Military Leadership for the Information Age

By/par Commander Thomas Francis Manning

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INTRODUCTION

The nature of the threat to international security has changed dramatically since

the collapse of the former Soviet Union and most military experts agree that changes will

continue in this area and will be further compounded by radical changes in technology.

With the transition to a global economy and an information age environment, the military

profession will continue to face new threats, the introduction of advanced technologies,

new tasks and new opportunities.[1] Experiences since the end of the Cold War indicate

that conflict now and into the 21st century will place great demands on battlefield leaders'

decision-making abilities. With the proliferation of technology and information, military

leaders will find themselves operating in an environment that is increasingly more

complex, faster paced and more lethal than ever before. The threats will be more diverse

and less defined than during the Cold War. They will include regional instability,

terrorism, proliferation of weapons of mass destruction and economic intimidation. The

nature of these threats and the environment in a disorderly, unpredictable world will bring

about complex and ambiguous factors that operational level leaders will have to deal

with: ill-defined enemy forces, unfamiliar climates and terrain, new strategies for waging

war, newly formed coalitions and culturally diverse task forces, and divergent set of tasks

and missions.[2]

Militaries have traditionally operated as a pyramid, with a rigid hierarchy, each

descending level more strictly controlled and supervised.[3] However, to endure in the

future, all organizations, including military forces, will have to be agile with open channels of communications, minimal chains of command, and confidence in empowered members. The rigors of the complex environment in which future organizations will be required to operate will necessitate leaders who can adjust to changes and continue to provide effective guidance and direction. Leaders will have to rely to a greater degree on their subordinates to perform their duties with only strategic direction and their leaders' vision. The transactional styles of leadership often traditionally associated with military organizations will not suffice for the senior military leadership of the next century

AIM

This paper will explore briefly the thesis that to be successful in the complex environment of the information age, senior military leaders at the operational level will need to adopt a more transformational style of leadership.

FACTORS AFFECTING THE APPLICATION OF LEADERSHIP

Leadership and Command

A significant challenge in the study of leadership is the abundance of definitions and theoretical approaches that have been pursued over the centuries and the lack of consensus among scholars concerning their validity. It is therefore essential to commence any study of leadership by defining the concept of "leadership" and establishing the context in which it will be explored. First, it must be understood that the "principles of leadership are universal and do not change with time, only the conditions in which they are applied change".[4] Similarly, although "the principles are the same at all

levels of leadership, they are applied differently by junior, senior and strategic leaders".[5]

As illustrated in figure 1, adapted from Doctor Frank Pinch's presentation to the Advance

Military Studies Course, the majority of the leaders commanding at the operational level

of war are senior officers. While it is acknowledged that senior officers also command at

the tactical level, the majority of the leaders at this level of war are more junior in rank.

Thus, this paper will address the leadership issue from the perspective of the senior

military leader, as it is focusing primarily on leadership at the operational level. The

operational level can be defined as the gray area between strategic and tactics. Therefore,

"if strategic is the art of war and tactics is the art of battle, then operations is the art of

campaigning."[6] Leadership will be defined in this context.

Figure 1

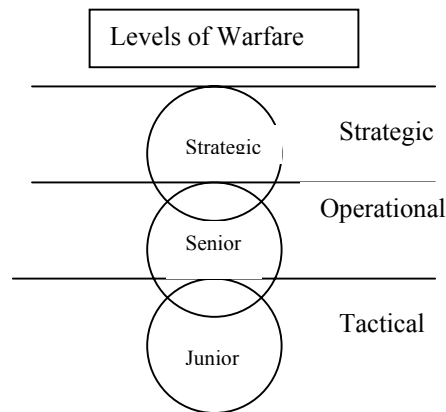It is also necessary to establish the relationship between "command" and

"leadership". While leadership is closely associated command and is often tied up with

the problems of command, they are different concepts. Command is defined as "the

authority to lead" while leadership is defined in the U.S. Army Field Manual 22 - 103,

Leadership and Command at Senior Levels, as "the art of direct and indirect influence

and the skill of creating conditions for sustained organizational success to achieve the desired result."

In his article on military leadership and decision-making in the information age, Professor Thomas Czerwinski discusses the three styles of command that operational level leaders can use to conduct military campaigns. While not mutually exclusive and often employed in combination, these methods are dominant. Each method grapples with the uncertainty of war in its own way, and it is to this uncertainty that its owes its very existence, as does the function of command itself. In Czerwinski's opinion the act of command, in the absence of uncertainty, is so self-evident as to be irrelevant and can be replaced by managerial qualities.[7] More important to this study of leadership however is the fact that each of these styles establishes different conditions under which the universal principles of leadership can be applied.

