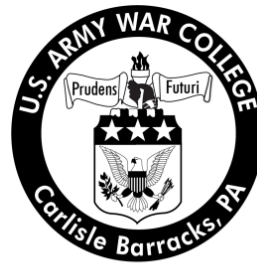


Strategy Research Project

Preparing for the Future Operational Environment

by

Lieutenant Colonel Robert J. Harman
United States Army



United States Army War College
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USAWC STRATEGY RESEARCH PROJECT

PREPARING FOR THE FUTURE OPERATIONAL ENVIRONMENT

by

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ABSTRACT

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As the United States and its Armed Forces transitioned out of Operation Iraqi Freedom (OIF), Operation New Dawn, and soon out of Operation Enduring Freedom (OEF), the emphasis on determining what is next, how to adjust military training, and training development remains at the forefront of Leaders at the strategic, operational, and tactical levels to include the young Soldiers. The transition to a training centric military focuses on preparation for the emerging threats, changing environment, and requirements to secure our Nation's interests. The question becomes what is different from how the military focused post-war training in the past and what future training focus is required posturing the force for success in future conflicts. Will training methodology, the development of Soldiers and Leaders, and training structure require changes to adapt to the future volatile, uncertain, complex, and ambiguous (VUCA) environment? This is a significant question, which requires attention, while the military remains engaged in combat. The application of the lessons learned will change how the military trains, develops leaders, and Soldiers to understand, embrace, and excel in future environments. Identifying the right training requirements affects the Operational Force at the tactical, operational, and strategic levels.

PREPARING FOR THE FUTURE OPERATIONAL ENVIRONMENT

As the United States and its Armed Forces transitioned out of Operation Iraqi Freedom (OIF), Operation New Dawn, and soon out of Operation Enduring Freedom (OEF), the emphasis on determining what is next, and how to adjust military training and development remains at the forefront of Leaders at the strategic, operational, and tactical levels to include the young Soldiers. This dilemma is not a new phenomenon. The United States Military transformed many times in the past from a war centric environment, redeploying, transitioning, and becoming a training centric military. The transition to a training centric military focuses on preparation for the emerging threats, changing environment, and requirements to secure our Nation's interests. The question becomes what is different from how the military focused post-war training in the past and what future training focus postures the force for success in future conflicts. Will the military's training methodology, development of Soldiers and Leaders, and structure require changes to adapt to the future volatile, uncertain, complex, and ambiguous (VUCA) environment? This is a significant question, which requires attention, while the military is still engaged in combat. The plan development must take full advantage of the lessons learned over the past 10 years. The application of the lessons learned will change how the military trains, develops leaders, and Soldiers to understand, embrace, and excel in future environments. This paper outlines the strategic implications of training in the past 10 years and what it means for the future force. Additionally, the paper provides a way forward in focus areas, which facilitates individual growth and the expansion of capabilities and responsibility to include individual development, unit collective training, and embracing the decentralized leadership concept.

Several factors must first be understood and reviewed before beginning to tackle the question of how the military needs to change the way of thinking about training and training development. The first factor is to look at where the force has been and what the previous 10 years provided the force at tactical, operational, and strategic levels. These experiences include the shifts in leadership dynamics, leadership expectations, the requirements of the Soldier on today's battlefield, and what the future environment combined with the potential changes in funding, structure, and mission requirements provides. Over the past 10 years, a change occurred in how the military operates as a force at the strategic, operational, and tactical level. The need for Soldiers to go far beyond knowing how to shoot, move, and communicate in the historic sense - focusing on the military fundamentals to defeat an enemy conducting population centric operations in which defeating an enemy is just part of the tactical operation and overall strategy. Our force conducted a significant mind-shift requiring Soldiers to defeat an enemy, simultaneously shaking the hand of a local villager, and conducting stability operations activities enabling economic growth in a civil and secure environment. Looking back on the 10 years of operations in support of OIF and OEF, this strategy was not conducted in a manner, which achieved the stated objectives, confidence, and shared responsibility of the Host Nation. The military's initial focus of effort mirrored the military's training to conduct operations in a force on force environment. Common with Vietnam, it took the military time to determine what was accurately happening on the battlefield and to reorient unit thinking and operations to facilitate addressing the evolving and key issue – enabling the population. The emphasis on Counter-Insurgency (COIN) operations began to take hold. In a holistic manner forces began to train prior to

deployments in honing their collective and individual skills but also conducting COIN training including warfighting culture, understanding civilian agencies, governance, economic development, rule of law, civil security, and the need to gain the respect and trust of the local populace. This training developed a more rounded Soldier, who is more situational aware on when to use force and when to shake hands. This development is a combination of institutional training methodology and multiple deployments. Leader development occurred over-time because of their leadership development in combat and understanding the operational environment. The military learned to adapt and the freedom to collect and analyze data, take the initiative, make timely decisions, and participate in reframing and developing the operational environment. Arguably, the military is at a level of proficiency in combat operations not seen since World War II. The tactical, operational, and strategic requirement to adjust the ways of thinking and acting because of an extremely complicated and ever-changing operational environment enabled the military in gaining proficiency.

