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OPERATIONAL ART AND THE OPERATIONAL LEVEL OF WAR

OPERATIONAL COMMAND AND THE FUTURE BATTLEFIELD
- NEW DEMANDS, NEW SKILLS, NEW METHODS

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ABSTRACT

This paper examines the challenges facing an operational level commander in the future and uncertain battlefield. The thesis of this paper is that the changing dynamics of the future battlefield will place new demands on command at the operational level, which in turn will demand new skills and methods to be inculcated through training and education, that must be institutionalised within the military system if operational level commanders are to be effective in the prosecution of their tasks. The paper will briefly explore the birth and evolution of the operational level of war, and place a reasonable definition on the operational level and the operational art for the purpose of further stating the thesis. The paper will then examine the concept of the end-state, which is fundamental in understanding the link between tactical action and strategic goals, achieved through operational command. The segment on the changing spectrum of war as we know it together with the related challenges of the future battlefield will set the stage for the type of commander that will be required to fulfil a successful command at the operational level. The paper will conclude with a discussion on some proposals on the way ahead, in terms of means to institutionalise talent grooming and retention, education and training of the officer corps.

INTRODUCTION

> *"The successful army group commander must have the full knowledge of the careful balance among operations, tactics, logistics and strategy. He must be a psychologist, capable of reading the psyche of his army at any point in time. Above all else, he must have vision to understand the end state and then plot the path for his army group to get there, weaving a trail through uncertainty, constraints and restrictions. Shaping all these elements becomes far more an art than a science[1]."*

> General Crosbie E. Saint

Engagements of centuries past comprised relatively simple fighting organisations with simple command structures and goals. This has changed since the Second World War, and with the advent of modern technology that allows more lethal and long-ranged destruction options, together with the complex military structures fighting in a multi-dimensional battle space, the fighting arena has become an extremely challenging environment, which demands a special breed of commanders, especially at the operational level. The future battlefield, with trends pointing towards more coalition and multi-national operations in a predominantly Operations Other Than War environment, and the need for the operational commander to consider factors well beyond the traditional realms of military command, will place various new demands, both on the operational level commander, as well as those in tactical commands, which in turn will demand new skills.

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level commanders are to be effective in the prosecution of their tasks. The paper will briefly explore the birth and evolution of the operational level of war, and place a reasonable definition on the operational level and the operational art for the purpose of further stating the thesis. The paper will then examine the concept of the end-state, which is fundamental in understanding the link between tactical action and strategic goals, achieved through operational command. The segment on the changing spectrum of war as we know it together with the related challenges of the future battlefield will set the stage for the type of commander that will be required to fulfil a successful command at the operational level. The paper will conclude with a discussion on some proposals on the way ahead to breaking the organisational mindset that will be the major stumbling block to achieving a core of such commanders.

ORIGINS AND EVOLUTION

The exact origins of the concept of operational art are not very precise. Recorded history points to the Germans and the Soviets[2] as the most probable originators of the concept, which since the Gulf War has taken increased prominence in military thinking and practice. The changing nature and complexity of war, and the technological innovations of the Industrial Revolution of the late 19th century, forced the European states to have a more sophisticated approach to the study of war[3]. Even prior to the Cold War, or even the First and the Second operational arw

gap between the strategic and tactical levels of war, and a need for a third level to fill this gap was in the offing. The Soviet experience from the Russo-Japanese War in 1904 and World War I spawned revolutionary thinking on the conduct of warfare, probably forming the earliest roots of the operational art concept. Rising from the lessons of these wars, the Soviets recognised the impact of the Industrial Revolution on the conduct of future warfare[5], and set about looking at how war could be studied and revolutionary methods of fighting be employed. A number of significant ideas, like the concept of deep operations (*glubokaia operatsiia*) and deep battle (*glubokii boi*) by Mikhail Nikolaevich Tukhachevskii, and the identification by G. S. Isserson of a link between the tactical and strategic levels, formed much of the basis of modern Soviet thinking and understanding on the operational art and the operational level of war[6]. The current American thinking on the operational art comes largely from their post-Vietnam military revolution.