Command by "direction" was virtually the sole method of command until the middle of the 18th century. The earliest military commanders realized that even if they could find a suitable vantage point from which they could observe their troops in action, distances prevented them playing any role other than observer. Alternatively, they could take personal charge of one element of their force, judging it to be the decisive one. They thereby directed some of their forces all of the time but depended on messengers to communicate with their other units. The other variant involved the commanders moving from unit to unit as the situation seemed to warrant, thereby directing some or all of their forces some of the time. Both variants of command by "direction" fell short of the commanders' desire to dynamically direct all of their forces.[8] Two hundred and fifty years ago, Frederick the Great tried to break out of the limitations imposed by command

by "direction" by resorting to command by "planning", thereby trading dynamism for comprehensiveness. He attempted to plan every move in advance, relying on highly trained troops and strict discipline to carry out the operational plan ordered. This method, which operates exclusively at the strategic and operational levels of war, is characterized by trading flexibility for focus in order to concentrate on identifying and neutralizing centers of gravity in a campaign context.[9]

According to Martin van Creveld's iron rules for increasing the performance of command both of these styles of command are inadequate and risk being self-defeating. He would argue that command forms, which centralize uncertainty or attempt to prioritize it, do not lend themselves to success.[10] Thus, Professor Czerwinski forecasts a transition to command by "influence". The hallmark of command by "influence" is the use of auftragstaktik - "mission - type orders" especially as developed by the German Army in the latter stages of World War I and refined in World War II. In this method of command, only the outline and minimum goals of an operation or a campaign are laid down which means all of the forces can be influenced all of the time although the direct control is diminished.[11]   Unlike other command forms, this method, according to van Creveld, "takes disorder in stride as inevitable and even, insofar as it affected the enemy as well, desirable."[12] Great reliance is placed on the local tactical level commanders' situational awareness and self-contained units capable of semi-autonomous action, supplemented by "directed telescopes." All of this operates, however, within the framework and context of the commander's concept of operations or intent.[13]

Leadership and Command by "Influence'

The transition to command by "influence", which will significantly change the conditions for the application of the principles of leadership, is being driven by changes in the way of waging war resulting from the fielding of information-age capabilities. Previously an attrition strategy was employed which was based on building up massive combat forces and wearing down enemy forces through direct pressure provided by industrial might. In the future, the "manoeuverist" theory of warfare, which has been adopted by most western nations since the end of the Cold War, will call for the employment of smaller units, with personnel much more widely dispersed in the battle area, linked mainly by information to one another and to higher command. Success will be expected while being more efficient in protecting lives and saving resources - gaining quick, decisive victories with minimum casualties. This increased complexity and ambiguity resulting from the adoption of the new command approach, combined with higher operational tempo and greater lethality of weapons, will all increase the demands on the operational level leaders' decision-making. With this approach to command, operational level leaders will no longer have the luxury of being able to rehearse every possible contingency of operations for years, as they could during the Cold War, nor can they rely on "checklist solutions" or "by-the-number responses." They will have to understand the environment in which they are operating and be able to think on their feet with timely and accurate decisions. This reduces the margin of error for senior military leaders in decision-making and force-employment as the decisions at the operational level tend to have greater consequences than ever before.[14]   This is further compounded in the information age by the compression of the three levels of warfare where actions at

the tactical and operational levels can have consequences and drive decisions at the strategic level.

Leadership and Decision Making

Operational level decision-making always depended on accurate and timely receipt of battlefield information. Quality information is the key to good decision-making. However, the problem in the future, will be too much information. The information age technology will provide senior leaders with unprecedented information from every imaginable source and in mind-numbing detail. Unfortunately, there is a very finite limit to the amount of information the human brain can usefully process before it commences to unconsciously filter out information. The challenge for senior leaders will be to make the natural filtering process a conscious effort rather than an unconscious reaction.[15] Operational level leaders will need to make hard choices in advance about the kind of information they need to make their decisions and the information that should be routed to subordinate commanders for tactical level decision-making.

Therefore, to permit the tactical speed and agility that will be necessary to win battles on the digital battlefield, operational level commanders will have to decentralize decision-making to their subordinate commanders. This means they will have to increase the authority, flexibility and freedom of action they delegate to tactical level commanders who, in turn, will keep them informed about discretionary action.[16] However to accommodate the larger number of direct reports, senior military leaders will have to rely more on active "managing by exception". Professional trust and confidence between operational level leaders and their tactical level subordinate commanders will be more essential than ever before.

