# The 7-Step Model – A Relevant and Ready Tool for the Future Force

## A Monograph
## by
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**AY 03-04**

SCHOOL OF ADVANCED MILITARY STUDIES
MONOGRAPH APPROVAL
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Title of Monograph: The 7-Step Model – A Relevant and Ready Tool for the
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| 1. REPORT DATE **26 MAY 2004** | 2. REPORT TYPE | 3. DATES COVERED **-** |
|---|---|---|
| 4. TITLE AND SUBTITLE **7-Step Model- a relevant and ready tool for the future** | | 5a. CONTRACT NUMBER |
| | | 5b. GRANT NUMBER |
| | | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) **Michaele Hammel** | | 5d. PROJECT NUMBER |
| | | 5e. TASK NUMBER |
| | | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **US Army School for Advanced Military Studies,250 Gibbon Ave,Fort Leavenworth,KS,66027** | | 8. PERFORMING ORGANIZATION REPORT NUMBER **ATZL-SWV** |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |
| 12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release; distribution unlimited** | | |
| 13. SUPPLEMENTARY NOTES | | |

14. ABSTRACT

**The 7-step model of the MDMP is a tried and proven process. However, some critics argue it is not the right decision-making and planning tool for the future force. The 7-step model is a deliberate process requiring a significant amount of time when all of the steps are executed. Naturalistic decision-making theories, like recognition-primed decision-making (RPD), are thought to be more applicable for the future force. To determine the relevancy of the 7-step model for the future force, this study first reviewed the purpose of decision-making and various decision-making theories. Next, the Cold War environment and the Contemporary Operating Environment were compared to determine if the environment that the Army operates within has significantly changed. Then, the study applied three criteria, applicability, adherence and joint commonality, to the 7-step model to determine the relevancy of the 7-step model for the future force. Through this research, the 7-step model was determined still applicable for the future force. The deliberate, systematic decision-making models are designed to aid decision-makers when the problems are complex or when the decision-makers are inexperienced. The naturalistic decision-making theories explain how experienced people within their areas of expertise make decisions. The Contemporary Operating Environment is full of uncertainty. The future force is expected to go to battle with an unknown enemy who will use unfamiliar tactics. Additionally, as the Army promotes officers into new positions, regardless of their experience, they are placed in a new situation. The uncertainty of the Contemporary Operating Environment coupled with the various level of experience of military decision-makers support the need for a deliberate process. However, the research did find merit in the recognition-primed decision-making process. The Army should continue to instruct the 7-step model to junior leaders. The Army should also adopt the recognition planning model (RPM) into doctrine. However, it is important to distinguish that the level of experience and familiarity to the situation are essential factors in determining which model is applicable to the situation. Additionally, the Army should present the 7-step model in a continuous fashion to ensure users understand it is a continuous process not a linear process. Finally, the Army should redefine the Military Decision-Making Process as conducting a critical analysis of a problem or a mission to develop a solution in the form of course(s) of action. This change will promote the understanding and flexibility that there are multiple tools available, for example the 7-step model and RPM, to aid in the process.**

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT<br>**unclassified** | b. ABSTRACT<br>**unclassified** | c. THIS PAGE<br>**unclassified** | **1** | **52** | |

# Abstract

The 7-Step Model – A Relevant and Ready Tool for the Future Force by MAJ Michaele M. Hammel, U.S. Army, 49 pages.

The 7-step model of the MDMP is a tried and proven process. However, some critics argue it is not the right decision-making and planning tool for the future force. The 7-step model is a deliberate process requiring a significant amount of time when all of the steps are executed. Naturalistic decision-making theories, like recognition-primed decision-making (RPD), are thought to be more applicable for the future force.

To determine the relevancy of the 7-step model for the future force, this study first reviewed the purpose of decision-making and various decision-making theories. Next, the Cold War environment and the Contemporary Operating Environment were compared to determine if the environment that the Army operates within has significantly changed. Then, the study applied three criteria, applicability, adherence and joint commonality, to the 7-step model to determine the relevancy of the 7-step model for the future force.

Through this research, the 7-step model was determined still applicable for the future force. The deliberate, systematic decision-making models are designed to aid decision-makers when the problems are complex or when the decision-makers are inexperienced. The naturalistic decision-making theories explain how experienced people within their areas of expertise make decisions. The Contemporary Operating Environment is full of uncertainty. The future force is expected to go to battle with an unknown enemy who will use unfamiliar tactics. Additionally, as the Army promotes officers into new positions, regardless of their experience, they are placed in a new situation. The uncertainty of the Contemporary Operating Environment coupled with the various level of experience of military decision-makers support the need for a deliberate process. However, the research did find merit in the recognition-primed decision-making process.

The Army should continue to instruct the 7-step model to junior leaders. The Army should also adopt the recognitional planning model (RPM) into doctrine. However, it is important to distinguish that the level of experience and familiarity to the situation are essential factors in determining which model is applicable to the situation. Additionally, the Army should present the 7-step model in a continuous fashion to ensure users understand it is a continuous process not a linear process. Finally, the Army should redefine the Military Decision-Making Process as conducting a critical analysis of a problem or a mission to develop a solution in the form of course(s) of action. This change will promote the understanding and flexibility that there are multiple tools available, for example the 7-step model and RPM, to aid in the process.

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# INTRODUCTION

There exist numerous writings about the Military Decision-Making Process (MDMP). So one must wonder why one more? The business of sending our nation's citizens into harm's way and possibly death demands that every precaution be taken to ensure the safe return of our soldiers. While no one can prevent death in battle, it is a commander's and his staff's duty to ensure the Army achieves the nation's goals with minimal loss of lives. Commanders and staffs accomplish this task by engaging in a critical analysis of the situation and developing options to deal with the situation. It is the Army's responsibility to ensure commanders and staffs have the right tools. For the Army, the MDMP '7-Step Model' is the current decision-making tool in Army doctrine.[1]

The Chief of Staff of the Army, General Peter J. Schoomaker, stated in his transformation message:

> "We must immediately begin the process of re-examining and challenging our most basic institutional assumptions, organizational structures, paradigms, policies, and procedures to better serve our Nation. The end result of this examination will be a more relevant and ready force—a campaign-quality Army with a Joint and Expeditionary Mindset. Our Army will retain the best of its current capabilities and attributes while developing others that increase relevance and readiness to respond in the current and projected strategic and operational environments.[2]

As such, it is our professional duty to ensure we select, train and apply the right model. The purpose of this monograph is to analyze the 7-step model and determine if it is still valid, requires revision, or should be replaced in order to meet the needs of the Army in this post cold war environment called the Contemporary Operational Environment.

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[1] The seven steps are Receipt of Mission; Mission Analysis; Course of Action Development; Course of Action Analysis; Course of Action Comparison; Course of Action Approval; and Orders Production. Hq, Department of the Army Field Manual (FM) 5-0 (Final Draft), *Army Planning and Orders Production* (15 July 2002), 3-2.

[2] GEN Peter J. Schoomaker, "The Way Ahead: Our Army at War - Relevant and Ready," Introduction, n.p., on-line, Internet, 20 January 2004, available from http://www.army.mil/thewayahead/intro.html

# METHODOLOGY

The first part of the monograph will explain the role of the 7-step model and discuss various decision-making theories. Next, the monograph will apply three criteria (applicability, adherence, and joint interoperability) to the 7-step model as defined below to determine if the 7-step model is still relevant. If the answer is no this monograph will address whether the 7-step model requires a transformation or requires a replacement.

## Criteria

### Applicability

*Affecting, connect with, or relevant to a particular situation*.[3] The monograph will evaluate the relevance of the 7-step model to the contemporary operating environment.

The monograph will analyze the contemporary operating environment through a review of the nature of war and the nature of technology. It is necessary to determine if or how the contemporary operating environment is different from the previous environment in order to determine if the 7-step model is still applicable. It will determine if the contemporary operating environment changes the military problems or the way decisions should be made.

Former Army Lieutenant Colonel, Hal Moore's operations at Landing Zone X-RAY in the Ia Drang Valley during the Vietnam conflict will provide the basis for analyzing the applicability criteria. After doing a review of various historical operations, this well-documented case serves as recent example of a non-linear, non-contiguous operation where a smaller, experimental, U.S. Army force defeated a much larger and overwhelming enemy. This example best describes that of the contemporary operating environment. The monograph assumes that an earlier version of the 7-step model influenced decision-making since it was a part of published

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[3] Dictionary.com, n.p., on-line, Internet, 20 January 2004 available from http://dictionary.reference .com/

doctrine. While ongoing operations in Afghanistan would also serve as an appropriate example, the amount of available unclassified information is very limited due to ongoing operations.

## Adherence

*The ability to follow closely; carry out without deviation.*[4] While Field Manual (FM) 5-0, Army Planning and Orders Production, does state that the model can be abbreviated, it does caution that first, the staff must master the steps of the full MDMP.[5]

Combat Training Center trends and various after action reviews and articles will serve as the basis to examine command and staff adherence to the 7-step model. Although doctrine serves as a foundation, its application should enable enough flexibility to adjust to the changing environment. Applying doctrine rigidly or dogmatically could counter or stifle creativity, which can also be argued as an important trait for military operations. However, in regards to the 7-step model, the steps are intended to be sequential and build upon each other. FM 5-0 (Final Draft) states: "Each begins with inputs that build on previous steps. Each step, in turn, has outputs that drive subsequent steps. Errors committed early affect later steps."[6] This suggests that adherence to the steps is critical to the process.

