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**DECISION MAKING TYPE CLASSIFICATIONS OF OPERATIONAL
COMMANDERS**

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract

In establishing an operations plan or order, an operational commander can be classified as either hard or soft in terms of their *a priori* assumptions that the operation will unfold as planned once the enemy is engaged. Furthermore, the operational commander can be classified as either permeable or impermeable in terms of his ability to process new information that either supports or does not support the initial operation plan and his beliefs. An operational commander can then be classified as HP (hard-permeable), SP (soft-permeable), HI (hard-impermeable) or SI (soft-impermeable). Recent historical examples of operational commanders possessing these classifications are presented. In a network-centric environment, an operational commander with SP characteristics is best suited for agile and adaptable decision making. Experience, coupled with formal and informal education, can assist the operational commander in understanding his classification type and improving his decision making.

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INTRODUCTION

The military recognizes that warfare has changed and will continue to change during this century. These changes revolve around technology, doctrine, and organizational structure. However, humans will still be the focal point of any conflict. DuPicq stated it compactly, yet powerfully, when he wrote “Man is the fundamental instrument in battle.”¹ Operational commanders are one of these most important “fundamental instruments.” Understanding and improving how they make decisions should be important elements of incorporating changes into the military vice the traditional suspects of changing technology, doctrine, and organizational structure.

The military will operate in a network-centric environment which will emphasize the ability to gather information from numerous sources, synthesize the information, provide tasks for action, monitor the effects of the action, and provide continual feedback. The intent is to operate within the enemy’s decision cycle in an effort to keep them off-balance and in a reactive mode. A network-centric operational environment will increase the amount of information available to the commander. Furthermore, the current and future battlefield has numerous entities besides combatants to include non-governmental organizations, intergovernmental organizations, and contractors. These entities will further contribute to the increase in information. The key precept for our operational commanders is to process all of this information and make executable decisions in a compressed time-cycle. A logical conclusion drawn is that the number of decisions a future operational commander will have to make will be more than those of previous ones.

For purposes of this paper, a decision is defined as a choice of one alternative among many alternatives. Decision making is defined as the process used to make this choice.

Although there may be only one optimal decision, there are numerous decisions that may meet a minimum threshold of acceptance for the operational commander that lead to a satisfactory outcome. To make an effective decision, an operational commander requires the “ability to gather information accurately, continuously, comprehensively, selectively, and fast.”² However, the assumption is that even if the commander does receive all of the relevant information in a timely manner, the commander will use this information to make a good or wise decision. Although the quality of a decision is a function of the quality, quantity, and timeliness of information, whether that information is actually incorporated into the operational commander’s thinking is perhaps the most critical factor.

Since the commander will be exposed to an ever-increasing flow of information, the ability of the commander to incorporate this information will prove to be even more difficult. Toffler refers to the overload of information as Future Shock when too much information is presented at once and a person is unable to absorb all of it which leads to denigrated decision making.³ The military needs to emphasize the education and training of its operational commanders to better understand how they make decisions and the barrier to good decisions.

This paper argues that there are two essential components that influence the operational commander and subsequent decisions made during an operation. The first component is how the commander perceives the initial operations plan or operations order. The second component is how the commander perceives subsequent information that either confirms or denies his initial perceptions of how the operation will unfold. In establishing an operations plan, an operational commander may be classified as either hard or soft in terms of their belief that the operation will unfold as planned once the enemy is engaged. Furthermore, the operational commander can be classified as permeable or impermeable in

terms of their ability to process new information that either supports or does not support the initial operations plan. An operational commander can then be classified as HP (hard-permeable), SP (soft-permeable), HI (hard-impermeable) or SI (soft-impermeable). In a network-centric environment, an operational commander with SP characteristics is best suited for agile and adaptable decision making.

BACKGROUND

We assume that a good decision will lead to a favorable outcome. Certainly history is replete with examples where a bad decision still led to a favorable outcome and vice versa, but we hold to this assumption. The credibility of the collection assets, timeliness of the information, quantity of information, friction on the battlefield, and ability to process information have all contributed to commanders making both good and bad decisions. Certainly personal traits of courage, wisdom, foresight, and resolution have also contributed to the quality of the decisions.⁴ However, we do not focus on these personal traits as much as we will focus on an operational commander's *a priori* beliefs and their ability to accept new information that either supports or denies their initial perceptions.