The speed and tempo of future battles will also require "flattened organizational structures with fewer levels in the chain of command".[17] The traditional "top-down approach to leadership will need to be replaced with more engaging methods" suitable for the information age and the command by "influence" approach.[18] The "manoeuverist" theory of warfare calls for smaller, self-contained units that can detach for missions in isolation, then re-form quickly and reintegrate back into larger units. This means that operational level commanders will have to design and implement flexible organizational architectures that will permit the agility needed to effectively employ their military forces in this manner.

Leadership and the Human Dimension

Innovations such as the stirrup, breech-loading rifles and artillery, wire and wireless communication, the tank and helicopter all have undoubtedly changed the face of battle, but the spirit of soldiers wielding these weapons has always been the deciding factor between victory and defeat.[19] War will always still involve human interaction in a contest of wills, fought with technology and weapons but fought for and with hearts and minds.[20] The technological revolution that is currently changing the face of battle and is driving the transition to command by "influence" will again have a tremendous effect on the human dimension of war. This, in turn, will significantly impact on the leadership style of the operational leaders and will affect how they elect to apply the principles of leadership.

In the 1970's, General Creighton W. Abrams used to say, "the Army is not made up of people. The Army is people". However, twenty-five years later most military doctrine still suffers greatly from its neglect of the human factors in war. U.S. Army

Field Manual 100-5, Operations, defines friction in war as the accumulation of chance errors, unexpected difficulties and confusion of battle that impede both sides. But it totally fails to mention the gut wrenching terror, the cowardice, the shirking, and the agonizing indecision. This definition suggests that there is little that hampers smooth operations on the battlefield that cannot be fixed with better intelligence, planning and communications.[21] Carl von Clausewitz, however, did recognize the present of the human dimension in warfare. He added a fourth ingredient to the friction of war, which he identified as "danger". "War is the realm of danger," he wrote, "and its presence inspires fear: fear, in turn, undermines the soldier's desire and ability to carry out the commander's will, thereby multiplying the sources of friction".[22]

The slightest activity can be detected on the modern battlefield by high technology sensors such that any movement, electromagnetic emission, firing, and even the simple act of warning up an engine can make a soldier a target. Further, the nature of manoeuver warfare intermixes forces throughout the breadth and depth of the battlefield so that the whole notion of "forward" and "rear" areas becomes moot. Every action, even minor routines performed miles from the enemy, becomes a calculated risk. Thus, the fear of death will not be limited to those directly confronting the enemy in the "forward" area but will extend throughout the battlefield's depth - a constant, nagging companion of every soldier, twenty four hours a day.[23] In fact, Colonel Steven Eden, U.S. Army, would argue that by virtue of his greater protection and lesser worth as a target, the infantryman in his foxhole would arguably be safer than the clerk in a command post.

The traditional supports for soldiers in combat have always been the presence of their comrades, the influence and authority of leaders they trusted, and confidence in their

leaders' plan. Unfortunately, the sources of danger on the modern battlefield are multiplying while these traditional sources of support are disappearing.[24] The lethality of modern weapons forces units to disperse in the battle area, causing soldiers to become more isolated than ever before. Isolated in foxholes, vans or armored vehicles, few soldiers will have direct physical contact with more than a handful of their peers. Moreover, many small groups will consist of maintenance detachments, air defense teams and engineer squads who will generally operate away from the parent unit to which they owe their primary loyalty.[25] S.L.A. Marshall observed that "on the field of ire, it is the touch of human nature which gives men courage and enables them to make proper use of their weapons…By the same token, it is the loss of this touch which freezes men and impairs all actions".[26] Furthermore, Colonel Eden argues that:

> Isolation also makes it harder for leaders to exert personal influence over their soldiers. Dispersal, camouflage and the tactical use of terrain render personal example a toll of limited usefulness at best. On the modern battlefield, even the most conspicuous act of bravery will rarely be seen and almost never appreciated for what it entailed. This does not mean feats of raw courage will have no place on future battlefields; it just implies that their ability to inspire comrades will decline, even as their cost in terms of leader casualties climbs. Other acts of leadership, such as a reassuring gesture, calming remark, inspiring speech or simple display of interest in and understanding for the fearful soldier, will become difficult to apply and likewise limited in effectiveness.[27]

Similarly, confidence that their actions are a part of a well-conceived operations plan has always been a source of courage for soldiers and enabled them to perform effectively. Sacrifice is easier to bear if one believe it will contribute to success - as no one wants to die uselessly. Many will argue that through the use of modern communication technology that each soldier can be fully aware of the commander's intent

and supplied with enough data to fight effectively as part of a fully synchronized team, thus enabling them to operate with minimal guidance. However, providing too much detailed information concerning the operations plan to members in the lower echelons will likely not have the desired effect. What will appear as agility, initiative and versatility to the operational level commander will be unintelligible to the squad leaders and the individual soldiers. They will know where to go, fire and pick up supplies, but their grasp of the overall plan will assuredly not be complete. This makes the subordinates' judgement of possible success or failure largely subjective and intensely personalized, reducing their resolve for self-sacrifice.[28] Risk of soldiers being captured with too much information to be squeezed out beyond rank, name and serial number must also be taken into consideration.[29]