The Combat Training Centers provide direct feedback to rotational units in the form of after action reviews and take home packages and indirect feedback to the Army as whole through trend reports compiled by the Center for Army Lessons Learned. The direct and indirect feedback, especially the quarterly and annual trends, provide insights on the areas that units should sustain and improve. Since the training centers observe multiple units every year, this monograph assumes that the observations and trends serve as a representative assessment of the force as a whole to determine the adherence of the 7-step model across the force.

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[4] *The American Heritage Dictionary*, 2nd ed (Boston, Houghton Mifflin Company, 1982), 79.

[5] FM 5-0, 3-3.

[6] Ibid. 3-2.

## Joint Commonality

*Possessing like and interchangeable characteristics enabling each to be utilized, or operated and maintained, by personnel trained on the others without additional specialized training.*[7] The monograph will evaluate, by means of doctrine comparison, the 7-step model with sister service and joint decision-making models.

Comparing current and emerging Army and Joint decision-making doctrine will be the basis for applying the last criteria of joint commonality. Since World War II, the services understood the value of joint interoperability, but it took the establishment of the Goldwater-Nichols Act of 1986 to mandate the services to develop officers that could serve in joint assignments and establish joint doctrine. The act allowed services to maintain their identity, but required them to work together empowering the Chairman, Joint Chief of Staff over the individual services.[8] As part of his nomination process to become the Chief of Staff of the Army, General Peter Schoomaker acknowledged that the Goldwater-Nichols act was important to ensure that our nation's military forces work together to enhance our nation's warfighting capability. He also stated that the Army's mission is to provide sustainable land forces for joint operations.[9]

As our nation's forces continue to work together, it is imperative to have doctrine that enables the services to work more effectively together. Joint doctrine is intended to do that, however, subtle differences in terminology and methodology between joint and service doctrines can cause unnecessary time spent on clarification and explanations of terminology and processes. Unfortunately, time is a precious commodity that should not be wasted because decision-making doctrine varies in both methodology and terminology. By using the same language and decision-

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[7] *Department of Defense Dictionary of Military Terms*, n.p. on-line, Internet, 20 January 2004, available from http://www.dtic.mil/doctrine/jel/doddict/data/c/01117.html.

[8] U.S. Joint Forces Command, "Joint Warfighting Center History," n.p., on-line, Internet, 4 April 2004, available from http://www.jwfc.jfcom.mil/about/jwfc_history.htm.

[9] Advance Questions for GEN Peter J. Schoomaker, U.S.A. (Ret) Nominee for Chief of Staff of the Army, 17, on-line, Internet, 30 March 2004, available at http://www.globalsecurity.org/military/library/congress/2003_hr/schoomaker.pdf.

making model across the joint force, time will be more effectively spent on solving problems. Decision-making doctrine at the service level should be nested with joint doctrine so that once a junior officer learns the process, he can intuitively apply it at the joint level.

By applying the criteria defined above, this monograph will analyze the 7-step model, determine conclusions and make recommendations. The Military Decision-Making Process and the 7-step model have evolved over a long period. The 7-step model, as we know it today evolved from an estimate process dating back to Frederick the Great and the Prussian Army. Rex Michel did extensive research on the historical background and concluded that the framework is a valid tool to aid commanders and staffs.[10] The issue this monograph seeks to address is whether the 7-step-model is still valid for the future force.

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[10] Rex R. Michel, *Historical Development of the Estimate of the Situation*, Research Report 1577, (Fort Leavenworth: U.S. Army Research Institute for the Behavioral and Social Sciences, October 1993), 1-14.

# THE BACKGROUND OF MILITARY DECISION MAKING

The Army's doctrine for decision-making is the 7-step model found in Field Manual

(FM) 101-5, *Staff Organization and Operations*, dated May 1997. The Army adopted this model

through a series of refinements starting as early as 1932.[11] Army doctrine is undergoing changes

for various reasons: relevancy, applicability, and joint alignment. As part of the doctrine

revisions, FM 101-5 is also undergoing changes. The contents will split into two distinct field

manuals – FM 5-0, *Army Planning and Orders Production*, and FM 6-0, *Mission Command:*

*Command and Control of Army Forces.* FM 5-0's draft version does include two new chapters,

"The Art of Planning" and "Problem Solving," however; the basis for making decisions is still the

7-step model. [12] The monograph will use FM 5-0 as the primary reference for the 7-step model

and the MDMP unless otherwise stated.

## Purpose of Decision-Making

> "[Wargaming]…result…of what decisions to expect to have to make…if you take the time to do that, you can probably figure out about 70-80% of those decisions. I'm not talking about whether to have eggs or bagels for breakfast. I'm talking about…Big, big decisions. Major muscle movement decisions. And it always seemed to me there aren't many of those big decisions that you have to make. But every one of them is absolutely critical to the outcome of the battle…about five or six…If you can figure out what those decisions are, that's good."[13]
>
> <div align="right">MG William S. Wallace</div>

The MDMP is a tried and proven process to aid commanders in making decisions;

however, it is also a very deliberate process relying on detailed staff estimates. The MDMP

enables a commander and staff to identify and analyze a problem, develop possible courses of

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[11] COL Kevin C.M. Benson, "Decision Making in the Information Age" (Monograph, U.S. Army War College, 2002), 7-8.

[12] FM 5-0, i.

[13] MG William S. Wallace, "Mentally Preparing for the Mission," in *66 Stories of Battle Command* ed. Adela Frame and James W. Lussier (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2000), 11-12.

action, evaluate the courses and come to a decision on the best course of action.[14] In the case of military operations, a problem is analogous with a mission. The nature of military missions poses unique problems and thus decisions requiring critical analysis. The problems are a result of needing to deal with a thinking enemy and limited resources from combat power to time. In addition, the commander must take into account uncontrollable effects like terrain and weather as well as many other factors. This creates a very uncertain situation that must be dealt with, however decisions can be slow to come by when dealing with uncertainty.[15]

The challenge for the staff is providing the commander with enough certainty in order to provide him with credible options to proceed with a decision. The level of certainty is a fundamental difference between problem solving and decision-making, the latter involving a greater deal of uncertainty. The difficulty in making decisions is the pull between the types of preference for the desired outcome. William Reitzel indicates there are two motivations for outcomes: maximizing gratification (achieving an expectation) and minimizing surprise (coping with contingencies and resistances). An example is 'what-ifing' something to death with numerous courses of actions, branches and sequels versus developing only one option. The 7-step model takes this into account by directing the development of multiple courses of action and allowing for branches and sequels. Reitzel cautions against the dilemma one faces between satisfying one form of motivation by compromising the other. For example the decision-maker could satisfy the desire to 'maximize gratification' and makes the decision to develop and plan for only one course of action. If that operation does not occur as expected, he could become overwhelmed by the surprise. He may not have plans or options to deal with the surprise and may not be able to make timely decisions to deal with the new situation. By going through a deliberate

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[14] FM5-0, 3-1 – 3-3.

[15] William A. Reitzel, *Background to Decision Making*, 1st ed. (Rhode Island: U.S. Naval War College, June 1958), 3.

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process and developing multiple courses of actions, the decision-maker is less likely to fall into the error.[16]

The 7-step model provides direction to a collective body, the staff, to critically analyze a new problem and determine a solution. The purpose of using the 7-step model is to provide a systematic framework to reduce the problem and determine options for the decision maker to choose from. Reitzel states the essence for the Army's adoption of the 7-step model: "Formulas are easy things to teach. Their regular use make it possible for a wide variation in human competence to be reduced to a reliable common denominator…but also tends to produce a feeling that the application of a formula will result in a satisfactory solution."[17] The 7-step model allows a staff of varying experience to analyze problems in a systematic way to determine possible solutions based on logic and sound judgment for the commander to choose the most optimal course of action.[18] "Decision-making for Dummies" is another way to think of the 7-step model.

The purpose of using a decision-making model is to provide structure to the process.

> "The more inclusive and dependable the body of knowledge…the more probable the effectiveness…realization of this led to a focus on the scientific approach. The fallacy of staking the future upon the possible availability of a military genius in time of need became clear when it was appreciated that more than one nation, hitherto victorious in arms, had been defeated and humiliated when genius no longer led its forces….it is safer and wiser to develop by training the highest average ability in leadership than to trust to untrained common sense."[19]

This is essential when dealing in a complex, chaotic and stressed environment with multiple distractions. Carl von Clausewitz describes the nature of war as including friction and fog. Both are major contributors to uncertainty. He also describes the attributes of a 'Military Genius' – a leader who is able to make decisions in this fog and friction. Clausewitz describes war as a contest of wills; it is not rational. Knowledge, both intellectual and experiential, enables leaders

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[16] Ibid. 4-14.

[17] Ibid. 1.

[18] FM 5-0, 1-12.

[19] *Sound Military Decision* (Rhode Island: U.S. Naval War College, 1942), 2.

to make decisions based on situational understanding and intuition. The ability to see through the fog and sense what must be done is termed Coup d'oeil. [20] The challenge for all leaders, past, present, and future is how to make decisions, despite uncertainty, faster and better than the enemy.

Field Manual 6-0, *Mission Command: Command and Control of Army Forces*, indicates that aspects of command contain both art and science. It further states that "A large portion of the art of command involves decisionmaking."[21] The commander provides the bulk of the art aspect by proving his visualization and intent while the staff provides the bulk of the science in their respective staff estimates. However, staff estimates hastily done are of no value. Nor should staff estimates be regurgitation of facts and data. Staffs play an invaluable role of analyzing data, turning it into relevant information for the commander, and thus giving him options for sound decision-making.