We refrain from simply looking at the decision to launch or not launch an operation. Although this is a major decision, there are numerous other decisions made as the operation unfolds. Some of these might be classified as major or minor decisions; however, even minor decisions might have dramatic effects on the operation. We will not distinguish between major and minor decisions. Decision making by humans refers to the “cognitive, mental processes that occur inside the minds of decision makers” and include concepts such as bias, judgment, and experience.⁵ Making decisions is the most important facet done by humans in war, thus understanding how these decisions are made is essential.

Operational commanders face numerous problems that ultimately require a decision. A problem has five components including a) the decision maker, b) the controllable variables that the decision maker can influence, c) the uncontrolled variables that the decision maker cannot directly influence, but that can affect the outcome, d) the constraints on the possible values of the controllable and uncontrolled variables, and e) the possible outcomes of the decision.⁶ The commander must weight the importance of the controllable and uncontrollable variables and how they will affect his decision. As information is received, the commander can continuously assess how his decisions are affecting the controllable variables and whether or not his decisions are having any affect on the uncontrollable variables. However, if the commander chooses to disregard informational updates, then he fails to understand the impact of his incremental decisions. Typically, decision makers only consider a limited amount of the available information when they make decision. As the complexity of the decision increases however, limiting the amount of relevant information analyzed will decrease the commander's decision quality.⁷

The principal elements of decision making include framing the picture, gathering intelligence, arriving at a conclusion, and learning. Framing the picture means how decision makers look at an issue and decide which aspects are most important and those they disregard in an attempt to simplify the environment. Gathering intelligence attempts to find the facts and make logical estimates in order to make a decision. Arriving at conclusions follows sound procedures that emphasize a methodical approach without simply relying on intuitive judgment. Learning from experience allows decision makers to keep track of expected outcomes and analyze what they have learned.⁸ We argue that the most important

principal is framing the question. If this is not done properly, then subsequent decisions made will be invalid.

THEORIES OF DECISION MAKING

Previous literature has focused primarily on four theories of decision making. These include rational expectation or analytical, action based or naturalistic, bounded or limited rationality, and complexity.⁹ In addition to these traditional theories, we also include cognitive dissonance as this theory bears directly upon how operational commanders incorporate new information, especially information that is contrary to their *a priori* beliefs. Rational expectation or analytical decision making theory is based on a structured decision process that is preference-based. All possible consequences are examined and evaluated in terms of the preferences of the decision maker. This is the foundation of the military decision making process (MDMP), but its drawback is that it takes too much time. Furthermore, assuming that all possible consequences are known is unlikely. Typically, three courses of action are examined with the most likely enemy course of action chosen as the one to base subsequent plans and orders.

Action based or naturalistic decision making assumes that the problem is ill-structured and the environment is uncertain with a corresponding lack of information and time. It emphasizes the need for bold action. This best describes the environment the US military faces today and in the future. Gary Klein is the most well-known advocate of naturalistic decision making (NDM) and is the architect of recognition-primed decision (RPD) model. His theory relies heavily on intuition and believes that commanders use RPD 90% of the time and that most decisions are made in less than one minute.¹⁰ The general scheme is that commanders match current situational cues as indicators to past experience.

Have they seen a similar situation previously? Based on this similar experience, the commander selects a course of action that has worked previously. The process provides feedback since if a decision leads to a successful outcome, the same decision will be made in the future when a similar situation exists. An alternate decision will be made if the resolution is unfavorable.¹¹ The two key ideas associated with NDM are that commanders “assess situations by using prior experience and knowledge and that situation assessment is more important than option generation.”¹²

Note that NDM differs significantly from the rational expectation method (MDMP) that uses an orderly and systematic approach. Some argue that NDM should be taught to military leaders since it relies on instinct built through experience, recognizing patterns and cross-checking these patterns with personal experience, and verifying facts.¹³ However, NDM does have certain limitations. Although it has merit when operating under time-constrained conditions, it does not work well for inexperienced leaders, unfamiliar situations, or competing courses of action (COA).¹⁴ Furthermore, decision makers will use this rapid decision making without fully understanding the relevance of critical information needed to support the decision.¹⁵ Again, we see reference to decision makers not properly incorporating information needed to make the best decision.