Finally, far removed from the close combat of the ground war, the air forces and navies of western nations have traditionally focused on the "means" or the quantifiable physical factors of war -- from economic capacity to specific platforms (ships and airplanes) to supporting structures (communications, logistics, etc.). The air forces have always worshipped at the altar of technology, seeking better and better ways to employ awesome technology in the air, preferably against strategic targets to gain a decisive victory. Similarly, the navies employ platforms at sea to destroy enemy platforms. For navies, the prevailing concept of warfighting in the information age is network-centric warfare. Networked information, command and control, and shooter grids interact to exponentially increase battlefield awareness and combat power. However, both the air forces' strategic attack and the navies' network-centric warfare are criticized for an over-reliance on "technological asymmetry" and their neglect of the human dimension of

warfare.[30] Both approaches assume that victory can be achieved by technology alone.

This makes the western democracies particularly vulnerable to the asymmetrical threat

that is likely to be the hallmark of warfare in the twenty-first century, where relatively

weak enemies will use unconventional weapons and tactics to foil or circumvent the

technological supremacy of western nations.[31] Their aim is not to claim territory or to

even threaten the sovereignty of their opponents. Their primary objective is to weaken

their adversary's resolve and ability to use their superior conventional military capability

effectively to intervene in regional conflicts or to thwart the goals of rogue states or other

subversive groups. Asymmetric threats embrace the full spectrum of disproportionate

intimidation with which the West might be faced, from international civil disobedience

and criminality right up to military low intensity conflicts. They range from computer

warfare through to terrorism or rogue state nuclear blackmail, and include the use of

weapons of mass destruction as much as national destabilisation arising from mass

migration.[32] While technology will provide the tools and weapons to address this threat,

success against the asymmetrical threat will require operational level leaders who can

intellectually out-manoeuvre their adversaries and effectively lead well-trained, tough,

disciplined soldiers, sailors and airmen. As stated by Lieutenant-General Romeo

Dallaire, all operational leaders of the 21st century, regardless if they are Navy, Army, or

Air Force, must have an in-depth understanding of the human side of war. They must

understand their own culture and be a part of it if they are to win the trust of the people

and that of their troops. They will also have to understand the civilian population that

supports their adversaries.[33] In any warfare, knowing one's enemy is fundamental to

success and this is no less true in the case of an asymmetrical threat.[34]

Leadership and Cultural Change

The cultural mosaic of the Canadian Forces (CF) in the next century will also acutely affect the leadership styles of both strategic and operational commanders. Canada is rapidly becoming a global society reflecting the diversity of the world's people and cultures. The increased diversity of language, ethnicity, religion and multi-nationalism reflects the recently increased immigration from more non-traditional sources.[35] As these new Canadians integrate into the fabric of the country, the cultural mosaic of the CF will assuredly change to reflect society. This is important as a representative CF may be fundamental to its ability to contribute to domestic security and essential for international security operations.[36] It will, however, create challenges as this multiracial, multiethnic, and multicultural nation becomes ever more diverse. There will undoubtedly be cultural clashes as many traditional Canadian values and beliefs and many CF traditions and customs are permeated by brief and value systems of new Canadians. Conflict has already arisen in both the Royal Canadian Mounted Police and the CF as illustrated by the Sikhs demands for the right to wear turbans and to carry their traditional kirpans. Important for the operational level commanders, is the fact that this cultural diversity will change the montage of their forces and ultimately affect their approaches to leadership.

While it is recognized that change has been a constant throughout history, the level of physical and cultural change in the past decade is unprecedented. This pace of change will undoubtedly continue into the future as organizations continue to embrace technology and seek efficiencies. These changes will have a tremendous effect on all military members and generate much stress and anxiety. Therefore, it is necessary that

today's senior leaders create an environment that teaches, nurtures and builds on the constants while embracing and leading necessary change. To achieve this environment, the senior military leadership must create a positive, predictable, and ethical command climate for their young leaders and soldiers.[37] They must clearly articulate the reason for the change and how it ties into the organization's mission and purpose.