Key to military operations is making decisions that enable U.S. Forces to maintain the initiative by entering and influencing the enemy's decision-making cycle. The Observe, Orient, Decide, and Act (OODA) cycle, Figure 1, explains this process. Although this is a simplistic depiction of a very complex process, it establishes the central role of the commander in making decisions. Although this cycle was first used to explain the decision relationship of friendly and enemy fighter pilots, it is considered applicable to land forces but with a different tempo. Through observation, the commander receives information on the situation. Then, the commander orients to the situation by turning the information into an understanding of the situation and developing a common operating picture. Next, the commander decides, intuitively or analytically,

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[20] Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (New York: Alfred A Knopf, 1993), 83-141.

[21] Hq, Department of the Army Field Manual 6-0, *Mission Command: Command and Control of Army Forces*, August 2003, n.p., on-line, Internet, 5 April 2004, available from http://www.adtdl.army .mil/cgi-bin/atdl.dll/fm/6-0/toc.htm, 2-50.

what to do and puts his plan in action. The OODA cycle is a depiction of "see first, understand first, act first, and finish decisively.[22]
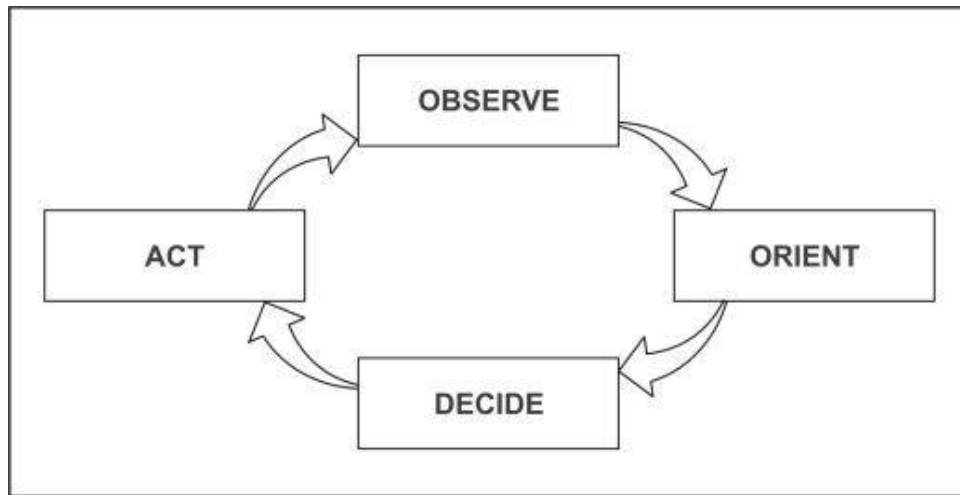


**Figure 1: OODA Cycle, FM 6-0**

The purpose of the OODA cycle is to create a dynamic environment in which the enemy is forced to be in a reactionary mode, which eventually places him in a position where he can no longer react to the tempo of friendly action. This is a continuous cycle that gains momentum when properly executed by shortening the time needed to plan, prepare and execute. Compared to the 7-step model, it is considered to be a more responsive decision-making model and is better suited for decision-making during the actual execution of the operation.[23]

Although FM 6-0 does not indicate similarities between the OODA cycle and the 7-step model, they are comparable despite the graphical depiction of one as continuous and one as linear. Figure 2 shows the similarities of the two processes. Steps 1 and 2, receive the mission and mission analysis, are similar to observe and orient. They both have end states of gaining an understanding of the situation so that a plan can be developed. Steps 3-6, course of action development, analysis, comparison, and approval are equivalent to the decide step. Step 7, orders

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[22] Ibid., App A.

[23] Ibid.

production, is putting the plan into effect or directing the action of the plan. The 7-step model does not include preparation and execution, but they could easily be incorporated as part of the process. Another essential aspect to the 7-step model and the OODA cycle is the need for continuous assessment.
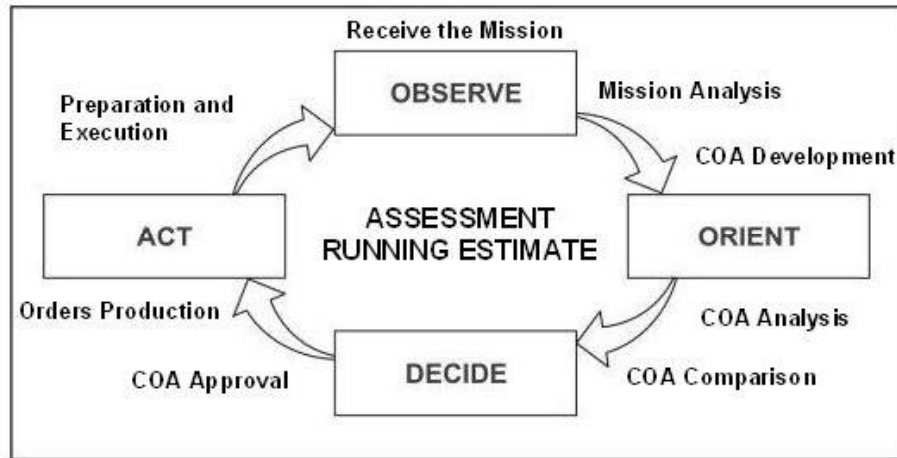


**Figure 2: OODA Cycle and 7-Step Model, Created by Author**

## Process versus Model

In Army doctrine, the Military Decision-Making Process is synonymous with the 7-step model, however there is and needs to be a distinction between the two terms. FM 5-0, under final draft, defines MDMP as: "a planning tool that establishes techniques for analyzing a mission, developing, analyzing, and comparing courses of action against criteria of success and each other, selecting the optimum course of action, and producing a plan or order."[24] Process is defined as "a series of actions or operations directed towards a particular result," while model is defined as "[a] structural design; an example for imitation or emulation."[25] By comparing the two definitions, it is clear that they are not the same. The 'process' of the MDMP should be the act of conducting

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[24] FM 5-0, Glossary -10

[25] *The Merriam-Webster Dictionary* (Massachusetts: Merriam-Webster, 1997), 584, 475.

critical analysis of a military problem, while the model is a method or tool. The monograph will

maintain the distinction between the process and the method.

Another issue this monograph intends to clarify is the difference between decision-

making and planning. Is the 7-step model a decision making tool, a planning tool, or can it be

both? FM 5-0 states that the "MDMP is an established and proven analytical planning process."[26]

While there are inherent decisions in planning and vice-a-versa, is there a difference between

planning and decision-making? Planning is forming a method for accomplishing an objective,

while deciding is to make a choice or to arrive at a solution that ends uncertainty.[27] It would seem

that there is a difference, however the Army establishes the MDMP as a planning tool and the 7-

step model, in Army doctrine, is analogous with the MDMP. Then why is the 7-step model not

called the Military Planning Process much like the Marine Corps equivalent, which is called the

Marine Corps Planning Process?[28]

Planning indicates a decision is already made since the purpose of planning is to form a

way or course of action for accomplishing the objective or mission. In one sense, this is true since

the first step in the model is to receive the mission. The decision, in this case, is not what is the

mission but how to accomplish the mission. Through the development and comparison of

multiple courses of action, the staff conducts planning and presents choices for the commander.

The decision is the selection of a course of action by the commander. In this manner, the 7-step

model, when conducted in the detailed, deliberate, sequential and time-consuming manner is both

a decision-making tool and planning tool.

However, in a time-constrained environment, the commander can make modifications at

his discretion. FM 5-0 states that commanders are in charge of the process and they play a central

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[26] FM 5-0, p. 3-1.

[27] The Merriam-Webster Dictionary, 560, 202.

[28] MAGTF Staff Training Program Pamphlet 5-0.2, *Operational Planning Team Guide* (Quantico, Virginia: MSTP Center, March 2001), 25.

role and their involvement is even more critical when abbreviating the 7-step model. This is

depicted in Figure 3 below taken out of FM 5-0.[29]
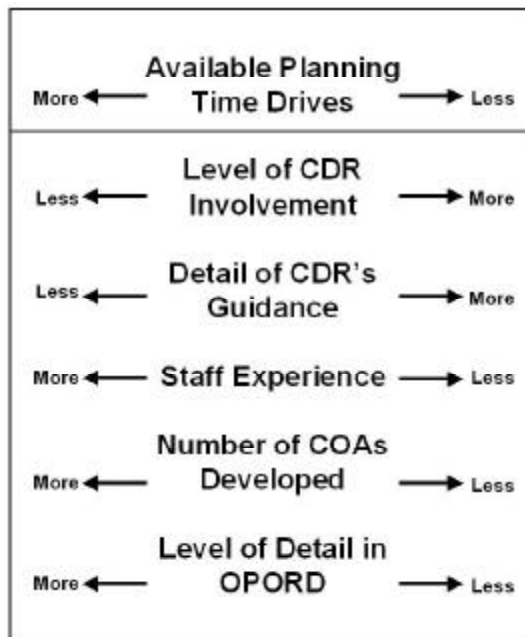


**Figure 3: Planning Continuum, FM 5-0**

The commander relies more on his expertise, intuition and creativity to quickly assess the

situation and determine possible courses of action. In this way he can limit the number of courses

of action developed or can direct a single course of action.[30] In this instance, the 7-step model

provides a guideline or framework to ensure critical areas are considered. In this sense, the

MDMP is a developmental tool for inexperienced or less gifted staff officers and commanders.

## Decision Making Theories

There are many ways to solve problems and make decisions. There are two broad

categories of decision-making theories: descriptive and normative. Descriptive theories explain

how people are observed making decisions, while normative theories explain how people should

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[29] FM 5-0, 3-49.