The second factor is the military need to look to the future operational environment. The future operational environment is the most important piece to comprehend. If the future operational environment is not fully analyzed and accepted, there exists a potential problem within the military to fall back on pre-9/11 training and developmental tendencies, which fails to prepare for future conflicts. Instead of focusing on a well-defined adversary as the main threat, the military continues to see a potential for conflict between states, nations, and non-state actors. There exists no defined threat to prepare for, instead there exists a significant amount of potential enemies, which are seen once action occurs. In addition to an ill-defined threat is the awareness

of the global environment, an increased gap between developed and developing Nations, and significant shifts in power among Nations.

The future operational environment fully embraces the phrase - if you break it, you own it. At this time and in this global environment in which shared and common interests exist among coalition partners, the future trained force can no longer afford to focus on military action alone. The environment demands an interagency approach with a balanced effort across several lines of operation. This force must possess the capability and training to defeat the enemy and conduct operations, which enables the population to establish governance, the rule of law, civil security, and economic development to function as a Nation. The future environment expands the military's mission requirement in two areas. The first area requires the force to expand its capabilities and readiness to prepare to excel at several missions – regardless of the environment and with the support of the Interagency. These missions include - counter terrorism, irregular warfare, deter and defeat aggression, project power despite anti-access/area denial challenges, counter weapons of mass destruction, operate effectively in cyberspace and space, maintain a safe, secure and effective nuclear deterrent, defend the homeland, provide support to civil authorities, provide a stabilizing presence, retain the ability to conduct stability and counterinsurgency operations, conduct humanitarian/disaster relief operations, and additional operations as required.

Balanced against these operations is the environmental change of the Defense Base Budget. With the loss of more than \$487 billion from the budget, over the next 10 years, the military envisions a change in the structure (personnel and equipment) while maintaining the necessary skills required through significant of forward-thinking training.

The force structure will be smaller, flexible, agile, and reversible with no loss to capabilities. The military continues to improve and refine their abilities ensuring they remain capable across the entire mission sets under Unified Land Operations. This remains a daunting task for a smaller force with a wider scope of missions in a VUCA environment. A smaller force requires a professionalized force across the ranks with a mission command mentality. This mission command mentality enables initiative and the agility of leaders across the ranks to take action appropriate to the situation. The trust, confidence, and abilities in junior leaders (Sergeant and Corporal) and Soldiers is not a catch-phrase. It remains a requirement for success in a decentralized operating environment in which the lack of understanding and situation awareness causes potentially strategic complications.

The military is at a crossroads to change the training development scheme, or potentially risking the degradation of the force and its current capabilities. There exists a potential vacuum approaching as OEF winds down in which experienced Leaders and Soldiers end up leaving the military. In order to compensate for this loss of expertise and experience, training and development of young Soldiers and Leaders must remain a priority. The training must focus on developing the necessary skills for conducting their assigned MOS and possess the critical and creative thinking skills. These skills include the ability to formulate and seek information, question data, formulate questions, answers, and become a proactive and not a reactive entity on the battlefield. The emphasis on development needs to expand. Young Soldiers and Leaders must develop the capacity for action and thinking ensuring they remain prepared to assume the added

responsibility of doing the right thing, at the right time across the tactical, operational and strategic level.

Before developing the training requirements to expand the capabilities of the Soldiers and Junior Leaders for potential future conflict environments, we must first examine the attributes and capabilities of the Soldier the military receives and continues to recruit. Generation Y, the Millennials, are the group of young Americans born in 1982 or later. Millennials make up a significant amount of the present force serving at the senior Captain / Sergeant First Class level and below. There exists no doubt that the performance of the Millennials during OEF and OIF and throughout the past 10 years proved exemplary. A conclusion for this outstanding performance is that the training enabled the success on the battlefield and in combat operations (as the environment) forced the Millennials into consistently performing beyond expectations. Based on how the military adapted to the operating environment, the Millennials who manned this force were successful. To exploit the ability to adapt will enable the future force.

Understanding the Millennials is important because the backdrop of combat operations will decrease. The adaptation of training and development requires a review of what worked, and what enables the Millennial's capabilities ensuring the military continues to develop the capability of the Soldier for the future.