<u>DEFINITIONS</u>

The notion of the operational art came about as early as the days of Jomini and his writings on the "logistics" that linked strategy and tactics[7], and those of Clausewitz's thinking on the links between strategy and tactics through time, space and manoeuvre[8]. Edward Luttwak stresses the importance of manoeuvre warfare in relation to attacking the enemy's weakness, in a term he refers to as "relational manoeuvre"[9], employing "low cost, high risk" options that allow significant operational and strategic returns for reasonably low tactical

investment[10]. It involves maintaining equilibrium between the four essential components of the operational art, namely, time, space, means and purpose, so that military power is applied in a manner that higher goals are optimally achieved[11]. Balancing the tensions between these components and understanding when and how to create an imbalance of the same in the enemy is the art.

Over time there have been several modern definitions and descriptions. For the purpose of this thesis, the paper will adopt the *US FM 101-5-1* version of the definition of operational art:

"The employment of military forces to attain strategic and/or operational objectives through the design, organisation, integration and conduct of strategies, campaigns, major operations and battles. Operational art translates the joint force commander's strategy into operational design, and, ultimately, tactical action, by integrating the key activities of all the levels of war."[12]

Essentially, it is the art of translating strategic goals through tactical action, and has the elements of campaign planning and conduct, and joint operations.

CONCEPT OF END-STATE

Perhaps the single most critical factor to be understood by the commander at the operational level is the concept of understanding the desired end-state of a particular operation. The end-state will determine the manner in which tactical battles are crafted and executed, which in turn will have a direct bearing on the

ability of the commander to fulfil the strategic objectives, which themselves are a product of the national goals. There is an iterative link from the strategic to the operational and then to the tactical levels[13] (and vice versa), very much like the reinforcing links of a chain. This is important because success at the tactical level does not automatically ensure that the strategic goals will be met[14], and the operational commander must have a clear understanding of this relationship between the levels of war. Such an understanding must go beyond the realms of the mission into that of post-war implications. Unfortunate as it may seem, many military forces take an isolationist attitude, not looking beyond the termination of their immediate military mission, with regards to their post-war roles and responsibilities.[15] This is especially so when it concerns the re-building of the area of operation as may be the case when peace enforcement transits to peace keeping. Such a stance by the commander can cloud his judgement in terms of what the end-state ought to be, and in the process may fail to achieve the strategic goals.

The operational commander must not only have a clear perspective of what is to be achieved, but must also query his superiors if there is ambiguity in the perception of a common end-state, or else his planning and execution will be based on wrong premises. This is particularly critical, as the national leadership's perception of the end-state and the related strategic military objectives may not always have a simple and direct relation. When General Norman Schwarzkopf, during the early stages of the Gulf War, was assigned the initial task of protecting Saudi Arabia from an Iraqi attack, he was also given a potential task (by

President George Bush) of ejecting Saddam Hussein's forces from Kuwait.[16] This had profound implications at the operational level since one end-state demanded a defensive approach while the other an offensive one. This was a serious problem in Schwarzkopf's view given his force structure and the manner in which he deployed his troops for the defence of Saudi Arabia. If Schwarzkopf had not raised the issue, it can be postulated that the subsequent offensive operation would have been flawed and the goal of liberating Kuwait would have been at risk. It is therefore critical that the commander at the operational level has a sound understanding what his military goals are in order to achieve the strategic goals as he is the vital link between the strategic level decision-makers and the tactical commands. If the relatively conventional setting of the Gulf War can cause a divergence in understanding of the end-state, the dynamics of the future battlefield will thrust greater and even more complex challenges upon the operational commander.

