with France. Lastly, it was his effort in creating a supreme war council and a unity of command in co-ordinating the strategies of the Allies in the war against Germany.

All these attributed to him as being a political strategist rather than a soldier. His stars were aligned perfectly to the right people and his persuasive skills brought him further than anyone ever did. Despite being kicked out of the military circle multiple times, he portrayed himself as a useful ally to the Prime Minister which saw him rise up again, this time in the political circle. It was a remarkable feat that was definitely unmatched and earned him the reputation of a 'political' general.

However, while the politicians themselves played an essential part in his advancement into the highest military level command, they also led to his decline as a senior commander on the Western Front and eventually, to his death. 🌐

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Quotable Quotes

"We sleep safely at night because rough men stand ready to visit violence on those who would harm us." .
– Winston Churchill (1874-1965), Former Prime Minister of the United Kingdom, military officer, historian, writer, artist and Nobel Prize winner in Literature.

"It is fatal to enter a war without the will to win it."
– Douglas MacArthur (1880-1964), Five-Star General of the American Army, Field Marshall of the Philippine Army.

"The only easy day was yesterday!"
– D.J Molles, author of "The Remaining" series

"A leader is a man who had the ability to get other people to do what they don't want to do, and like it."
– Harry S.Truman (1884-1972), 33rd President of the United States.

"Lead me, follow me, or get out of my way."
– George S.Patton (1885-1945), United States Army General.

"Whoever is under a man's power is under his protection, too."
– David J.Schwartz (1927-1987), American motivational writer, coach, professor.

"Leadership is the capacity to translate vision into reality."
– Warren Bennis (1925-2014), American scholar, organisational consultant and author, distinguished professor.

"You don't lead by pointing and telling people some place to go. You lead by going to that place and making a case."
– Ken Kesey (1935-2001), American novelist, poet, essayist.

"Leaders always choose the harder right rather than the easier wrong."
– Orrin Woodward, author, entrepreneur, motivational speaker.

"Leaders must be good listeners. It's rule number one, and it's the most powerful thing they can do to build trusted relationships."
– Lee Ellis (b. 1943), retired United States Air Force Colonel, author, speaker, consultant.

"If you don't love something, you're not going to go the extra mile, work the extra weekend, challenge the status quo as much."
– Steve Jobs (1955-2011), Co-Founder, Chairman and CEO of Apple.Inc, entrepreneur, marketer, inventor.

"The quality of a leader is reflected in the standards they set for themselves."
– Ray Kroc (1902-1984), American businessman, predominant establisher
of the McDonald's Corporation.

"How we think shows through in how we act. Attitudes are mirrors of the mind.
They reflect thinking."
– David Joseph Schwartz (1927-1987), American motivational writer and coach.

"Go as far as you can see; when you get there, you'll be able to see farther."
– J.P Morgan (1837-1913), American financier, banker, philanthropist, art collector.

"The function of leadership is to produce more leaders, not more followers."
– Ralph Nader (b. 1934), American political activist, author, lecturer, attorney.

"A man is but the product of his thoughts what he thinks, he becomes."
– Mahatma Ghandi (1869-1948), Indian Nationalist Leader, politician, spiritual leader.

"We think too small, like the frog at the bottom of the well. He thinks the sky is only
as big as the top of the well. If he surfaced, he would have an entirely different view."
– Mao Zedong (1893-1976), Chinese Communist revolutionary, founding father of the People's Republic of China.

"I can't change the direction of the wind, but I can adjust my sails to always reach my destination."
– Jimmy Dean (1928-2010), American country music singer, television host, actor, businessman.

"I can accept failure, everyone fails at something. But I can't accept not trying."
– Michael Jordan (b. 1963), American former professional basketball player, entrepreneur.

"Learn everything you can, anytime you can, from anyone you can –
there will always come a time when you will be grateful you did."
– Sarah Caldwell (1924-2006), American opera conductor, impresario, stage director.