So who are these young Millennials that will carry the armed forces to the next conflict and how does the military's framework of training and culture adapt to facilitate the basics required for success addressing the operational environment? How do we interpret the Millennials and how are they defined? As mentioned previously, "The cohort born between 1982 and 1994, the first of whom began college in 2000 and

graduate school in fall of 2004. The popular descriptions characterize the Millennials as confident, visual, and multi-tasking learners who are technologically savvy and easily bored. They are demanding consumers who want services to be customized, convenient, and fast. They are experiential learners who are inclined to collaborate. On personality tests they are warm, outgoing, and more organized and self-disciplined than immediately preceding generations.”¹ Further elaboration on their distinct characteristics as networked, collaborative, and experientially inclined. Taking the cohort as a whole, two other characteristics are striking: the millennial cohort is more diverse and has significantly more global experience and expectations than preceding generations.² Millennials are also achievement-oriented. They want to excel and have high expectations of the individuals in authority and are not hesitant to ask questions of that authority. What is interesting is Millennials need challenges through meaningful work. Satisfaction in their performance and the relationship to a bigger cause is an imperative. Another interesting point is networking and collaboration remain key characteristics of Millennials. These characteristics are significant differences from Generation X. Generation X is the generation prior to the Millennials - requiring a different manner of training for the future. Generation X in review seems to be the opposite of the Millennials. Generation X lacks a sense of loyalty and focus more on taking care of their own needs over those of their employer.³ Another interesting difference is while Generation X embraces learning new skills, they prefer to have an outcome allowing them to figure out how to achieve an endstate. This is an interesting point as one looks historically to the ways we have fought in combat and trained. This paper discusses the mission command philosophy and the mentality of top-down driven guidance, direction,

and solutions required as a method of conducting training and operations because of the Generation X mentality and abilities. With Generation Y, there exists a broader minded individual who remains involved, works within a team, and requires input into the decision-making process. Generation Y remain creative and critical thinkers and excel when their creative and critical thinking is recognized and embraced. As we look at the environment of the future, this type of capability and thought-process is something to strive to attain and becomes an imperative at the Soldier and junior Leader level based on decentralized operations with a bottom-up mentality and information flow.

In recognizing this change in the current Soldier and future recruits, the military needs to examine at how it adapts training methodology to embrace and enable these individual capabilities to achieve maximum performance and the potential of the individual. An article in the Cavalry and Armor Journal, November-December 2011 edition, focused on the paradigm shift required for small unit leader development. The article needs to include the Soldier to ensure it does not miss out on addressing the future leader. What is interesting is the graphic noting the areas of emphasis required for proficient small unit Leaders and Soldiers in today's environment and future operational environments. These areas of understanding and proficiency requirements include and equate to understanding development, living/teaching the Army Values, Warrior Spirit, building teams, working within the digital arena, understanding and operating in different cultures, working and incorporating external enablers (either technological or civilian agencies), training and education, advanced situational awareness of an ever-changing environment, comprehensive soldier fitness (mental,

spiritual, and physical), and social and family well-being.⁴ This significant menu of requirements placed on the lower-level Leaders and Soldiers to understand and develop requires a significant change in the paradigm of training.

Reviewing the training methodology of the past for the young Soldiers and Leaders, there exists a common theme of focusing on the fundamentals - muscle memory ensuring Soldiers and young Leaders acted correctly when directed. The repetition of actions ensured the Soldier did the right thing when directed. This mentality developed over-time because of several factors. The factors include the environment of a linear fight against a defined enemy force vice a nonlinear, the VUCA fight, decisions of actions in a more centralized manner vice decentralized, the lack of empowerment for decisions and input, and an expectation based on the quality of Soldier. The new method must enable a Soldier to become more relevant both as a Soldier and a thinking participant. The military's past training lacked the focus on the cognitive skills development - enabling the skills to collect, analyze, adapt, and make critical decisions at the right time and place. Initially, this muscle memory training methodology (repetition) greatly facilitated enabling the skills required for success on a straight-forward, linear environment, with a known enemy, and a centralized decision-making process. The military's deficiencies in training apparent as the environment shifted to a more dynamic and demanding way of looking at the problem and understanding the employment of the ways and means outside of the trained expertise. Overtime, our Generation Y Soldiers adapted because of the necessity to succeed in the VUCA environment. The force was always a learning organization but OEF and OIF provided the environment, which forced dynamic change in procedures and people.

OEF and OIF provided Generation Y the opportunity to think, act, become a part of the solution instead of receiving direction, and placed in positions to make decisions, which affect the tactical through strategic levels of operations. The question becomes how the military adjusts future training to develop and prepare for the next VUCA environment.