Leadership and Information Age Technology

The current technological revolution in military affairs has caused many experts to question or doubt, whether leadership is still the number one criterion for battlefield success. Many technocrats would suggest that this revolution will fundamentally change both the principles of leadership and the manner in which operational leaders will control their units. They believe technology will replace leadership as the driving force behind military effectiveness.[38]

Writers, such as Eliot A. Cohen, argue that changes in technology will compel a transformation in the characteristic styles of military leadership. In the past, operational leaders and their staffs planned an operation and then spent the next day or two letting the machine conduct its initial operations on virtual "auto-pilot." They would contend that today operational level commanders would be found pacing back and forth at an electronic command post, talking to pilots or tank commanders on the front line by radio and maybe peeking over their shoulders via remote cameras.[39] Their arguments rest on two central assumptions. First, they suggest that technology evolution engenders a fundamental change in human nature, a sort of technological relativism and that the old days of leading by "dash and bravado" are over. The specialists will replace the warrior as the head of combat formations. The new leader, the "electronic warfare wizard"

uniquely qualified to implement, operate and manage the new systems, will supplant the charismatic operational level commanders of days gone by. Their second assumption claims that technological innovation requires absolute centralization of authority.[40]

Edgar F. Puryear and other military analysts would counter the first assumption by suggesting that "the study of great captains such as Generals George C. Marshall and Douglas MacArthur and the classical writers on war such as von Clausewitz will always be necessary in the development of military leaders, for war will always be won by warriors."[41] If human nature remains the same despite technological advances, then motivating human beings will always have an enduring quality. Thus leadership, the dynamic of human motivation, will be as timeless as human nature. Different leaders will always have unique styles but leadership's substance does not change. "Beneath the cigar-chomping of General Creighton W. Abrams, the profanity and ivory-handled revolvers of Patton, the endearing smile of Eisenhower and the reserved calm of General Robert E. Lee are the timeless principles of character and vision, which made these warriors great leaders in their day."[42]

Cohen's second assumption is equally mistaken. While dramatic advances in technology and communications will make increased centralization easier in some respects, the reason a leader opts for more centralized or decentralized control has little to do with technology.[43] Progress in communication technology will undoubtedly improve communications throughout the theatre of operations, making it possible for operational leaders to have direct connectivity to lower echelons. But there is a very dangerous downside to this increased communication capability. Operational commanders may misuse the tool to micro-manage and skip intermediate levels of command. Tomorrow's

operational level leaders must recognize that they are constrained by the same human limits that dictate an efficient span of control. Their job is to look at the larger picture and allow subordinate leader to address the details.[44]

Fundamentally, it must be understood that technology is a product of human ingenuity. It deals with the hands, and while it does affect organizational relationships and the skills and competencies of both the leader and the follower, it is a neutral factor in interpersonal relationships. Leadership, on the other hand, is an agent of the mind. It focuses on developing the quality of human interaction between the senior and subordinate. The way a leader controls his unit depends more on the maturity of the organization and his leadership style, than on technology.[45]

Leadership Styles

In the information age, with the increased emphases on egalitarian values, it is important to recognize that it is leadership, not technology, which inspires followership. In all organizations, leaders will have to enhance the power of their subordinates and the subsequent effectiveness of technology by providing purpose, direction and motivation. However, since the implementation of new technologies and new social standards often necessitates changes in organizational relationships, leaders will be required to adjust their leadership styles, not their leadership principles, to maintain their organizations' effectiveness. Those, who resist change, will risk creating unnecessary internal strife and conflict within their organizations. They will chance creating an incongruent situation between the organizational structures and relationships, the new technologies and the new social values, and the leadership styles.

As militaries adjust to the impact of the information age and increasingly egalitarian nature of our society, senior military leaders, like their civilian counter-parts, must alter their leadership styles to accommodate the complex environment in which they must now apply the principles of leadership.[46] While most experts would agree that a change in leadership style is necessary, they cannot agree on precisely what that change should be. However, since the early 1980's, civilians studies in business firms, government agencies, and other civilian organizations, along with military research, have supported the greater effectiveness of transformational leadership in contrast to transactional leadership in generating subordinate extra effort, commitment, satisfaction, and contribution to military readiness.[47]

Transactional leadership occurs when the leader rewards or disciplines their followers depending on the adequacy and quality of their performance. As a result, the followers often do not share the transactional leader's beliefs, but rather, tolerates them, since the leader has the power to reward or punish. For this reason, transactional leadership is often associated with the stereotypical manager, who dictates tasks to his followers and monitors to ensure that they perform the tasks correctly. A transactional leader will not normally initiate change but tend to maintain the status quo and is largely responsible for the bureaucratic aspects within an organization.[48] Military leadership, especially at the junior levels, is often transactional in nature as few military leaders are given the opportunity to truly rise above the transactional level. The day-to-day organizational demands of the job often stifle their vision.[49] This should not be surprising in traditional hierarchical organizations, such as military institutions, where measuring short term results and performance is often mistakenly assumed to be more

important then achieving long term goals and objectives. In this environment, bosses can only reliably measure immediate task accomplishment, structural decisions, and adherence to prescribed strategy - all activities associated with transactional leadership and management.[50] The most critical characteristics and behaviors of transformational leadership are often undisclosed to the boss and cannot be directly or immediately measured - thus the disconnection for an organization that wishes to measure everything. This is illustrated by the "zero-defects" mentality so prevalent in military organizations today and the increased emphasis being placed on performance measurement as confirmed by the proliferation of surveys and questionnaires circulating in the Canadian Forces and.