THE FUTURE BATTLEFIELD

The face of the battlefield has changed over the centuries, ranging from the ancient Roman marching columns, to the devastating effects of firepower and technology witnessed in the Gulf War, and to the recent scourges of small-nation wars and asymmetrical warfare (which will be elaborated later in this paper). Perhaps a suitable comparison on the nature of change, at the operational level, can be taken using the Napoleonic wars and the Gulf War. The former saw

unprecedented introduction of mass military formations and decisive self-contained manoeuvres supported by fire that was previously unparalleled.[17] It also saw a combination of statesman and soldier in the form of Napoleon Bonaparte, who was not only the Emperor of France but also the supreme military commander[18]; in fact, Napoleon "insisted not only on a one-man rule but also on one-man command"[19]. This had certain advantages as the collapse in `distance' between the national leadership and that of the military ensured that the commander became the single point of reference for understanding the relationship between national goals and military objectives. This was an important factor since all battles have an element of uncertainty, and it was Napoleon's keen understanding of time and space and his application of seizing windows of opportunity that gave him the upper hand. This also meant that Napoleon did not require an elaborate staff, as he was able to view the battlefield most of the time and make decisions based on what he saw, and the staff was therefore basically information gatherers.[20] This relative `simplicity' was no more the case in the Gulf War, which saw a coalition of more than 43 countries[21] engaged in a single effort to liberate Kuwait. The level of complexity created by the mass of forces, the technology and firepower involved, and the coordination required to orchestrate the myriad of assets and manoeuvres in the battle space, could only have been done by organised staff who not only gathered, processed and disseminated information, but also provided the operational commander with assessments and options. The various national interests that prevailed tremendously complicated the `distance' between statesman and soldier, and the

effort required to harness these interests into a common purpose in the battlefield that answered to the strategic requirements. The recent Balkan conflicts and the on-going strife in Palestinian territory have created an asymmetrical dimension that adds new challenges. War was never simple but it has become even more complex.

The end of the Cold War also brought with it the possible end of conventional conflicts that the world has experienced. While there has been argument for a post-Cold War bi-polar military world with China achieving "strategic parity with the United States",[22] current analyses of China's military power build-up and potential predicts a formidable U.S. lead in the 21st century.[23] The future scenario will see a series of continuous and globally scattered small wars that will pose a challenge to the military that has been used to using its overwhelming firepower and manoeuvre capabilities to resolve conflicts[24]. Christopher Bellamy has postulated three areas of trends for future conflicts, namely, the "environmental conflict" that is driven by competition over scarce resources, conflicts arising from tensions resulting from migration, and the polarisation of society, which he terms "anti-elite action generated" conflict[25]. These scenarios have become commonplace events in the global arena, which give an added non-conventional twist to the already unfamiliar battlefield and its game rules. There is an increased appearance of a number of non-traditional actors in the `battlefield'[26]. This is evident when we examine the rising cases of ethnic warfare like the guerrilla and terrorist attacks waged by the Tamil Tigers in Sri Lanka[27], the post-Suharto racial riots in Indonesia which not only put the

ethnic minority Chinese in jeopardy but also saw clashes between Muslim and Christian ethnic Indonesian factions, and the on-going tensions in Kosovo. In each of these cases there was some semblance of secessionist motivation, and therefore, the operational commander's perspective of end-state vis-à-vis his military objectives becomes very complicated. This effect would be even more confusing at the tactical level where simple tactical decisions may bear strategic repercussions, and hence the need for strategic awareness at the tactical level also. What we see is the absence of a total war[28], and the absence of clearly definable threats in some cases[29], which gives rise to non-state actors, and this may include criminal organisations, drug cartels or even religious sects. It becomes a battlefield with no fronts, very little propensity to recover from errors (strategic, operational or tactical), and great dependence of commanders at all levels to be able to think on their feet with the strategic perspective always at the back of their minds. This changes the operational commander's perception of end-state, and raises queries in his mind of what the definition of `victory' will be, or for that matter, whether victory in the traditional sense can ever be achieved. The eventual solution to the conflict may not be pure military force but rather a combination of non-traditional avenues[30] that the operational commander must explore and exploit.