[30] Ibid. 3-50.

make decisions.[31] There are many factors that distinguish the various decision-making theories such as: choice or rule based; levels of awareness and ambiguity; and levels of interaction between participants (autonomous or complex system).[32] Some are very deliberate, logical and scientific, others are spontaneous, illogical, and based on intuition. Based upon the situation, the decision-maker must first determine how, or rather, the model he will use to make the decision.

Before discussing decision-making models, it is important to understand how the human mind processes information. Robert G. Lord and Karen J. Maher, *Leadership and Information Processing: Linking Perceptions and Performance*, describe the human mind as having long and short-term memory and various levels of attention. Our short term memory can be further broken down into sensory (visual) which holds information up to 300 milliseconds, conceptual (symbolic) which preserves information for less than one minute, and general which holds several chunks of information for about 20 seconds. In order for information to transfer from short-term to long-term memory, it must be repeated numerous times. The example the authors use is a telephone number: visual is the brain recognizing the symbols as numbers; conceptual is the brain understanding the concept of the seven numbers as a telephone number; and general is the brain's ability to remember the seven numbers long enough to dial the number. Through the repetition of looking at and dialing the telephone number, the brain stores the information into long-term memory.[33]

A similar process occurs with the 7-step model. The more individuals are repeatedly subjected to the 7-step model the more of it they commit to long-term memory. The Army provides this repetitive learning environment in schoolhouses, unit training and the various combat training centers. Brigadier General Russel Honore, while working at the National training

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[31] Stuart M. Dillon, "Descriptive Decision Making: Comparing Theory with Practice," 10, on-line, Internet, 17 March 2004, available at http://www.esc.auckland.ac.nz/Organisations/ORSNZ/conf33/papers/p61.pdf.

[32] Ibid., viiii – ix.

[33] Robert G. Lord and Karen J, Maher, Leadership and Information Processing: Linking Perceptions and Performance (New York: Routledge, 1993), 9-11

Center, attributes his understanding of battle command, which enables decision-making and the military decision making process, to his repetitive education and experience. He understands that everyone has varying levels of experience and explains that the Army gives experience to people though repetitive rotations at the combat training centers and in the schoolhouses. But he also cautions against people getting too comfortable with the scenarios.[34]

Another factor is the amount of attentional resources or energy needed to process information. If the task is new or different, it will require a significant amount of attentional resources (controlled processing), whereas, well-rehearsed tasks require minimal amounts (automatic processing). Generally, people are flexible information processors and use combinations of controlled and automatic processes.[35] Lord and Maher explain that automatic processing enables a person to do multiple tasks while controlled processing limits the amounts of tasks. For example an experienced secretary can type, talk on the telephone, and listen in on co-workers/supervisor without any difficulty. In contrast, an inexperienced typist will have difficulty concentrating on anything else while typing.

The mind encodes and retrieves between short and long term memory. Because of processing limitations, information going between long and short-term memory can get bottlenecked. The mind compensates for this by labeling and categorizing stimuli. The more our mind can operate in automatic processing, the more resources can be devoted to processing new stimuli. The labeling process is critical because the initial label affects how subsequent related stimuli are also categorized. People generally function satisfactorily under category-based processing, however errors can occur when information is missing and we use simplifying mechanisms to fill in the gaps. Assumptions are another way to understand simplifying

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[34] BG Russel L. Honore, "Enriching Experience," in *66 Stories of Battle Command* ed. Adela Frame and James W. Lussier  (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2000), 18.

[35] Robert G. Lord and Karen J, Maher, 13-14.

mechanisms. Simplifying mechanisms allow us to encode, retrieve, interpret, and predict situations. Incorrect simplifications can lead to errors.[36]

In order to cope with information processing, Lord and Maher, discuss four models: Rational, Limited-Capacity, Expert, and Cybernetic. The rational model is characterized as deliberate with an unlimited capacity to identify options and combine information in an objective manner. This is considered an ideal model but unattainable based on the limitations of how the mind actually works. Limited-capacity models incorporate the short and long-term memory capacities. They best typify how people actually process information, but fall short in explaining the best way to make judgments. Expert models are a modification of limited capacity models and take into account the experience level of the individual. This model asserts that experts are able to process information faster and better, but only within the area of expertise for which they have a built up knowledge base in their long-term memory. Cybernetic models are also a derivative of limited-capacity models but differ by incorporating feedback mechanisms. This is considered an optimal model when feedback is available and initial mistakes are not costly.[37]

The 7-step model is a variation of a normative, how decisions should be made, and rational model. By using the 7-step model commanders and staff are expected to be able to make sound decision through the application of a logical and deliberate planning and decision-making tool. The benefits of using the 7-step-model, full or abbreviated, are: the development of multiple options (courses of action, branches, and sequels); higher degree of synchronization and coordination; reduction of a large complex problem into manageable pieces; and a decreased chance of skipping key considerations.[38]

Naturalistic decision-making, which is a category of descriptive decision-making theory, is gaining in popularity. Gary Klein's *Sources of Power* is a descriptive naturalistic theory

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[36] Ibid. 16-18.

[37] Ibid. 21-25.

[38] FM 5-0, 3-2

explaining how experienced people make decisions in uncertain, stressful and time sensitive environments. His theory known as recognition-primed decision-making (RPD) is not a formal, rote-learned way of making decisions, but rather the 'way' people naturally make decisions. It involves experience, intuition, mental simulation, metaphor, and storytelling. Decision-makers are able to absorb information, mentally develop and compare options by imagining what will happen and make a decision [39] The advantage of this theory is speed. The more experience the decision-maker has in regards to the situation, the faster decisions will be made with minimal errors. When critical errors are made using this model, they are usually a result in a lack of experience, lack of information, or dismissal of warning signs. [40] Klein acknowledges that a deliberate model is applicable to many situations and especially when the decision-maker lacks experience, the situation is too complex, or time is not a factor. Additionally he points out that deliberate or rational models are useful when a group is involved in the decision. While rational models do not guarantee that inexperienced people will make good decisions, it does provide experience for them by allowing them the opportunity in thinking through problems [41]

Major General William Wallace in an article regarding the commander's role in making decisions describes a similar process to the recognition-primed decision model – the commander's visualization. [42] He provides the following advice: "[T]aking time to think, which doctrinally relates to the commander's visualization  -  wargaming in your mind, coming up with a mental model of how you think your forces are and how the enemy is, coming up with courses of action and mapping out what will happen – this gives you a 70% solution to work with, judgments, observations and expectations that you've already thought out ahead which allow you

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[39] Gary Klein, *Sources of Power: How People Make Decisions* (Cambridge, Massachusetts: The Massachusetts Institute of Technology, 1999), 1-3

[40] Ibid., 273-274.

[41] Ibid., 28-29.

[42]  See FM 6-0, 4-17 for more information on Commander's Visualization.

to react quicker when it does happen than had you not thought about it."[43] Commander's visualization is a critical part of the military decision-making process and the 7-step model. Through this visualization, commanders are able to develop subordinates by imparting on them lessons they learned from personal experiences.

With recognition-primed decision-making, Gary Klein places a great deal of emphasis on experience. Klein asserts that through experience learning, an individual builds up examples, models, stories that the mind is able to rapidly assess and compare the current situation to and decide on a single appropriate solution instead of multiple solutions. Experts have a large reserve with which to do this. In describing a 'military genius,' Carl von Clausewitz also places importance on the role experience plays in developing one's ability to make decisions, whether personal or through the rigorous study of history.[44]

As a result of the theory of recognition-primed decision-making, a new model of decision-making and planning was developed called the Recognitional Planning Model (RPM) shown as Figure 4. John Schmitt and Dr. Gary Klein first presented it at the Naval War College as part of a symposium on command and control. A field manual explaining how the model works was written as part of the unit of action testing.[45]

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[43] MG Wallace, 11-12.

[44] Clausewitz, 115-131.

[45] John Schmitt, *RPM Field Manual* v2.2, 12 January 2003, 4.

**RECOGNITIONAL PLANNING MODEL**

The "Decision"
(subject to test
and evaluation)

Situational
information

Guidance/Tasking
from HHQ

Understand
Mission

Conceptualize
COA

Test/Operationalize
COA

Wargame COA*

*For executors as
well as planners.

Develop
Orders

DISSEMINATE
EXECUTE
IMPROVISE

Once the COA satisfices in
the wargame and/or testing,
it has become "the PLAN." No
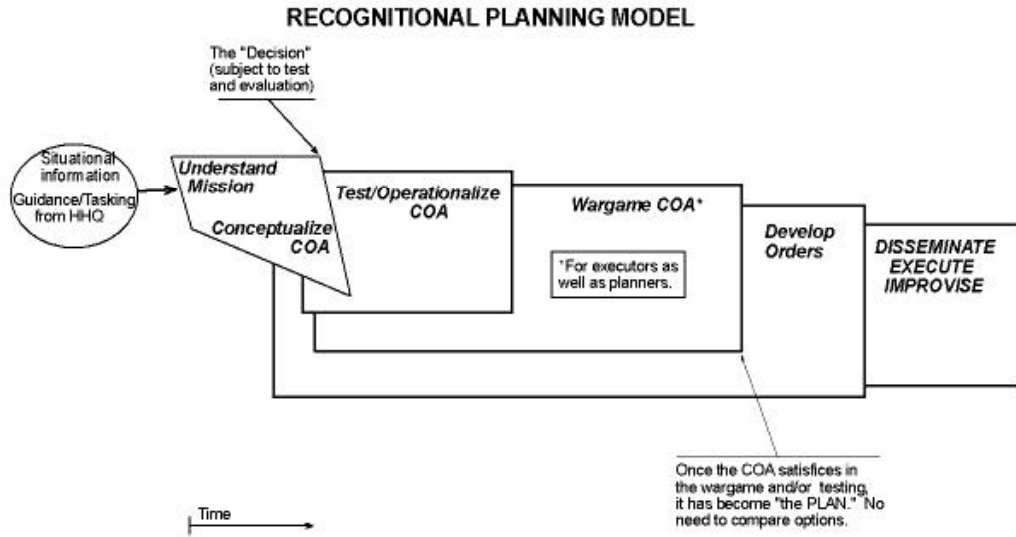need to compare options.