On the other hand, transformational leader's relationship with his followers goes well beyond the establishment of simple exchanges or agreements. It is based on much more than the followers' compliance; it includes shifts in the followers' beliefs and values. Followers internalize the transformational leader's end values, such as integrity and honor, and commit themselves to the leader and his vision. Therefore, transformational leadership is built on followers' commitment. The leader focuses on long-term goals, inspires followers to share his vision, enacts change and empowers followers.[51] Because of these traits, transformational leadership can inspire followers to transcend their own self-interest to get through times of crisis, change and instability.[52] Perhaps the greatest difference between the transactional and transformational leader - the manager and leader, respectively - is that "the manager does things right; the leader does the right thing".[53]

THE TRANSFORMATIONAL SENIOR MILITARY LEADER

Every leader will display both the transactional and transformational style of leadership to some degree. As militaries adopt the "influence" style of command, operational commanders will have to become more transformational and less transactional. For future senior military leaders, a much greater premium will have to be placed on the principles of transformational leadership than on management and contingent rewards. As military organizations adjust to the information age, the complexity of tasks at the higher levels will increase, while concomitantly, the leaders direct authority will become more diffuse. Spans of control and points of contact will also expand dramatically. More importantly, decision-making and communicating will become more complex, and the consequences of poor decisions or fuzzy communications will become graver.[54] Therefore, senior military leaders cannot afford to simply be managers; they must be leaders and "do the right things".

As senior military leaders adopts the transformational style of leadership they will develop more constructive self-images, create more feelings of empowerment in their tactical level subordinates, and higher productivity in their formations and units.[55] Their new transformational approach to leadership will help to eliminate micro-management, careerism, integrity violati

authority, responsibility and decision-making to subordinate commanders when it is appropriate and the organizational maturity permits. In this environment, subordinate commanders who are directly in touch with the tactical situation will be permitted to make decisions and all members of the team will have the opportunities to excel and to accomplish their goals to the best of their ability.[57]

With directive control, the senior military leaders will have to provide control through direction. They will provide the vision, develop strategic objectives, provide the necessary resources, and monitor results. In this environment, subordinate commanders will be expected to use their initiative when the plans no longer reflect the reality of a changing operational or tactical situation. Senior military leaders will expect them to recognize and exploit opportunities first and then to report their actions later. With directive control, the commander will have to accept the risk of mistakes or short-term decline in effectiveness in order to achieve long-term, sustained objectives.

A person who is coerced is pushed, but one who is lead follows willingly. The transformation senior military leaders, especially in western democracies, will have to inspire their subordinate leaders and their soldiers to follow voluntarily. To achieve this they will have to provide coherent direction and guidance that their subordinates will voluntarily follow through future's uncertainty. However, people will voluntarily follow only when they believe in the leader as a person (character) and in the direction the leader wishes to take the organization (vision). In addition, to maintain the loyal support of their followers, leaders will have to establish a healthy, winning culture where people will work together and excel (cohesion).[58]

Character

Gaining the respect and admiration of one's subordinates is central to the transformational leadership process and is achieved through the establishment of credibility through principles of character. The values of trustworthiness, respect for the dignity of others and caring for others' well-being form the foundation of transformational leaders.[59] Subordinates must perceive their leaders as possessing compassion, courage, candor, competence, and commitment.

Transformational military leaders will have to possess a basic respect for the dignity of each subordinate in their organizations; treating all with dignity and respect. Subordinates will have to believe that they are being treated fairly and that their leaders cares and will do everything feasible to ensure their well being and safety. To gain subordinates' respect, senior military leaders will have to exhibit both physical and moral courage. Physical courage will have to be demonstrated by the commanders' physical presence on the battlefield or in the theatre of operations and will play a major role in inspiring and motivating soldiers to perform their best under very dangerous and confusing conditions. Successful leaders have always led by example, and from the front. However, a danger facing the military in the information age is that technology will work so well, operational leaders will no longer feel the need for physical presence with their soldiers.[60]