There exist three basic areas of emphasis for the future force to focus on ensuring it provides the right environment achieving overmatch for our Soldiers. Overmatch is the successful ability to execute critical tasks against projected threat forces in all operational environments, including decisive operations that drive the adversary to culmination, and achieving the operational objective while retaining the capability to continue with subsequent missions.⁵ This is a very straight-forward definition but for the sake of this paper, the scope of the operational environment expands to include all aspects outside of a kinetic and non-kinetic scenario, thus requiring a flexible, adaptive Soldier and Leader. These three areas encompass the key areas highlighted in the above paragraph referencing the proficiency requirements of the future and include individual development/education, unit level training, and a culture shift in decentralized leadership.

“Most Army schools open with the standard bromide: ‘We are not going to teach you what to think ... we are going to teach you how to think.’ They rarely do. Critical thinking is both in art and science. There exist techniques to critical thinking, such as the careful application of logic, or the alternative application of deduction and induction. These techniques can be taught and learned.”⁶ The most important capability required for the Army’s Future Force is a thinking Soldier and junior Leader who seeks after the “why” of a situation, task or directive, the understanding which makes better use of the

purpose.⁷ This concept and way of thinking is not something new and addressed in history as a deficit in development of Soldiers. In WWII, the British Army identified the lack of Soldier initiative and ability to act based on the situation. Based on unsuccessful actions of their forces, the British War Office realized the need for every private soldier to enjoy a certain level of tactical expertise, enabling them to function usefully when positioned beyond the control of an officer or NCO.⁸ The British Army essentially adjusted their focus while in combat to push beyond just drills enabling their Soldiers to act based on the situation, not on material printed in a book as a checklist for success. The U.S. Military witnessed the same scenario for the past 10 years and identified the need to expand beyond drills and develop the ability for Soldiers to think both creatively and critically. This is a welcomed change in how the military views the Soldiers, but the emphasis must be placed on how to accomplish this early in their careers taking advantage of the Generation Y's abilities. The objective is to place Soldiers in the proper environment capitalizing on their talents and potential.

The military's current education focuses on creative and cognitive thinking development in the later stages of development. As a Soldier or Leader progresses in rank gaining more responsibility and influence, more education is forced upon them however, in combat the responsibilities of thought and action requires Soldiers and junior Leaders to act quickly and decisively. Therefore, the military needs to re-look how to develop and educate Soldiers and junior Leaders early. There exists no question that the military's program of turning young recruits, with little to no discipline or experience, into Soldiers with a very solid base knowledge for conducting their MOS basic skills remains unparalleled. The area lacking in this training is the development of the ability

to think critically and creatively. The mentality of don't think, just act when told needs to be history. The military must focus efforts early in a Soldier's career providing the base for cognitive thinking. Today, the Army must account for the fact that actions they take at the earliest points in a Soldier's career manifest themselves much later.⁹ Forcing a Soldier to think early provides a foundation enabling the Soldier the ability to think and act in future situations and environments.

The fear of many over the years for a Soldier going through Basic Training and Advanced Individual Training (AIT) is the amount of training time available. This training ensures the Soldiers meet all the required standards for graduation and postured for success at their follow on unit. However, this timeframe is the most crucial for Soldiers to develop the ability to think. Based on the projected future environment, the Soldier must possess the capability to think through problems and determine solutions because their actions can cause significant implications when deployed into a VUCA environment. By no means, should Basic and AIT develop the Soldier to the point of being able to conduct analysis, provide recommendations, and act independently. Instead, the goal is to develop individual confidence, initiative, accountability, and mastery of skills, instead of just meeting the minimum baseline level of performance. A new approach to training and education is the concept of Outcome-Based Training & Education (OBT&E) to include the two teaching methods of Combat Applications Training Course (CATC), and Adaptive Leaders Methodology (ALM). The principles behind OBT&E are as follows:

1. Training to grow problem-solving instructs Soldiers to "teach themselves" the skills necessary to the success of their mission.

2. Training to increase intangibles develops the attributes of confidence, accountability, and initiative.
3. Training to increase understanding and awareness teaches contextual understanding of the task and mission application.
4. Training to increase deliberate thought conditions Soldiers to exercise a deliberate thought process while under stress.
5. Training to improve combat performance conditions Soldiers to overcome the psychological and physiological effects of combat.