Time

**Figure 4: Recognitional Planning Model, RPM Field Manual v2.2**

# THE TRANSFORMATION ENVIRONMENT

The Contemporary Operational Environment is described in FM 3-0, Operations, as having six dimensions: Threat; Political; Unified Action; Land Combat Operations; Information; and Technology.[46] These six dimensions influence the type and flow of forces, and the type of operations. While all six are important, the threat, information, and technology dimensions are the most critical to the future force and the use of the 7-step model because they provide direct inputs into the model.

The threat indicates an adversary that may or may not be part of a nation-state. This has implications on many aspects of the conduct of operations from the rules of engagements to the allocation of reconnaissance assets. At the basic level, it is the difference between fighting a recognized army belonging to a nation-state as defined by the Peace of Westphalia and fighting criminals, national and transnational.[47] FM 3-0 further indicates that adversaries will adapt methods to attack our perceived weakness by incorporating a nonlinear, non-contiguous, simultaneous approach to their operations. They will adopt information methods and acquire technologies that counter our systems. It further indicates that they will operate similar to the North Vietnamese as well as Iraqis and Serbs.[48] This suggests that the adversary will solicit or by ways of coercion obtain support from non-military actors or that non-military actors may also participate. It is in this way that our experience in Vietnam in the 1960s and 1970s could be viewed as analogous with the Contemporary Operational Environment. In Vietnam, the North Vietnamese Army, the Vietcong, and the Chinese Army and indirectly the Soviet Army challenged the U.S. Army. The operations were characterized by a non-linear and non-contiguous battle space. Additionally, the rules of engagement severely restricted U.S. operations. In regards

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[46] Hq, Department of the Army, Field Manual (FM) 3-0, *Operations* (Washington, D.C.: June 2001),1-8.

[47] "Treaty of Westphalia," *Wikipedia*, n.p., on-line, Internet, 11 April 2004, available from http://en.wikipedia.org/wiki/Treaty_of_Westphalia.

[48] FM 5-0, 1-9.

to information, technology and the operational environment, FM 3-0, while indicating that the adversary will have the capability to obtain information and advanced technologies, assumes that the U.S. will be able to maintain superiority in these areas.[49] Unfortunately, FM 3-0 does not elaborate on how the United States will maintain this superiority over the enemy.

It is imperative that the Army remains relevant against potential enemies. The National Security Strategy states: "The threats and enemies we must confront have changed, and so must our forces. A military structured to deter massive Cold War-era armies must be transformed to focus more on how an adversary might fight rather than where and when a war might occur. We will channel our energies to overcome a host of operational challenges."[50] Prior to the actual publication of the National Security Strategy, the Army leadership set a course for transformation. The Army transformation path began with General Shinseki, former Chief of Staff of the Army. He laid out his vision with the depiction of a three-pronged trident as depicted in Figure 5. The top prong represented the legacy force, the bottom prong represented the interim force, and the middle prong represented research and development. All three prongs led to the Objective Force.[51]
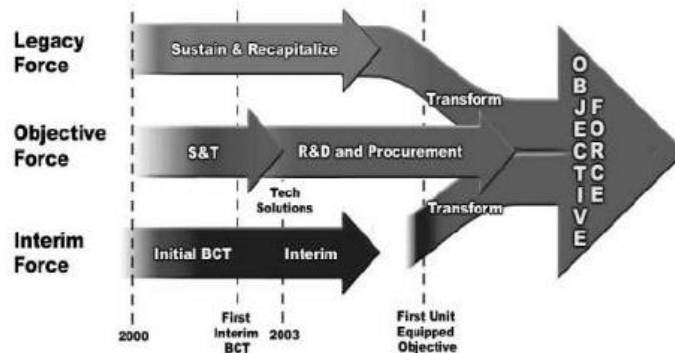
[49] FM 3-0, 1-8 – 1-9.

[50] *The National Security Strategy*, 2002, n.p., on-line, Internet, 14 march 2004, available from http://www.whitehouse.gov/nsc/nss.html.

[51] Department of the Army, "2002 Army Modernization Plan," 52, on-line, Internet, 20 April 2004, available from http://www.army.mil/features/MODPlan/2002/wMP_mainv03b.pdf .

**Figure 5: Objective Force Trident, 2002 Army Modernization Plan**

The Objective force, now called the future force, is intended to be the Army's answer to maintaining relevancy. The Future Force holds at its foundation soldiers enabled by the best warfighting technology. The tenets of the Future Force are commonly referred to as the 'ilities:' deployability, agility, versatility, lethality, survivability and sustainability. Additionally, the Army White paper states that soldiers and leaders enabled with advanced technology will be able to see first, understand first, act first and thus able to finish decisively. In the introduction, the paper states: "Leaders must know how to conduct rapid tactical decision-making. This means changing from plan-centric to intent-centric operations; changing from physical rehearsals to virtual ones; and changing from static command posts to situational understanding on the move. They will be adaptive and self aware – able to master transitions in the diversity of the 21st Century military operations."[52]

Since the end of the Cold War in 1989, the Army has participated in a variety of operations. Varying from high intensity conflicts in Iraq, Desert Shield/Storm and Operation Iraqi Freedom to stability and support operations (SASO) in Mogadishu, Bosnia, and Kosovo to name but a few. The legacy force, with evolving technology and doctrine, successfully carried us through these operations. The U.S. Army has a long history of being adaptive and innovative. Examples of this are evident in all of these operations and throughout history, but the Army leadership continues to direct and emphasize the force to 'transform.'

This focus on 'transformation' implies a new and different way of fighting, and not the traditional evolution of the Army. This need to label the change as transformation may be a result of the ongoing debate about information technologies and whether we are undergoing a military revolution or a revolution in military affairs as presented by MacGregor Knox and Williamson Murray in *The Dynamics of Military Revolution: 1300-2050*. Their basic argument is that military

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[52] Army White Paper, "Objective Force Concept Summary", v.

revolutions cannot be predicted, controlled or foreseen. They have a global, long-lasting impact. Revolutions in military affairs result from a combination of changes in doctrine, organizations, technological innovations and tactics and they are controllable. The concern is whether we are in an informational military revolution or if we are adapting technologies as part of a revolution in military affairs. The implication, based on their definitions of the two concepts is whether we understand what type of change we are undergoing. If we are truly in an information revolution, as some argue, then despite our best efforts for transformation, the outcomes are rarely predictable.[53] The monograph will not address this argument, but will address the basic assumption that information technology will enable Army leaders to 'see first, understand first, act first, and finish decisively.' These attributes are all part of the MDMP.

Regardless of the label for change, the United States Army enjoys the benefits of a technologically advanced country. The most obvious transformations are a result of technological improvements that include enhancements of weapon systems, command, control, communication, computers, intelligence, surveillance and reconnaissance (C4ISR) systems. This advanced technology gives Army leaders the ability to obtain more data faster. While the Army is improving its ability to obtain more data and share it across the battlefield, what has it done to ensure decision-makers harness this data to make better and faster decisions as stated in the concept for the Future Force? The 7-step model, in order to be an applicable tool for the future force, must be able to aid decision-makers and staff planners to make faster and better decisions and plans than the enemy.

**Nature of War**

There are many dimensions to the nature of war. Carl Von Clausewitz in On War describes war as a brutal test of wills in which "friction is the force that makes the apparently

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[53] MacGregor Knox and Williamson Murray, ed., *The Dynamics of Military Revolution: 1300-2050* (New York: Cambridge University Press, 2001), 6-11.

easy so difficult."[54] In addition to friction, there is a lack of facts that he describes as 'fog.' These two simple terms encompass a realm of complexity still applicable to today's environment. The nature of war is a complex environment requiring balance between the policy makers, the military, and the people.[55] It is complicated by a participating and thinking opposing force. War is not governed by logic. He cautions that we must never forget that the enemy is a thinking and capable force. War is not for the feint of heart for it is a test of wills. A commander must be able to make decisions despite the friction and fog. According to Clausewitz, a commander must have a strong will coupled with "appropriate gifts of intellect and temperament" in order to be successful in a complex environment.[56]

According to historian John Keegan, battle is also a conflict of human wills. The moral breakdown of the opponents results in victory. He argues that this is true throughout time regardless of advanced technologies. The reason this occurs is because the factor common to all battles past and future is the involvement of humans.[57] He points out that western armies try to "reduce the conduct of war to a set of rules and a system of procedures – and thereby make orderly and rational what is essentially chaotic and instinctive."[58] This is accomplished by conducting rote learning and repetitive drills. The result, although some argue it is through de-humanizing, is soldiers and officers are able to rise above the psychological aspect of human fears and operate within the chaos. They are able to describe and act in their environment.[59]

Since the end of the Cold War, there has been a need to determine who are our enemies. Army doctrine and forces are primarily funded, designed and trained to protect our country's interests by defeating our enemies in combat. Our security strategy requires an enemy to be

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[54] Clausewitz, 140.

[55] Ibid. 101.

[56] Ibid. 115.

[57] John Keegan, *The Face of Battle* (New York, New York: Penquin Books, 1976), 301-302.

[58] Ibid. 18.