Coalitions and alliances have been a recurrent feature for decades and it is apparent from conflicts since the Gulf War that coalitions and multi-national forces will be the dominant force structure used in resolving global conflicts[31]. A recent assessment by the British Army, in its role for the 1990s and beyond,

showed that increased political influence is likely to continue on military decision-making as coalition warfare takes the place of conventional warfare between nations[32]. The study also established that it

One of the main occurrences with the divergence in capability between first world countries, who are endowed with sufficient economic independence to pursue technological revolutions, and third world countries, is the emergence of asymmetrical warfare. This is possibly the poor man's revolution in military affairs. The main problem with asymmetrical warfare is that the level of the conflict is determined by the lowest denominator in the battlefield[36], in this case the underdog who is probably a non-state actor that uses unconventional means to achieve his goals. The superior force, in this case probably a coalition force, is forced to fight at the opposition's level, which is a disadvantage given the conventional approach of most military forces. This also brings about the question of what the enemy's centre of gravity is. While the centre of gravity, which is the seat of the enemy's power,[37] according to Clausewitz, is simple in theory, it is very difficult to identify in practice.[38] This is something that must be clear in the mind of the operational commander. Non-state actors and social entities that form non-conventional military-type organisations are unpredictable compared to conventional and structured military forces bound by doctrine and training[39]. Usually having no moral or legal inclinations[40] when conducting their operations, these forces do not work on traditional military norms and ethics. This creates a very different and challenging environment for the troops and commanders who are used to training and operating in conventional settings. The situation wi389 TrDea a blurring of the line between civilians and soldiers,[41] where the concept of end-state, the definition of victory, and the recognition of the enemy's centre of gravity is fuzzy. This wi389pose ahallenge not only for the

operational commander, but also the commander at the tactical level who is in direct contact with these elements and will therefore need to understand the strategic implications of their tactical actions.

The media is a powerful and critical factor influencing the future battlefield. The presence of media in war is not a new phenomenon. In fact, the media of some form or rather has been present in battles since the 18th century and, as in the present day, have never been popular with the military[42] because of the transparency the military is faced with. In turn, the military has tried various measures of censorship, usually with futile results. In 1985, Richard Simpkin in his book *Race To The Swift* predicted the impracticality of censorship in light of modern media like the television[43], where scenes of extreme terror from the battlefield are delivered to the homes of the public, causing a possible turn of public opinion. The improvements in technology will proliferate the media's ability to broadcast future military campaigns with real-time global reach and almost immediate worldwide response.[44] The intuition of the operational commander in sensing the situation and managing the press to achieve the desired outcome becomes a crucial characteristic. The first near real-time reporting by the media occurred in the Vietnam conflicts[45]. There were no censorship measures in place and the media operated in the immediate vicinity of the battle area, which resulted in direct broadcast of the battles, sometimes with misrepresentation, into American homes. The broadcast of the Tet Offensive in 1968 is a vivid example of how media coverage can have a negative impact at the operational and strategic level. In that incident, American public perception was distorted by the

television broadcast of tactical battles that appeared to portray severe American losses[46], even though success was actually achieved at the operational level as the North Vietnamese Army and the Viet Cong were unable to achieve any significant strategic objectives. The situation was exacerbated by the poor government-media relationship. On the other hand, near total censorship of the media by the Reagan administration in the Grenada operation, until two days after the invasion where journalists were escorted to the battlefield, prevented adverse media influence on the operation,[47] but did subsequently raise the issue of "constitutionality".[48] The Thatcher government, during the Falklands War in 1982, sought middle ground, and exercised limited control on the media[49], which served the government's interest. The Gulf War witnessed another approach to media management where thousands of journalists relied on the Coalition as the primary information source[50]. Through a system of cooperation with the various international media, the Coalition regulated releases of information and footage[51], and in turn created a dependence of the media on the Coalition. This was possible more because of the isolated nature of the theatre of operations as opposed to the willingness of the media to accede to these terms, and a repeat of such conditions is unlikely. The independent and professional nature of the media, with the proliferation of communication and information technology[52] will make the media a force to be reckoned with in the future battlefield. Media management (which would include new doctrinal and procedural measures)[53] rather than censorship will be the key to dealing with the media. The greater the ability of the operational commander to discern the intricacies of this force, the

better will be the chances of him applying the correct tactical leverage to derive strategic goals.