For the sake of early training methodology, this section of the paper focuses on the concept of CATC. The basis of CATC deals with a method to instruct and develop mastery of a given subject. The premise that Soldiers can apply principles of understanding the how and why of training begins the cognitive thought process of thinking critically and creatively at the early stage of development.¹⁰ CATC adjusted the method of training at the entry-level maintaining the required training to master skills but also provide overlap on training which emphasizes to the Soldier to develop a solution. The Soldier's responsibility centers on determining a solution, figuring out the problem, and accomplishing the task. The Soldier through this mission analysis and based on his thoughts and analysis - develops long term problem-solving skills and how to think. A quote from an article by Donald E. Vandergriff shows the training shift to solution development, "I see the CATC philosophy as training Soldiers to be adaptive leaders - making today's Soldier a thinking tool and not a mindless robot, and ensuring that the training we provide for today's Soldiers is what is necessary on the battlefield."¹¹ This is a tremendous shift in the training of Soldiers at initial entry training. Instead of

telling the Soldiers how they will conduct training, walking them through step-by-step, and forcing the Soldier to react to commands of a Mentor (new term for trainer / observer, in this case a Drill Sergeant) the Soldier identifies the problem and develops a solution achieving the required training. The use of this methodology and thought process ensures no loss of necessary training on the basic skills while enabling the opportunity for the development of the cognitive thinking required to build the adaptive and innovative Soldier.

The other area in building the cognitive capabilities in the Soldier is in the realm of education through reading. "Reading furnishes the mind only with materials of knowledge; it is thinking that makes what we read ours."¹² This appears simple and straight-forward but when one looks at the emphasis on reading at the Soldier level - there exists a lack of attention and a defined program, which embraces this necessary skill. The military develops reading lists focused on the development of the professional at the senior enlisted and officer ranks. What is missing at the lower levels is an effort to develop Soldiers knowledge and training, which develops the ability to share and discuss perspectives and opinions. Researching the implementation of a reading program at the lower levels, a program by the Australian Army provides a different perspective. The Australian Army's focus on reading assists Soldiers of all ranks to think about the profession of arms of which they are members.¹³ Their philosophy is a clear balance requiring Soldiers to remain physically active and improve their minds. A Soldier's most flexible and most effective weapon is his or her brain.¹⁴ Another very interesting aspect is their view of developing the Soldier for the near term (Army career) but also facilitating a better Australian citizen after their time in the service. According to

reports this enables a long term, mentally strong, thinking Australian. Lieutenant General Peter Leahy provides a significant introduction in the 2007 Australian Chief of Staff Reading List. In his introduction, LTG Leahy discusses the key points of a balance of war in the sense a Soldier has to be both physical and intellectual. It remains imperative for the Soldier to understand his profession, his role as a soldier, and as an Army become flexible, agile, and adaptable. LTG Leahy prioritizes the need for Soldiers to develop cognitive skills to remain successful in combat and places responsibility on the Soldier by imploring them to contribute to how the Australian Army remains flexible, agile, and adaptive in the future. This statement provides the expectation that the Soldier is imperative in the success of the Army, proficient in their tactical skills, and a thinking Soldier on the battlefield.

Another interesting aspect of this Reading List is how the Australians broke the readings down by rank (Private to Senior Officers) using both fiction and non-fiction historical books. The reading list is designed to enable progression through an individual's career.¹⁵ Soldiers and Leaders read books corresponding to their rank and from the junior ranks ensuring they understand the young Soldiers perspective and experience levels. This reading list provides an article on a technique for reading and understanding history, and the application and understanding of current and future environments and operations. It is obvious in reading LTG Leahy's introduction that developing the mind is an imperative to be successful as a Soldier in the Australian Army. LTG Leahy places the responsibility on the Soldier and his Leaders with the ending statement - "Start reading now - enjoy, learn, and become better as a professional soldier."¹⁶

The intent for the reading needs to focus on entry-level training instead of waiting for a Soldier to arrive at their first unit/duty station. The argument against beginning a reading program in entry level training is time and the perception that this impedes on the necessary training focused on basic skill development. The focus of reading is not necessarily books, which consumes time, but vignettes of history and current operations. Additionally, discussion in a group dynamic on the vignettes enhances communication and analytical skills. Research of the Generation Y individual, reflects the social aspect of learning through discussion among peers and supervisors or leaders. The following key points focus on the development of the Generation Y capability and in return facilitate developing a thinking and analytical individual:

- Develop opportunities for experiential learning. Small group discussions, projects, in-class presentations and debates, peer critiques, team projects, service learning, field experiences, developing simulations, and case method approaches are successful for high school and college Generation Y students.

- Encourage the development of learning communities - small groups of students discussing and analyzing readings and assignments. This addresses the needs of Generation Y students for hands-on activities in the classroom.