[59] Ibid. 20.

identified. Since the collapse of the Soviet government, the United States has been wrestling with determining what force will challenge us in the new environment. The environment is so complex we are unable to label one major conventional force. Based on the new environment an enemy equally complex and allusive was identified. The irony is the environment is our new enemy – the Contemporary Operational Environment. We develop doctrine to fight a known enemy, and doctrine is the result of analyzing history/past actions, explaining it through theory and determining proven methods. As discussed in the section above, even Gary Klein acknowledges that rational, deliberate methods are more applicable to complex, uncertain environments, because the decision-maker returns to the status of a novice, regardless of experience, every time he enters into an unfamiliar situation. Although the decision-maker may not be an 'expert' in the new situation, he still has a greater level of experience and should still be able to make some decisions using the principles of the recognition-primed decision-making model. [60]

## Nature of Technology

The Army's concept for transformation relies on advanced, breakthrough technology. The Army White Paper on the future force states: "Soldiers and leaders enabled by advanced technologies will provide revolutionary increases in operational capability."[61] The advanced technologies, while not fully realized, include information systems to weapon systems. The belief is in a system of systems that will enable the force to operate in the complex environment regardless of terrain and weather.[62]

Lieutenant Colonel H.R. McMaster is one of the leading cautioning voices regarding the ability of information technology to achieve information superiority. He argues that transformation terminology assumes that the Army can achieve near certainty. This presents the

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[60] Klein, 28-29.

[61] "Objective Force Concept Summary," iv.

[62] Ibid. iv.

dichotomy of operating in an uncertain and complex environment with near certainty because of emerging technology. He does agree with the need to transform but not at the expense of assuming away the nature of future war.[63]

Martin Van Crevald in *Command in War* describes the challenges facing commanders. He explains that the problems are not new but the dimension of complexity has changed due to technology. The increased mobility, dispersion of forces, specialized forces and equipment, computer and communication systems all contribute to a more robust and complex method of command. As command becomes more complex, the need to develop ways to manage it more effectively results in the development of more tools causing an ever-changing command environment. He states that regardless of capabilities or levels of technological advancement there are no guarantees to the successful conduct of command in war. Due to the complexity of command, no one aspect of command can be taken in isolation to prove its worth, not even advanced technologies.[64]

Brigadier General Rick Lynch, commander of the first 'digital' brigade echoes the challenges of command despite having advanced technology. He fully supports the goals of digitization but identified four myths: tactical operating centers will be smaller; less time needed for training; contractors are required to repair digital equipment; and, instantaneous battlefield improvements resulting from information technology (which he considers to be the most dangerous). The expectation by various people that information technology will have an immediate and noticeably positive impact on the battlefield is mistaken. Based on his experience, he feels that soldiers and officers must first be proficient/expert in the basics in order for them to leverage technology. This takes many hours of training. Since technology is always changing, this became difficult. As his soldiers learned one system, a new one came along and they had to enter

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[63] H.R. McMaster, "Crack in the Foundation: Defense Transformation," (Received article as part of curriculum for course on Carnage and Culture, School of Advanced Military Studies, AY 2003-2004), 2.

[64] Martin Van Crevald, *Command in War* (Cambridge, Massachusetts: Harvard University Press, 1985),

another training phase. They were unable to maintain a high enough level of proficiency to execute in an improved fashion. Finally, a decision was made to limit upgrades, and after seven months of training, the unit's performance indicated their ability to leverage technology.[65]

The nature of war and technology still requires decision-makers to overcome the basic challenges of a complex environment. Despite increased information, fog, friction and uncertainty still exist requiring the decision-maker and staff to engage in some form of a process to analyze the problem and develop solutions. This review of the environment, both the nature of war and technology, has not changed significantly enough to abandon the 7-step-model. The next step of the monograph is to apply the criteria listed above to the 7-step model to determine if the model requires modification.

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[65] Rick Lynch, "Lessons Learned: Commanding a Digital Brigade Combat Team," pp27-29.

# APPLICABILITY

*Affecting, connect with, or relevant to a particular situation.*[66]

This criterion will compare the environment of the Ia Drang Valley to the contemporary operational environment to determine if the environment has significantly changed. This monograph applies this criterion with the assumption that if the Estimate of the Situation was a useful tool then, and the environment has not significantly changed, then the 7-step model is still applicable. The monograph makes this assumption since the 7-step model is an evolved version of the Estimate of the Situation. Joint doctrine defines the commander's estimate of the situation as: "A logical process of reasoning by which a commander considers all the circumstances affecting the military situation and arrives at a decision as to a course of action to be taken in order to accomplish the mission. A commander's estimate that considers a military situation so far in the future as to require major assumptions is called a commander's long-range estimate of the situation."[67]

Before 'transformation,' Army doctrine, with some exceptions, addressed a specific enemy, the Soviet army. This enemy could be templated and its actions and reactions were seemingly very predictable. It seemed fighting a scenario against anything other than the Soviet horde was unthinkable or an anomaly until Vietnam. The U.S. military involvement in Vietnam is a blemish on an otherwise impeccable record of victory. Our involvement in Vietnam is considered by some tactically successful, but operationally and strategically the greatest loss for the United States.[68]

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[66] Dictionary.com, n.p., on-line, Internet, 20 January 2004 available from http://dictionary.reference.com/

[67] Department of Defense, Joint Publication (JP) 5-0, 2nd Draft, *Doctrine for Joint Planning Operations* (Washington, D.C., 10 December 2002), GL-7.

[68] Summarized from the Introduction, Harry G. Summers, Jr., "On Strategy: The Vietnam War in Context" (Monograph, U.S. Army War College, 23 March 1982)

The enemy was complex and comprised of many players not just a conventional military of the North Vietnamese Army. The enemy in Vietnam had many faces – the North Vietnamese Army soldier, the VIETCONG, the Chinese soldier, the villager whether sympathizer or though terrorization (men, women, and children). By the time of the United States involvement in Vietnam, the Army had formalized the 'Estimate of the Situation' into Army doctrine. The process originated in 1932 and went through several changes. By 1960, the formal process was established as a means for assessing the situation and developing and executing courses of action.[69]

General, then Lieutenant Colonel, Moore's successful actions and decision making qualities as understood from his actions at Landing Zone XRAY and his other operations in the Ia Drang Valley embody the traits and attributes the Army was looking for then and is looking for now to lead the future force.[70] How was it that he was so successful? Clausewitz describes the characteristics of a 'military genius' as being able to see through the fog of war as discussed under the section of the Nature of War and General Moore would appear to fit the description. Based on his success, can it be derived that the 7-step model or at least the estimate of the situation that serves as the foundation for the 7-step model was applicable then as it is now?

It is assumed that during his operations in the Ia Drang Valley, Lieutenant Colonel Hal Moore was taught, familiar with, and had used the format for the estimate of the situation. He ascribes to four leadership principles: three strikes and you are not out; there is always one more thing that you can do; when there is nothing wrong, something is wrong; and trust your instinct.[71] General Moore no doubt engaged in a form of recognition-primed decision making, but he also

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[69] Joseph Dichairo, "The Impacts of Digitization on the Army's Military Decision-Making Process: Modificatiosn to the Estimate of the Situation" (master's thesis, Command and General Staff College, 1997), 27.

[70] Summarized from chapter 4, LTG Harold G. Moore (Ret) and Joseph L. Galloway, *We Were Soldiers Once…and Young* (New York: Random House, 1992).

[71] GEN Hal Moore, "Battlefield Leadership", n.p., on-line, Internet, 11 April 2004, available from http://www.1-9aircav.org/hal-moore.html.

understood and used the steps of the Estimate of the Situation to guide his actions. Two of his principles that he promotes directly tie into decision-making – there is always one more thing you can do and trust your instinct. In regards to this, there is always one more thing you can do, he describes the mental process of asking questions about what is or is not happening that can influence the situation. This equates to minimizing surprise by developing options, branches and sequels. He also explains that instinct and intuition enables a commander to develop a quick Estimate of the Situation and that instinct and intuition are a result of education, training, reading, personality, and experience.[72] It would seem evident that the rational process of the Estimate of the Situation coupled with experience enabled Moore to harness his intuitive decision and achieve victory, at least a tactical one, over an overwhelming enemy.

The 7-step model, while seemingly linear and archaic, still should be considered applicable in the contemporary operational environment. It's strength lies in the fact that it is a model that reduces a complex situation into manageable chunks. It enables people of varying experience to solve complex problems and the nature of war is in fact still a very complex problem. The enemy is arguably even more complex or at least as complex as the United States saw in Vietnam with the active participation of state actors, non-states actors, third party state actors, as well as blurred lines between combatant and non-combatant villagers.

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[72] Ibid.

# ADHERENCE OF MDMP BY COMMANDERS' AND STAFFS'

*The ability to follow closely; carry out without deviation.*[73]

This criterion will assess the adherence commanders and staffs to the 7-step model. As discussed earlier, rational decision-making models, such as the 7-step model, are intended to be followed closely and sequentially. Brigadier General Russel L. Honore while serving at the National Training Center made the following comment in regards to synchronization which is an output element of the 7-step model: "So we plan …sequentially. Then we get out on the battlefield and things start happening simultaneously."[74] This requires an understanding of how sequential planning affects operations.

An old adage of the Army is to 'train as you fight.' Unit training exercises, whether at home-station or Combat Training Centers (CTCs), attempt to provide the most realistic training environment for their units. The dirt CTCs, the National Training Center and the Joint Readiness Training Center, serve as the closest training environments for units to simulate operations at the tactical level (brigade and below). The Battle Command Training Program trains, through computer simulation, division and corps commanders and staffs.