The fundamental effects of future conflicts, like the horror from death and destruction, are unlikely to change[54]. However, the increased lethality of modern technology, and the presence of non-traditional actors and civilians in the fighting arena, will require greater judgement and sense of awareness, on the part of the operational commander, and even his tactical commanders and troops. This will have a direct impact on the operational commander's use of tactical outputs to fulfil the strategic objectives.

OPERATIONAL LEVEL COMMAND

When a nation goes to war it is the civilian political masters who decide on the national goals that are to be achieved through the application of military force. It will therefore be the role of the professional military leadership to provide a sense of rationality and proportionality of the strategic military aspects of the operation and explain them in a digestible manner to the civilians[55]. This is an important aspect of the military professional's role and it will set the environment for the development of the strategic goals, and the necessary tactical inputs that have to be factored to achieve those goals. In effect, the commander at the operational level must have very clear military and political perspectives of the situation if he is to achieve any measure of success. It is imperative therefore to have a pool of competent commanders, at the correct place and time, who are

able to make such quality complex decisions,[56] and provide quality of advice to the military options available. This pool is something that must be groomed and established over time through training and professional military education.

Commanders at the operational level are the vital link between the strategic and the tactical levels. They must question the relevance of the means to the ends (or achievement of the end-state), especially when, in the commander's mind, the strategic goals are best achieved through application of the military option[57]. They will best be able to advise the civilian leaders on the development of the strategic military objectives that will attain the national goals. However, this has not always been the case, and this was one of the major failures of the German military commanders in the Second World War; most were competent at the operational level, but failed to point out the flaw of the strategy in the plans to their superiors.[58] This was the case in the Panzer divisions' *blitzkrieg* invasion of France in the spring of 1940. Although the resounding tactical success encouraged exploitation, there was fear at the operational level of severing the lines of communication, as the follow-on forces were basically less mobile infantry. The national German leadership, at the same time, decided to put a halt to the advance with the intention of using diplomatic leverage for France's surrender. However, the situation was beyond recovery, and the troops were torn between tactical success and strategic indecision when the rush culminated at Dunkirk. This disconnect in the understanding of a common end-state was due to the incomplete analysis of the strategic end-state which confused the operational perspective in terms of the best way to employ the

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available means to attain the desired ends.[59] The interaction of the operational commander with the strategic level leadership is an important component of command at the operational level[60], and this has remained a constant in time, albeit the actual practice of the art has been less than desired. There is a need for the strategic and national leaders to leave the fighting to the operational commander,[61] allowing him to best integrate his tactical assets as part of his overall campaign plan and decide where and when to fight the tactical battles. The latter is also obliged to give inputs on the tactical outcomes and explain this in context with the achievement of goals at the strategic level.

The operational level of war has the greatest potential for problems because of the joint, and in modern times, combined, nature of operations, integrating tri-service assets, and striving for unity of purpose and effort while at the same time striving to achieve a military end-state which fulfils the common strategic goal. The command of war at the operational level, therefore, will arguably be more of an art, than a science, in times to come, than it has ever been, requiring quality commanders who possess a holistic view of the military and political sensitivities that surround a coalition operation in a future theatre of war facing unconventional threats. The likelihood of an operational level coalition commander remaining for the duration of the operation[62], as opposed to the peacetime requirements of command rotation within a force, will mean that selection of the correct candidate with the right attributes is crucial, with no room for mistakes.

What then would be the future criteria for command at the operational level? The candidate would be an intellectual, skilful at the art of leading people and managing resources, in a diverse and complex multi-national force, and who is able to see the totality of the military and political situation. While "technical knowledge"[63] is the basic requirement at the lower levels of command, the operational commander must have "decision-making ability"[64] at the higher level, which entails comprehensive understanding of the inter-relationships between the military and political considerations. He would need the ability to discern the nuances of distilled superior direction[65], most of which are the products of individual national interests and viewpoints based on the respective national agenda through the various levels above him. He must then sense the situation, set aside service parochialism, and craft operational direction that not only fulfils strategic goals, but also avoids confusion at the tactical level. Intellect, therefore, is a pre-requisite, as a commander who lacks such skills will find it nearly impossible coping with the political, diplomatic, and non-military influences that dog his military operations and turn it around to a common advantage.