- Provide feedback, which is essential for Generations Y. Providing timely feedback to Generation Y personnel provides them with direction and corrections to get them back on track. Frequent attention from instructors is welcome.¹⁷

This program built for a classroom environment is applicable for basic and advanced individual/collective level training. Building confidence on reading skills, understanding, analyzing, and sharing perspectives, and providing feedback begins the

process of building the necessary capabilities of the Soldier who can function in a VUCA environment. “Try group discussions or projects using real world examples to spice up your training. This does two things: real world examples make it relevant, and group projects benefit from the team dynamics. The group effectively teaches each other and solves problems. Here the instructor imparts basic information and then serves as the facilitator of the group, keeping the discussion on point. This approach can be very effective, but it does require the instructor’s creativity to identify or develop case studies and open ended discussion items.”¹⁸ The best case scenario is relating vignettes (either historically or current operations) to the training conducted around the Soldier. This applies to basic training, advanced individual training, collective training, unit training, and formal school house training throughout a Soldier’s career. Using vignettes or reading materials applicable to military operations, enhances the Soldiers cognitive capabilities and enables an increased understanding of actions, decisions, and real-world environments pertaining to leadership positions, responsibility, and situational awareness. The Soldier gains an understanding of reality instead of training based on a generic enemy and situation, which loses the understanding and development of experience in a real world scenario.

Developing the base for cognitive skills early in a Soldier's career enables an expansion of the training at the unit level. A Soldier confident in his ability to comprehend, understand, and decide provides the opportunity to conduct a level of training in units, which combines skill training with situational training. Situational training places Leaders and Soldiers in an environment where they must think through a problem and figure out a response, which leads to success. As previously discussed,

resources available for training reflective of a real-world environment may not be available. This deficiency potentially leads to degradation in proficiency in areas outside of shooting bullets or executing core tasks. As addressed, the future Soldier and Leader needs to understand, analyze, and employ a broad spectrum of capabilities. These capabilities must be both organic and not organic to the organization. The issue at hand for the units in their training methodology is how they apply effort and training to fill the gaps combat provides to units. In other words, how do units maintain the same realities of combat? Training must prepare Soldiers and Leaders to execute their skills upon entry into combat instead of relearning these same skills while in combat. Collective live fires are considered the true validation of a unit's proficiency and ability to conduct combat operations. The two issues with live fires centers on the potential lack of resources employing all the necessary capabilities replicating combat and the lack of flexibility live fires provide the Soldier and Leader to make decisions and changes, depending on the situation. In order to do provide the necessary flexibility to a situation and pressure the thinking of all participants, live fires must become less restrictive in the training methodology, and a less controlled event. Tank Gunnery provides some of this flexibility as it provides the tank crew with the ability to make decisions while traversing a course but this is achieved after several iterations of training where the lane is somewhat predictive for the participants. Where units need to progress is to a point where the situation is unknown and provides the participants the ability to adapt, take initiative, and decide on actions while conducting the training. The use of virtual training provides this capability and places the participants in situations that change depending on their actions. This interactive training, which inputs decisions cause Leaders and

Soldiers to remain flexible and think through the situation instead of the lane or training dictating their actions. The virtual training realm existed for several years. This training is employed as a substitution for range training, which focuses on development of skills instead of using the capability to test the cognitive reasoning, skills, and capabilities required of Soldiers and Leaders in combat situations. The virtual system accommodates several operational themes, including major combat, irregular warfare, peacetime engagements, and civil support.¹⁹

Virtual training provides an opportunity to conduct repetitions, group discussions, in-depth After Action Reviews, and places Soldiers and Leaders in situations in which they must take the initiative. Virtual training provides the opportunity to make decisions and learn from these decisions, compared to live fire training where the potential for decision-making is either not afforded because of the potential risks or training restrictions.

Virtual training emphasizes change in the training culture. If the military accepts that cognitive thinking is an imperative at all levels in the future operating environments, changing the culture of the training requires facilitates, which emphasizes continued cognitive development. Changing the culture in the execution of training ensures leaders develop training, which incorporates opportunities for constant thinking while maintaining the focus on skill development. A scenario as simple as a qualification range exemplifies the necessary change in culture among several layers including personnel running the range, personnel operating the range, and personnel receiving the training on the range. The normal, past procedures focused on safety requirements through adherence of administrative tools to include paddles signifying when the firing

line is prepared to conduct live fire. Upon receipt of the signal from the range safety personnel, commands to commence firing occur, signifying to the firers to chamber and prepare to engage by watching their lanes. The fallacy on ranges conducted in this manner affects the most important person on the range, the firer, who waits to be told what actions to take. This methodology detracts from the Soldier taking the initiative and reacting to the situation instead the Soldier waits to be told what to do. This example provides the opportunity for simple refinements enabling the cognitive thinking of the Soldier while ensuring the endstate is met for marksmanship skill training. A few simple adjustments enable cognitive thinking, these include:

- Personnel running the range. Personnel conducting the range such as tower operators and safety personnel on the firing line become tactical. Instead of using paddles to provide signals to the tower, use systems which replicate combat. Radios serve as the conduit to the tower for communication instead of administrative communication system and visual aids. This accomplishes developing skills on current combat communication systems, enhances SOPs, and builds confidence in relaying information in a tactical manner over an operational communications net. The safety personnel communicate with the firer as they would in a combat situation, providing the commands necessary to allow the firer to engage when applicable. Instead of waiting to be told to engage, the firer is afforded the opportunity to engage targets as they appear similar to what is expected in combat. This forces the firer to think through what is happening, maintaining a level of responsibility, and taking action when the firer deems appropriate based on the understanding of defined rules of engagement (ROE).