Moral courage is equally important. The fear of delegating authority to subordinates is not a new phenomenon. The "zero defects" mentality - where commanders feel that their commands must be error free is not new. But the senior military leaders will have to possess the moral courage to deny this damaging philosophy

that says it is worse to report a mistake than it is to make one. The lack of moral courage in peacetime can have disastrous in battle.[61] General George G. Marshall, in describing the need for leaders with the moral courage to tell their superiors when they are wrong, stated "it is hard to get men to do this for this is where you lay your career, perhaps, your commission on the line."[62]

Another character trait that is closely associated with courage is candor. Candor is a two-way street; honesty is as important to a subordinate as it is to a superior. The senior military leaders will have to mentor and coach their subordinates and develop an atmosphere of trust and openness by allowing them to grow and learn from their mistakes.

The final character traits necessary for transformational senior military leaders are competence and commitment. Subordinates will have to believe that their leaders are competent and will not unnecessarily endanger their lives. Additionally, the leaders must show self-sacrifice in achieving their vision and be perceived as being committed to the country, their unit, and the men and women under their control.[63] Without these character traits, senior leaders will not be able to provide the coherent direction and guidance that their subordinates will believe in and voluntarily follow.

Vision

The military leaders' most critical single task will be to consistently give attention to their vision, show its legitimacy and personify it by their actions.[64] The leaders' vision will serve as a source of self-esteem and common purpose for the officers and soldiers that serve in their commands. Alexander the Great, a leader who never lacked in charisma, martial prowess, and personal character, suffered his only military defeat at the

hands of his own troops. They rebelled on the Hypasis River in India because they no longer believed in the direction he wished to take them.[65]

The three elements of a proper vision statement or commander's intent are definition, simplicity and believability. It must first articulate exactly what is to be accomplished. It must be clear and simple so everyone can understand it and the vision must be believable - something attainable and important. A successful vision must attract commitment and inspire enthusiasm, create meaning by clarifying purpose and direction, establish a standard of excellence and bridge the present and the future. Simultaneously, a senior military leader's vision must consider the followers' needs, values and hopes.[66] Finally, the vision must instill self-confidence that will translate into a state of empowerment. During the Gulf War, Chairman of the Joint Chief of Staff Colin Powell's vision for dealing with the Iraqi army was very simple; "first we're going to cut it off, then we're going to kill it."[67] Everybody knew it, everyone understood it, and everyone believed that it was achievable.

Cohesion

Finally, senior military leaders will have to establish and maintain the cohesiveness necessary for success. Cohesiveness encompasses both horizontal social bonding among peers and vertical social bonding of superior and subordinates based on the development of trust and interdependence. Within the cohesive team, inspirational members set examples for others and foster acceptance of mutual goals. Intellectually, stimulating members build on one another's ideas and develop a sense of ownership in solutions to problems. Team cohesion is further strengthened when members are individually considerate and show they care for one another.[68] In the multiracial,

multiethnic, and multicultural forces of the 21st century, it will be absolutely imperative that senior commanders personally ensure that all members under their command are integrated into a cohesive force and that cliques don't become the dominant structure of their organizations.

Cohesion can be, however, a double-edged sword. Therefore, it will be necessary for effective military leaders to pay close attention to the positive alignment of unit and organization goals. Cohesion is a strong predictor of unit effectiveness when there is an alignment of the goals of the unit and the goals of the organization. But it can also be a strong predictor of the opposite. When the goals of a cohesive unit are opposite to those of the organization, the stage is set for sabotaging the organization.[69] Many military analysts attribute the leadership problems in the Canadian Airborne Regiment, that lead to the troubles during the United Nations Mission to Somalia, to a collapse in vertical cohesion.

ADDRESSING THE HUMAN DIMENSION

Delegation

With smaller units and personnel widely dispersed on the battlefield, soldiers will feel more isolated and vulnerable. In addition, subordinate tactical level commanders and leaders will be asked to make more complex tactical level decisions as more decision-making is delegated to lower levels. In short, tactical level leaders will shoulder more responsibility, receive less-specific guidance, be required to process more information and be exposed to a greater degree of danger than their predecessors. It will be little

wonder if many are unable to bear the combat stress and will seek refuge in passivity or indecision.[70]