Unfortunately, history has shown that the peacetime grooming of commanders does not place emphasis on war fighting leadership[66], and peacetime promotion criteria is usually skewed towards staff proficiency. One such example is Lieutenant-General Arthur Ernest Percival, who was General Officer Commanding of Malaya at the time of the Japanese invasion in World War II. Despite having an impressive combat record from World War I[67] (which had been twenty years earlier), he made several campaign mistakes[68] that lead

to the British surrender of Singapore to the Japanese. One may question whether his rise in career when identified as a talent during his tour as an instructor at the Camberley Staff College[69] was an error in judgement on the part of his superiors. Percival was not a risk-taker and therefore he assumed that the Japanese would also be the same,[70] which was a grave error of judgement on his part. In fact, after the fall of Singapore, the British Chief of the Imperial Staff, Field Marshall Alan Brooke, expressed that "officers were being promoted to higher command because they were proficient at staff work – which was quite wrong – and urged that fewer mistakes of this nature should be made in the future."[71] Peacetime commanders who make the least mistakes are usually judged to be the best, as the organisation is more concerned with preserving the social structure in peacetime, but little learning is derived from such an environment. The traditional military structure demands conformity and stifles mental growth[72]. In comparison, the commercial sector is `at war' all the time, with CEOs making daily decisions that determine the success or failure of the company. There is tolerance for mistakes, which hones the skills of the CEO, and even if he does lose his job as a result, he is still a marketable asset; this is not true for a military organisation.[73] The need to create a similar environment is vital in command at the operational level where the operational commander must understand the enemy and achieve success by making him commit the mistakes.

THE WAY AHEAD

General Saint's quotation at the beginning of this paper, seems to suggest that having such a successful commander, or even commanders, would be an extremely tall order. However, given the unpredictable and unforgiving nature of the future battlefield, there is little choice but to seek ways and means to groom commanders in the system to handle the challenges that will confront them. What then should be the way ahead? Drawing a parallel from the commercial sector, most successful companies have their top positions occupied by a small group of people who move about in the commercial sector, as opposed to those who rise up the ranks within the same organisation[74]. A similar model focusing on the grooming and retention of a talent pool in the military organisation is a possible option. However, given the state of most military organisations, there may be a need to incorporate radical changes in the current leadership, and this is not without historical precedence. When General George C. Marshall was appointed the Chief of Staff of the US Army prior to the Second World War, he forcibly retired 500 senior officers whom he saw as having redundant and regressive thinking[75] and replaced them with a young generation of intellectual and progressive officers. While this action was received with scepticism in the beginning, many of those officers formed the basis for the US Army's growth at that time. Many of those officers were labelled as `mavericks', and as the military system would have it, a number of these talented men were overlooked for promotion. However, this was not always the norm. There were also success

stories like Admiral Hyman Rickover whose passion for nuclear power nearly ended his career, as he was a bane to the Navy leadership[76] at the time. In 1953, Admiral Rickover was saved from that fate because the organisation was at the infancy of its nuclear programme and he became the main candidate to seed its growth.

Admiral Rickover's positive experience was a result of chance rather than design and a more deliberate system of identifying and grooming talent must be put in place. The concept of grooming a talent pool in the military is not new. It was seen in the form of the general staff concept that probably originated late in the 18th century when Gerhard von Scharnhorst re-organised the Prussian War Ministry,[77] where the Prussian General Staff (comprising the best graduates of their War Academy) resided as the core nerve centre of Prussian strategy. During his tour there, Helmuth von Moltke transformed the Prussian General Staff into a "unique instrument combining flexibility and initiative at the local level with conformity to a common operational doctrine and to the intentions of higher command"[78], and this was possibly a key reason for their success in the Franco-Prussian War. Most modern military forces, like the U.S. Armed Forces, do not have a General Staff, but have adopted innovative solutions like the concept of the Jedi Knights, an informal group of intellectuals who shalcon790h