- Personnel operating the range. In most cases, ranges have operators from range control. These operators are present to ensure safety procedures are adhered to throughout the training. As methods are adapted facilitating thinking, the operating procedures must remain flexible while maintaining the required safety procedures. As long as safety is adhered to, conduct on the range rests with the unit to allow thinking and action.

- Personnel receiving the training. This is the target audience and the training emphasis must include developing the required tasks/skills and cognitive thinking. Range safety ensures and maintains a balance between initiative, action, and restricting the ability to think. The balance must incorporate a cultural change ensuring personnel being trained possesses the ability to see the situation, think through the action, and act. The difference between waiting and being told when to engage a target instead of using initiative and engaging targets as they present themselves instructs the Soldier to think. This simple adjustment provides the Soldier the ability to think, act, and react to situations employing targets as the means. The Soldier takes action based on skill development and deciding when to engage the targets after analyzing the situation.

The above scenario is just a simple example, but it highlights an aspect further refined in following paragraphs emphasizing - consistency. There must exist consistency in the application of training in respect to developing the required skills – including cognitive skills. If not, confusion at the Soldier level causes potential inactivity at a moment in which Soldiers' action or inaction impacts an operation from tactical to the strategic level. The recent incident with respect to the accidental burning of the Koran emphasizes the point for Soldiers to think through situations. This action affected

the leadership at the tactical, operational, and strategic levels. Additionally, this consistency bears a long-term development of the Soldier. In actuality, the military is building a Soldier to think and be better prepared for the responsibility of becoming a Leader. The unit's thought-process must center around making the Soldier proficient in his/her current position but, arguably more important, prepare the Soldier for the next level of responsibility. Placing the Soldier in situations, which demand thinking, actions, and assuming responsibility early in their development, enables the skills required to transition from a Soldier to a Leader. The question of do we train the Soldier early with the intent of making the Soldier a Leader or train the Leader to be a Leader once in a leadership position? This transition is important to a Soldier who on one day is part of the team and who on the next day is charged with leading the team. This scenario is consistent with combat as evident in WWII, Korea, and Vietnam. Training focused on building cognitive thinking enables the Soldier to understand the changing environment, roles, required actions to think through the problem, and develop a course of action to transition to the next level of leadership.

“Learning organizations are... organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together.”²⁰ The Armed Forces is a learning organization as evident from the Cold War mentality of force on force to recent endeavors in OEF employing multiple entities (Department of Defense, Department of State, Inter-agency, and Multi-National Forces) against several lines of effort to address multiple problems is achieving an endstate. The ability to decentralize operations and

empower lower echelons to adapt to the situation and take initiative based on their understanding greatly increases the success of operations in a VUCA environment. “Development of a culture of innovation will not be advanced by panels, studies, or this paper. Cultural change begins with behavior and the leaders who shape it.”²¹ As the military transitions, training and development of the Soldiers and junior Leaders highlighted in previous paragraphs is a change in thinking. This change embraces a concept facilitating growth in cognitive skills while mastering key skills in the application of war across the operational environment. The true test is the acceptance and understanding by Leaders to view this methodology as a means to achieve success of the future force and the potential input on operations ranging from tactical to strategic levels.

GEN Dempsey summarizes this transition in the following statement, “We know how to fight today, and we are living the principles of mission command in Iraq and Afghanistan. Yet these principles have not yet been made institutional in our doctrine and in our training. They do not pervade the force. Until they do—until they drive our leader development, our organizational design and our materiel acquisitions—we cannot consider ourselves ready, and we should not consider ourselves sufficiently adaptable.”²² In simple terms, the present military force is capable, but until it solidifies and thinks this way it lacks the adaption required to take on the future operating environment. Mission command is one way the Army is moving forward to solidify how leaders think and employ decentralization empowering the Soldier and Junior Leaders to be innovative and adaptive within higher intent. Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined

initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified operations.²³

The Marine Corps' version of the Mission Command further refines this philosophy – “Mission Command guides the character development of Marines in garrison and combat, promotes an entrepreneurial mindset and enables the strong relationships of trust and mutual understanding necessary for decentralized decision making and the tempo of operations required to seize the initiative, degrade enemy cohesion and strengthen our own cohesive relationships in the crucible of combat.”²⁴