"Success is not final, failure is not fatal: it is the courage to continue that counts."
– Winston Churchill (1874-1965), Former Prime Minister of the United Kingdom,
military officer, historian, writer, artist and Nobel Prize winner in Literature.

"Never put off till tomorrow what you can do the day after tomorrow."
– Mark Twain (1835-1910), American author, humourist.

"He who has never learned to obey cannot be a good commander."
– Aristotle (384-322 BCE), Greek philosopher, scientist.

"You have to learn the rules of the game. And then you have to play better than anyone else."
– Albert Einstein (1879-1955), German theoretical physicist, philosopher of science,
Nobel Prize winner in Physics.

"The will to succeed is important, but what's more important is the will to prepare."
– Bobby Knight (b. 1940), American retired basketball coach.

"Rank does not confer privilege or give power. It imposes responsibility."
– Peter F. Drucker (1909-2005), management consultant, author, educator.

"The soldier is the Army. No army is better than its soldiers. The Soldier is also a citizen.
In fact, the highest obligation and privilege of citizenship is that of
bearing arms for one's country."
– George S.Patton (1885-1945), United States Army General.

"When you are in any contest you should work as if there were -
to the very last minute - a chance to lose it.
– Dwight D. Eisenhower (1890-1969), 34th President of the United States,
Five-star General of the United States Army.

It is not enough to fight. It is the spirit which we bring to the fight that
decides the issue. It is morale that wins the victory.
– George Catlett Marshall (1880-1959), Chief of Staff of the United States Army,
Secretary of State, third Secretary of Defence.

"When you can't make them see the light, make them feel the heat."
– Ronald Reagan (1911-2004), 40th President of the United States, actor, politician.

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Tim Huxley, *Defending the Lion City: The Armed Forces of Singapore* (St Leonard, Australia: Allen & Unwin, 2000), 4.

Huxley, *Defending the Lion City,* 4.

Ibid., 4.

Edward Timperlake, William C. Triplett and William II Triplet, *Red Dragon Rising: Communist China's Military Threat to America* (Columbia: Regnery Publishing, 1999), 34.

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For example:

Chan Kim Yin and Psalm Lew, "The Challenge of Systematic Leadership Development in the SAF," *POINTER* 30, no. 4 (2005): 39-50.

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Mark J. Valencia, "Regional Maritime Regime Building: Prospects in Northeast and Southeast Asia," *Ocean Development and International Law* 31 (2000): 241.

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Michael I. Handel, "Introduction," in *Clausewitz and Modern Strategy,* ed. Michael I. Handel, (London: Frank Cass, 1986), 3.

H. Rothfels, "Clausewitz," in *Makers of Modern Strategy: Military thought from Machiavelli to Hitler,* eds. Edward Mead Earle and Brian Roy, (Princeton: Princeton University Press, 1971), 102.

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For example:

David Boey, "Old Soldiers Still Have Something to Teach," *The Straits Times,* 28 September 2004, 12.

Donald Urquhart, "US Leaves it to Littoral States; Admiral Fallon Says Region Can Do Adequate Job in Securing Straits," *The Business Times Singapore,* 2 April 2004, 10.

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and URL. If no date is given, substitute date of last modification or date accessed instead.

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Liaquat Ali Khan, "Defeating the IDF," *Counterpunch,* 29 July 2006, http://www.counterpunch.org/khan07292006.html.

If the article was written by the publishing organisation, the name of the publishing organisation should only be used once.

For example:

International Committee of the Red Cross, "Direct participation in hostilities," 31 December 2005, http://www.icrc.org/Web/eng/siteeng0.nsf/html/participation-hostilities-ihl-311205.

If the identity of the author cannot be determined, the name of the website the article is hosted on should be used. For example:

"Newly unveiled East Jerusalem plan put on hold," *BBC News*, 2 March 2010, http://news.bbc.co.uk/2/hi/middle_east/8546276.stm.

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Editor, *POINTER*
AFPN 1451
500 Upper Jurong Road
Singapore 638364
Tel: **6799 7755**
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