The MDMP serves as a means for commanders, staffs, and subordinates to interact throughout the planning process. When MDMP occurs near simultaneously or real-time, it is referred to as parallel and collaborative planning respectively. Depending upon the nature of the mission, current or contingency and the time available, a commander may direct only his staff to plan or may direct parallel or collaborative planning, full or abbreviated.[75] There are pros and cons for each type of planning. The flexibility and interpretation of the 7-step model based on the situation makes the application of the adherence criteria challenging. To what degree does a commander and staff need to perform the steps for them to get 'credit' to adhering to the model?

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[73] *The American Heritage Dictionary*, 2nd ed (Boston, Houghton Mifflin Company, 1982), 79.

[74] Honore, 66 Stories, 15.

[75] FM 5-0, 3-52

In a training environment, where observer/controllers provide feedback, but do not maintain continuous presence, it is difficult to determine if the steps were followed. The 7-step model as depicted in Figure 6 indicates tangible outputs to the process. It seems logical that producing the outputs as shown in the figure would indicate that the step was followed. Unfortunately, it is easy to produce an output without having gone through the qualitative process and gaining the benefits of conducting analysis versus going through the process in a rote manner. This leads to a concern of evaluating the quality of the output.
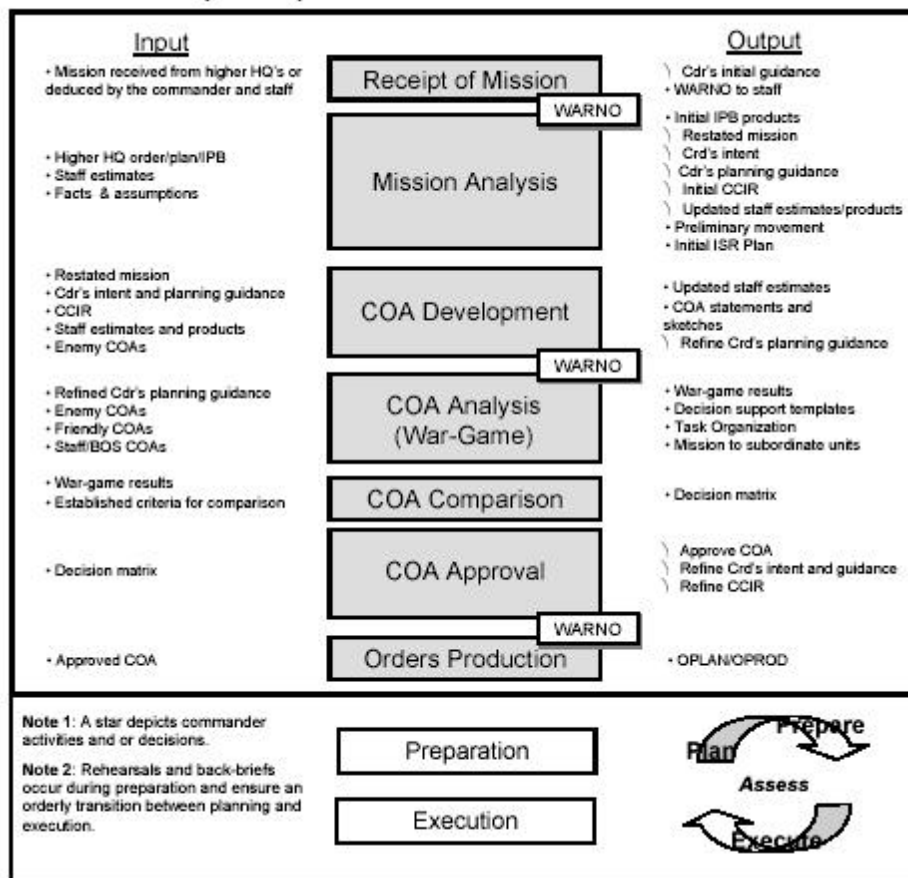


**Figure 6: The Military Decision Making Process, FM 5-0 (Final Draft)**

Before a staff can effectively abbreviate the MDMP, the field manual states that it must master the steps of the full MDMP.[76] It also states that the process can be modified based on the

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[76] Ibid., 3-3.

situation. Training centers strive to replicate the true nature of war. In that sense, commanders and staff are subjected to a time-constrained environment with multiple stresses. Observer/controllers provide the commander and staff feedback on how the unit did in various areas – MDMP being a key discussion point.[77] If it is accepted that the training environment is time-constrained and the commander may direct an abbreviated MDMP which allows for steps to be completed mentally by the commander and output products may be less detailed or omitted, how then do or should observer/controllers assess the MDMP. This relates to the earlier distinction between process as a critical analysis and the 7-step model as a tool.

There are many instances where the staffs do not adhere to the 7-step model. By examining trends from the Combat Training Centers, it is evident that all aspects of the 7-step model are in someway not followed. By examining Center for Army Lessons Learned trends taken from the National Training Center, third and fourth quarter of fiscal year 1998, there are 70 negative, needing improvements, trends related in some fashion to the MDMP 7-step model. These 70 trends range from posting of correct graphics to sharing of information within and between commands. Most of the observations are assessed based upon an output found in figure 5. For example, under Course of Action Development, one of the outputs is updating staff estimates. One of the trends identified is the requirement of LOGSTATS turn-in to update the staff estimate, but the trend does not indicate if it affected the Course of Action feasibility, acceptability or suitability criteria.[78] While the field manual does not indicate that the process is to be strictly adhered to, there are several possible explanations. [79]

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[77] The author served as an Observer/Controller at the National Training Center for three years and participated in the development of after action reviews at the company, battalion, and brigade level. It is the author's personal observation that the MDMP and the 7-step model is a focal point for every after action review conducted.

[78] Center for Army Lessons Learned, CTC Trends: National Training Center 99-10 3rd and 4th QTR FY98 (Fort Leavenworth, August 99), 83.

[79] FM 5-0, 3-3

One possible explanation is based upon Klein's model of recognition-primed or naturalistic decision-making. Since observer/controllers are looking for tangible outputs to confirm a step was done and the commander or staff did the step mentally, then the observer may assess the step as not being done. Klein indicated that many of the people he observed during his study could not articulate the mental steps they took to reach their decision or assessment of the situation.[80] Additionally, several of the trends indicated a lack of experience or unfamiliarity with the sub-steps of the 7-step model. This monograph is not looking at assessing all the trends to determine the strict adherence, but rather to the general adherence. The fact that there are numerous trends relating to various aspects of the 7-step model indicates in fact that the 7-step model is generally adhered to.

Normative models, since they are theoretical or ideological, are typically not followed since they do not enhance the way the human mind processes information, but they are still a valid option. FM 5-0 states: "Errors committed early affect later steps."[81] This indicates a linear form of problem solving. However, the Army is moving away from a linear mentality based upon the operational environment. This also does not allow for self-correction. The future force as outlined in the Army White Paper wants creative thinkers. Is it possible then to achieving complex thinking with a linear model?

The answer is again found by understanding the strengths and weaknesses of rational, deliberate model and recognition-primed decision-making. Rational models as discussed earlier are designed for novices or people lacking experience in a certain area, even though not adhered to strictly, to analyze a complex system and develop multiple options. Recognition-primed decision-making is based upon experts making decisions in familiar, area of expertise, environments.

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[80] Klein, 31.

[81] FM 5-0, 3-2.

Intuition and personality play a key role in decision-making, some decision-makers are able to make decision despite uncertainty while other, even armed with the best information available at the time are still hesitant at making decisions. As a result of this phenomenon, an area is identified for further research involving the Meyer-Briggs personality traits. The Army administers a variation of this test at many of its schoolhouses. These tests provide a typing of how people think, act and, more applicable to this monograph, make decisions. There are sixteen personality types and four decision-making types. The dividing line is intuitive vice analytical decision-making. Generally, intuitive decision-makers are not hindered by a lack of information, they are able to make necessary assumptions and proceed with a decision. Analytical decision-makers, on the other hand, require gaps to be filled in before proceeding with a decision[82]. As indicated by FM 5-0 and supported by numerous theorist, writers and professional soldiers, intuition, especially during tactical fights plays a major role in decision making. By going through the deliberate process over time, perhaps the process as outlined by the 7 step model coupled with experience and familiarity of the situation, allows the decision maker to mentally go through the steps and reach decisions that, at first glance, seem to be pure intuition.

As mentioned earlier, the 7-step model helps organize a staff's effort, by serving as a framework or checklist, in assessing the situation and providing the commander with options. The outputs of the model can easily be turned into a checklist for evaluating if a commander and staff have gone through the steps, implying they have conducted a critical analysis. This is where it is important to distinguish between process (critical analysis) and model (analysis tool). The framework and checklist are the inputs and steps, not necessarily the outputs. This is an area where the mindset and the focus of the Army may need to transform. It is more important to conduct analysis and gain understanding. Units and the training centers must get out of the habit of going through the motions to put together a product and evaluating a unit based on a checklist

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[82] For a summary of the sixteen types see: Otto Kroeger, *The Typewatching Profiles* (Fairfax, VA: OKA Otto Kroeger Associates, 1995).

of required products. Training centers need to find a way to evaluate the quality of the process of

critically analyzing the situation.