Therefore, the operational leaders will have to understand the human dimension of battle and realize that their subordinates' "spirit and will to win will be lost in computer-processed displays."[71] They must fully comprehend that fear will become an even more powerful source of friction on future battlefields and must consider what can be done to reduce its effects. First, they will have to distinguish between what is technically feasible and psychologically desirable.[72] Technology will allow the expansion of a leader's span of control but commanders are only effectively capable of controlling a limited number of subordinate units. Second, effective operational leaders must select an appropriate level of directive control based on their organizations' maturity in terms of trust, training levels and subordinate leaders' decision-making abilities. As an organization matures along these lines, the leader moves from more centralized to more decentralized control to capitalize on subordinate leaders' initiative and capabilities. In this way, organizations move away from mere technological efficiency toward the realm of human effectiveness and do not delegate more responsibility than their subordinates can comfortably manage.[73] Finally, new doctrine must be developed that pays more than lip service to battlefield morale, both in human and organizational terms. Units must be structured and employed to minimize the stress placed on the soldiers who serve in them, not just to maximize their weapons' destructive potential.[74]

Physical Presence

Soldiers may wield "push buttons" more often than bayonets, but metal will still tear flesh with sickening regularity-often without warning. Realistic training and unit

cohesiveness can mitigate some of the fear, but there is no substitute for strong battlefield

leadership in steeling soldiers for the real and perceived dangers of future wars.[75]

Modem communication technology allows for command and control of units without

requiring the leaders' physical presence, thereby allowing greater dispersion and depth on

the battlefield. However, the lack of the leaders' physical presence can have a number of

deleterious effects in the units' efficiency. One example where the impact will be most

obvious is in the loss of fidelity in communications. Since more than eighty-seven

percent of human communication is nonverbal, over reliance on digitization can result in

leaders losing the perspective they would have had from interpretation of their

subordinates' nonverbal signals.[76] During the Persian Gulf War, misunderstandings

between General Schwarzkopf, Command in Chief Central Command (strategic level

commander), and Lieutenant-General Franks, Commander US 7th Corps (tactical level

commander), concerning the speed of advance of the 7th Corps and the achievement of

their tactical objectives could possibly have been avoided if Lieutenant-General Yeosock,

Land Forces Component Commander (operational level commander), had been present

on the battlefield with his tactical level subordinates. On the other hand, the exemplary

performance of the Marine Corps during the war can be attributed in no small part to the

physical presence of Lieutenant-General Boomer, the Marine Corps Component

Commander, on the battlefield with his subordinate commanders and troops.

In addition, another digital reality is that leaders can neither personalize their

messages nor discuss their subordinates' psychological problems in any depth over the air

- the enemy's electromagnetic warfare efforts will make it impossible. Finally, digital

links cannot give effective leaders what they need most - a sensing of their subordinates'

moods. No computerized icon has been developed yet to signal leaders that their subordinate commanders or their troops are "freezing up," cowering or simply needing reassurance. For that senior military leaders must be with their subordinate tactical level commanders and their troops.[77] The commanders' personal presence on the battlefield is essential for inspiring and motivating subordinates, especially during combat. Sharing personal experiences with subordinates helps leaders develop a heightened awareness of the realities of combat.[78] S.L.A. Marshall expressed this concept best when he stated that the front is only understood through the eyes and minds of the men who fight there. Further, subordinates at the front know that a leader who is physically present will understand their tactical problems and do all he can to help solve them.[79]

CONCLUSION

Militaries in the future will deploy extremely quickly, be logistically self-sufficient, be intelligence-rich with instant information about its own and enemy forces and conditions. Personnel will be widely dispersed in the battle-contested ground, air, and space above. Units will be small and linked mainly by information to one another and to higher command. Organizations will be flatter than today's. These fast moving, highly maneuverable units will have great firepower.[80]

Obviously, it would be gross incompetence for all branches of the services, navies, armies and air forces, not to incorporate information age technology into their practice of the art of war and exploit the opportunities it offers. However, they must realize that technology will not solve all the problems of war for "war is the matter of heart and will first; weaponry and technology second" and in the 21st century the

operational art will involve much more than just applying force against force.[81] Wars in

the complex information age environment will require a leadership style that fosters

active participation by every member of the team not just a few key players. A style that

feature constant communication, influencing, encouraging, giving feedback, and most of

all listening to the subordinates who make it happen. "Military leaders will have to

enhance the power of their people and the effectiveness of technology by providing

vision, developing strategic direction, monitoring results and acting accordingly. The

future leader will need functional expertise, core values and high ethical standards and

must operate as coaches, mentors or facilitators. They will have to understand the

intricacies of governance, international relations and roles of different players. And,

most importantly, they will have to transfer that understanding to subordinates to improve

their capabilities to meet diverse challenges".[82]

Tomorrow's operational level commander will encounter many situations in

which they will need to exercise a transformational leadership style. The operational

leaders' primary goal will be to transform their subordinates into self-actualizing

members of a cohesive team who see their actions intrinsically linked to that of the

various levels of the organization. Such a selfless state would compel the organization's

members to incessantly seek ways to improve the organization's capability while

maintaining its strong professional ethic.[83]

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