The concept and basic principles of Mission Command highlight the themes of this paper and provide the leadership an enduring focus and ensures an opportunity for development at the lower echelon. The basic principles of Mission Command builds cohesive teams through mutual trust, creating a shared understanding, providing a clear commander's intent, exercising disciplined initiative, employing mission orders, and accepting prudent risk. Below are summaries of a few of the principles as they apply to preparing the future force -

1. Building cohesive teams through mutual trust. Trust is earned over time based on experience, which many believe translates into rank and time in the service. Trust develops through training. For the future environment, this is based on repetitions and realistic training, which reflects true situational dilemmas - placing the Soldier and junior Leader in circumstances, which force them to think, decide and act. Repetitive activity breeds trust from the higher leadership when they view Soldiers and Junior Leaders reacting to situations after thinking through the problem. The big factor in this realm is patience. Patience is mandatory in the development of trust and is incumbent on the

senior Leaders to embrace the development of the cognitive skills in conjunction with the basic skills mastery of common tasks.

2. Creating a shared understanding and providing a clear commander's intent.

The shared understanding requires a leader's intent, a clear emphasis on the why, and the potential impacts. The military witnessed several instances in which a lack of shared understanding of certain actions derailed the tactical operation and affected the strategic campaign. Soldiers and junior Leaders not understanding their actions to the overall situation can impede and even halted progress in the operational and strategic environments. Instances such as Abu Grab, the Koran burning, and the recent Marine incidents reflect a lack of shared understanding. Shared understanding is developed overtime in training and education. A clear intent, whether in training or combat, provides the base for a shared understanding by answers the why.

3. Use of mission orders and exercising disciplined initiative. Taking the initiative and conducting a course of action based on the guidance and mission provides the thinking and acting required at a level of leadership and Soldier proficiency best suited for the situation. Those living in the environment (combat or training) understood the best way to go about achieving the given order.

4. Accepting prudent risk. Leaders have grown over the past 10 years identifying and mitigating risk allowing the most latitude at the level of execution. As transition occurs to a more focused training environment, the acceptance of risk cannot degrade. If degradation occurs where leaders are not balancing the risk mitigation against the freedom of initiative at the lower levels, the training required to embrace and encourage

initiative and agility of decision-making at the Soldier and junior Leader is in-sufficient to prepare for the future operating environment.

Mission Command provides the philosophy of how the military progresses in preparing the future force to embrace uncertainty. This uncertainty exists at all levels of responsibility and is mitigated through fostering growth, properly framing information, encourage thoughtful decision making, create synergy, and cultivate innovation.²⁵

“Culture is not something that you manipulate easily. Attempts to grab it and twist it into a new shape never work because you can’t grab it. Culture changes only after you have successfully altered people’s actions, after the new behavior produces some group benefit for a period of time.”²⁶ The military is presently at the transition, in which altering behavior to facilitate Mission Command requires a change to the education and training methodology.

In the past 10 years of conflict in support of operations in Iraq and Afghanistan, the Armed Forces discovered the value of a thinking Soldier. The decentralized mentality adapted over time in these conflicts forced an acceptance by Leaders to trust and empower Soldier and junior Leaders to act based on their assessment and on an acceptance of increased responsibility. The Soldier and junior Leader discovered their value added of doing the right thing at the right time to the tactical situation and the effects at the operational and strategic levels. Combat provided the structure developing a thinking and acting Soldier and Junior Leader over-time and the evolution of a key component in operations.

As the military transitions from a consistent deployed force in combat to a force in training oriented on future engagements, how the military adjusts training

methodologies and mindsets capturing and implementing the evolution of these capabilities remains essential. Three of these areas facilitating this growth and expansion is through individual development focused on broadening the mind and capabilities to think, decide, and act. The employment of unit collective training focused on placing individuals in situations, in which they must think while conducting the physical aspects of core tasks changing the outlook of leadership to empowered subordinates allows them to exercise initiative and the freedom of action to make decisions. These areas remain key in enabling and developing the future Soldier, mentally and physically, to accept more responsibility, to act according to the situation, and to understand the intent of the mission.

The military must pursue and embrace the changes it gained in combat. The potential for losing ground is significant and affects the environment of the future. Adapting a new training paradigm determines how the military conducts future operations in an unknown and complex operational environment. The effects of conducting inadequate training as evident with the recent Koran burning, impacts the military's capabilities at the tactical, operational, and strategic levels.

Endnotes

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