# JOINT COMMONALITY OF MDMP

*Possessing like and interchangeable characteristics enabling each to be utilized, or operated and maintained, by personnel trained on the others without additional specialized training.*[83]

As the nature of United States military operations become increasingly joint it is imperative that the Army doctrine nest with joint doctrine. In the preface to Army FM 1, *The Army*, it states:

"Therefore, Army doctrine must support and be consistent with joint doctrine to ensure the full integration of Army land power capabilities into both joint and multinational military operations. FM 1 connects Army doctrine to joint doctrine as expressed in the relevant joint doctrinal publications, especially Joint Publication 1, Joint Warfare of the Armed Forces of the United States, and Joint Publication 3-0, Doctrine for Joint Operations."[84]

The purpose of applying this criterion is to determine if the 7-step model is compatible to joint decision-making and planning processes as well as sister services. It is difficult to make the case for a single model that will serve all services since each service has a different capability that they bring to the fight. A similar analogy is with music and the saying "getting on the same sheet of music." This concept does not mean every instrument player needs the exact same music score, it means that they have the right song, right key, with the right tempo. If every instrument played the exact same note, the music would be monotonous. There would be no harmony.

The 7-step model is similar to other models currently in joint a sister service doctrine. Figure 7, is included in the Marine air-ground task force (MAGTF) staff training program Pamphlet 5-0.3 to show how the various processes compare to each other. Although it does not

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[83] *Department of Defense Dictionary of Military Terms*, n.p. on-line, Internet, 20 January 2004, available from http://www.dtic.mil/doctrine/jel/doddict/data/c/01117.html.

[84] Hq., Department of the Army, Field Manual 1, *The Army* (Washington, D.C.: 14 June 2001), Preface.

depict the Air Force model, it is a good representation of the Marine, Army, and Joint processes. It shows, in general terms, the basic similarities of the processes. [85]

## Process Comparison

| MCPP | MDMP | JTF | JOPES Crisis Action Planning |
|---|---|---|---|
| MISSION ANALYSIS | RECEIPT OF MISSION | MISSION ANALYSIS | SITUATION DEVELOPMENT |
| | MISSION ANALYSIS | PLANNING GUIDANCE | CRISIS ASSESSMENT |
| COA DEVELOPMENT | COA DEVELOPMENT | COA DEVELOPMENT | COA DEVELOPMENT |
| COA WAR GAME | COA ANALYSIS | COA ANALYSIS | |
| COA COMPARISON/ DECISION | COA COMPARISON | COA COMPARISON | |
| | COA APPROVAL | COA SELECTION | COA SELECTION |
| ORDERS DEVELOPMENT | ORDERS PRODUCTION | ORDERS PRODUCTION | EXECUTION PLANNING |
| TRANSITION | | | EXECUTION |

**Figure 7: Process Comparison, MSTP Pamphlet 5-0.3**

Although the processes are similar, there are subtle nuances within the steps that may require a staff to spend precious time, which is usually a precious resource in military operations, on ensuring everyone understands what model is going to be used and clarifying terminology. The concern is whether the time spent on ensuring everyone has the same framework is wasted time. For example the Marine Corps Planning Process uses the term commander's battle space area evaluation to describe the same concept of what the Army Military Decision Making Process calls the commander's visualization. Although not depicted in the chart above, another subtle difference between the Army and Marine models lies in the visual representation of a circular continuous process for the Marine Corps model and a sequential, linear process for the Army's

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[85] U.S. Marine Corps, MAGTF Staff Training Program (MSTP) Pamphlet 5-0.3, MAGTF Planner's Reference Manual (Quantico, VA: April 2001), 161.

model.[86] The Marine Corps visually represents their process much like figure 2 where the 7-step model is similarly depicted in a circular fashion with the OODA cycle.

"The challenge of battle command, when you don't have habitual relationships, is to get everyone to understand how you fight and what you are looking for."[87] Even though, a staff will have to work through these subtle differences, the models are close enough to each other to allow the individuals to come together as a group.

Key to the ability of a staff to come together is the requirement to establish a learning organization as described by Peter M. Senge in *The Fifth Discipline: The Art and Practice of the Learning Organization*. If an organization is able to establish a systems thinking approach, personal proficiency, mental models, shared understanding, and dialogue to gain team learning, then it is considered to be a learning organization and will be able to solve complex problems.[88] The similarities between the models can be argued to set the framework for this concept. Going through a deliberate process, regardless of which model is used, helps create this effect by analyzing the situation, exchanging information and coming to a common understanding, and developing options. This process leads to a shared vision, which in turn is conveyed to the rest of the command through orders dissemination. Although Senge argues that a truly shared vision by definition is not produced by the leaders and imparted to subordinates, in a military environment the incorporation of parallel and collaborative planning helps develop this shared vision.[89]

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[86] U. S. Marine Corps, MSTP 5-0.2, Operational Planning Team Guidance (Quantico, VA: March 2001), 123. and FM 5-0, chapter 3.

[87] COL Ted Kostich, "Leadership in a Composite BCT," *66 Stories of Battle Command* ed. Adela Frame and James W. Lussier (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2000), 49.

[88] Peter M. Senge, The Fifth Discipline: The Art and Practice of the Learning Organization (New York: Doubleday, 1990), 5-11.

[89] Ibid., 5-11.

# CONCLUSION AND RECOMMENDATIONS

The 7-step model is still a very useful tool to the Army and should continue to be a vital part of Army doctrine. As the nature of our operations become more complex as a result of the contemporary operating environment and increased level of jointness, a deliberate decision-making model is considered a more applicable tool than those of more naturalistic ones. Although there are many cases where the 7-step model is not adhered to completely, it is adhered to in a general manner proving commanders and staffs a framework to solve complex problems and conduct planning to support the commander's decisions. Finally, the 7-step model is nested with joint and sister service models and although there are differences, they are not so great as to cause problems when conducting joint operations.

Although there is concern that the 7-step model is not suitable to the future force, the Army needs to proceed cautiously before abandoning it. The following excerpt communicates the idea that the 7-step model may not be of value, but that is not what this study has concluded.

> Greater emphasis on adaptive execution will require us to rethink a military decision–making process (MDMP) that hasn't changed in its essentials for nearly half a century, and that was devised originally to assure systematic planning of set–piece operations by relatively inexperienced and untrained leaders. As we improve leaders' skill and knowledge, that rote style of decision–making can be replaced with a more artful application of leader knowledge and intuition that encourages greater adaptation and initiative within the commander's intent. Planning will become iterative rather than linear, more a framework for learning and adjusting than a rigid template for action. Adjusting the MDMP thus will allow us to capitalize on the American soldier's inherent versatility, our growing ability to acquire and process information, and the increased rapidity with which planning adjustments can be disseminated, coordinated, and transformed into effective action.[90]
>
> "Serving a Nation at War", *Army White Paper* (draft)

The Army needs to adopt a more flexible approach to decision-making. The problem is not the 7-step model, but the mindset of what it is and is not. The 7-step model is not the Military Decision-Making Process; it is a tool or framework to conduct the process. It is a good tool, but depending on the situation, other tools may be more appropriate like the Recognition-Primed Model or the

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[90] "Serving a Nation at War: A Campaign Quality Army with a Joint and Expeditionary Mindset" (Army White Paper (draft), 13 April 2004), 13.

OODA cycle. The 7-step model is still a valid and applicable tool, however it has been misunderstood as a rigid process. There is no single right model for decision-making. Various factors need to be taken in account such as: level of experience of the commander and staff, familiarity with situation, and the involvement of various services and/or coalition partners.

Our doctrine should differentiate between the Military Decision-Making Process and the 7-step model. By distinguishing them, the Army can provide the force with multiple tools to make decisions. This will help promote a mindset of conducting analysis without limiting the tools. The Recognition-Primed Model can also be presented as a decision making tool giving commanders and staff more flexibility and options to conduct planning based upon the situation and time available. If our doctrine continues to equate the MDMP with only one model, the force is hindered in exploiting the human dimension.

The 7-step model is a useful tool for inexperienced decision-makers and staffs or when dealing with complex problems and it should continue to be taught as part of entry-level junior leader training and education (lieutenants, captains, and junior non-commissioned officers). The 7-step model plays a key role in determining the four or five decisions a commander must make. It can be argued that due to the strategic and political implications of expeditionary operations, even more care should be given to deliberate planning. When dealing with people, there are many influencing factors, culture being one of the most complicated, so arguably, there still exists a need for a deliberate process. It is important that the Army change the mindset of its personnel to understand the continuous nature of the process. A recommendation the Army should consider is changing the way the 7-step model is graphically displayed to re-affirm the continuous process of the 7-step model by adopting the graphic depicted in Figure 2. The 7-step model as compared to the OODA cycle depicts the model's ability to be viewed as a continuous process just like the Marine Corps' process.

"Sometimes there is not an empirical why or justification of scientific rationale for making decisions, its just gut level feeling."[91] Intuitive, naturalistic, recognition-primed decision-making are all valid forms but not for all situations. For these types of decision-making processes, specialized experience is the cornerstone. At first glance, this sort of a model is very enticing for an expeditionary mindset, but the Army must go forward cautiously before throwing out the tried and proven process of the 7-step model. For these models to work well, the decision-maker must have a store of similar examples in order to come up with a mental model or gut feeling of what might happen. However, under a truly expeditionary mind set, the situation may be new. The recognitional planning model should be introduced to captains and fully incorporated into field grade and higher education systems and to senior non-commissioned officers. Important to this education is the applicability, strengths and limitations of all the models. The level of experience is the key difference to highlight.

This purpose of this monograph was to analyze the 7-step model and determine if it is still valid, required revision, or should be replaced in order to meet the needs of the future force in the Contemporary Operational Environment. The 7-step model is still a relevant and ready tool for use by the Army. It continues to be a tried and proven process to aid military decision-makers and planners in developing solutions to military problems.

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[91] Colonel George Bowers, "Follow Your Heart," in *66 Stories of Battle Command* ed. Adela frame and James W. Lussier (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2000), 30.

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