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Kuwait that included his famous `Hail Mary' plan[80]. While it is recognised that such officers may never rise to higher appointments in peacetime, their retention in the military system will be an asset in times of conflict, and the challenge is maintain this equilibrium. The challenge will be integrating these intellectuals into the organisation where they can exercise creative thinking (and progress career-wise) with guidance and control from superior commanders. The Singapore Armed Forces has a General Staff in its system where bright officers are cycled through at various stages of their career and given the opportunity to exercise their creativity in a controlled environment.[81] Eventually, while a number of these officers do rise to higher command, a fair proportion progress up the staff ladder contributing along the way. While the general staff concept is but one option for retaining talent, the nurturing and retention of such a pool of `thinkers' within the system, while at the same time allowing them latitude and exposure of their ideas to the general population, will form the core requirement in creating the correct "wetware"[82] for future operational level command.

Professional military education is a crucial aspect of seeking an organisational solution to the challenges of operational level command in the future. It is an "essential element in developing and maintaining a high quality military force, and enhancing readiness",[83] and higher education levels generate a greater level of critical thinking.[84] The training of every commander how to `paint', while at the same time identifying and grooming the `artists' in the system will allow the latter to set the directions and objectives, while the former will ensure that the vision is transformed into a credible painting (or plan). This would

entail an early identification and nurturing of the `artists' while educating the rest of the `painters'. The education process should then be reinforced with a robust and challenging training system that allows learning through mistakes in a controlled environment. The challenge in this is seeking solutions practicing the operational art at both the inter-service and intra-service levels[85], creating awareness of strategic implications at the tactical level, and enabling operational level commanders to juggle the links between. The process gives the commander the tools to manage the various components that influence the future battlefield, and through an iterative process derived through training and education, he develops the art.

The process of talent identification, the value of professional military education, and challenging training are not totally new concepts to a military organisation. What will be new (and necessary) is the need for a concerted effort to institutionalise these processes within the officer grooming system so that future operational level commanders are a product of design rather than chance, and the talent pool within the organisation becomes the reservoir of institutional experience, knowledge and creativity. In time, with general education in the operational art, every officer will be able to `paint', while the selected `artists' will be given further individualised training[86] to hone their skills, and the system will be backed by a creative pool of talented intellectuals. This will mean a shift in the institutional mindset that can only be brought about by the commitment of senior leadership,[87] allowing its commanders to `think out of the box', at all levels, in a structured organisation, nurturing creativity, and learning from mistakes, and not

allowing any of these to become stumbling blocks to the career path of the officer. While it is recognised that not all of these officers will have the potential to rise to the top, the idea is to groom those who can, while retaining the rest within the military system (and perhaps even the nation[88]) where they can contribute. This will also allow enough proliferation of `operational level' thinking so that even tactical commander will be aware of strategic considerations.

If ever there was a need for the operational commander to effectively practice the operational art, it will be in the future battlefield. The relative `simplicity' of the conventional battlefield already places severe challenges on the operational level of command. Increased trends towards coalition and multi-nationalism, the introduction of the asymmetrical element into the battle arena, the presence of non-traditional elements like the responsive media and non-government organisations, all pose new and even greater challenges to the operational commander. However, given the nature of operations like peace support, where even the tactical commander may be faced with decisions that impact the strategic level, the degree of difficulty of managing the operational level is escalated even further. This would demand even better quality commanders at the operational level who have sufficient skills, confidence and intuition to be able to "create a degree of stability out of apparent chaos"[89], borne out of an institutionalised and deliberate process.

There has been a great deal of academic thought in the operational art and the conduct of war at the operational level, but little emphasis has been made over the years to institutionalise these qualities in the grooming of military

commanders. If the processes are left to chance, the operational commander will become the first victim of the future battlefield, and with him the credibility of the military profession. The future battlefield will create new demands on the operational commander that will require new skills, and therefore new methods of approaching the problems that lie ahead. Institutionalising new ways and means of educating and training the officer cadre ensures perpetuity and proliferation, and over time, a common ethos in the command structure.

ENDNOTES

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