Bounded or limited rationality theory assumes decision makers are rational and will seek to make a decision quickly by choosing a COA that meets some threshold. Although decision makers want to make the best decision, the quality of information they receive, their perceptions of the information (and its source) and their ability to process information often prevents this from happening. The barriers to making quality decisions include uncertainty, information inhibitors (personality and stress), expectations (framing effects), and

experience.¹⁶ Again, we see the impact of expectations or framing the picture that precludes the commander from synthesizing the available information. In bounded rationality, commanders must avoid failing to recognize the need for change and the reluctance to change.¹⁷

Complexity theory adequately describes the battlefield, but it is not prescriptive for the decision maker. Its main advantage is that it describes the environment that the commander will operate within.¹⁸ Again, what complexity theory fails to address is how a decision maker reacts to new information that either confirms or denies his initial perceptions.

We would be remiss not to address some personality traits that address perception and judgment. The most common test given to military leaders is the Myers-Briggs test, but the key element of the test is the Keirsey Temperaments that partition the sixteen Myers-Briggs types into four groups.¹⁹ According to Keirsey, individuals either prefer sensing perception or intuitive perception. Additionally, individuals prefer either thinking judgment or feeling judgment. Note that the intuitive perception aligns itself most closely to NDM. According to Keirsey, the SJ leader (Guardian) asks the question “What?” and prefers to be told what to do in concrete terms. The constraints, facts, and assumptions carry significant weight. The MDMP would appeal to the SJ leader. The NF leader (Idealists) focuses beyond the words of the higher headquarters or that which is readily apparent in the situation. They perceive the data that is obvious and look beyond the data for underlying information. The notion of planning is foreign to SPs (Artisans.) They ask the question “When?” and want the freedom to act spontaneously whenever or wherever the opportunity arises. The NT planner (Rationals) asks the question “Why?” and is a conceptualizer for whom mission receipt

begins an exciting learning adventure.²⁰ The Keirsey Temperaments do permit some insights into the decision maker and how the commander is primed to make decisions, but they do not address how they process new information.

Cognitive dissonance is a theory proposed by Leon Festinger that explains how people reconcile new information that is counter to existing beliefs. The theory attempts to determine how people try to make sense out of their beliefs, their environment, and their behavior.²¹ When a person has two cognitions that are psychologically inconsistent, he experiences dissonance. This is a negative drive state similar to hunger or thirst. Since the dissonance is unpleasant, the person attempts to reduce it by changing one or both cognitions.²² The purpose is to make sense out of the environment and reduce inconsistencies between what had been believed and new information that challenges those previous beliefs. Dr. James March from Stanford University contends that the cognitive limitations of people include memory, attention, comprehension, and communication.²³ Each of these limitations is incorporated into this paper's explanation of determining how a commander perceives an initial plan and how new information affects subsequent decisions.

INITIAL PERCEPTIONS AND BELIEFS ABOUT A PLAN

An operational commander works with his staff to develop an operations plan and operations order. The commander may have certain beliefs about his staff and the courses of action developed. If the commander has confidence in the staff, then he is more willing to accept their assumptions and recommendations. Furthermore as the commander's decision increases in complexity, the commander may be more willing to seek assistance from his staff.²⁴ As the operations plan is developed, the commander gains or loses confidence in the plan. If the commander dictated certain courses of action to be analyzed during mission

analysis, then the courses of action carry his stamp of approval and most likely he will be satisfied. However, if alternate courses of action are proposed by the staff, he may not fully embrace the merits of them. The commander has developed what we will term as *a priori* assumptions about the plan.

An operational commander's belief that the enemy will act according to the initial operations plan is classified as either hard or soft. If an operational commander considers it highly probable that the enemy will act according to the initial operations plan, then we classify the commander as hard. If the operational commander does not overly prescribe to "scripting" what the enemy is likely to do from the initial operations plan, then we classify the commander as soft. If the commander was a primary driver in the course of action development, then he will most likely be classified as hard since his beliefs are thoroughly integrated. As an example, during the first Desert Storm, General Norman Schwarzkopf was the primary architect of the plan to invade Kuwait. Although he had access to several School of Advanced Military Studies graduates, he still believed that his concept of the operation was the right one.²⁵ Certainly we cannot fault commanders for having confidence in the plan that is developed. If there was little confidence in the plan, then the commander has failed to direct his staff in a meaningful and productive manner. However, unnecessary hubris and framing an overly optimistic picture are not desirable.

A commander who has a certain level of confidence in the plan, but does not believe that all assumptions will hold to be true might be better suited to keeping an open mind as the operation unfolds. As an example, again during the first Desert Storm, General Fred Franks (VII Corps Commander) is an example of a soft classification. Franks was thoroughly involved in the planning of the operation, but did not believe all assumptions were

necessarily valid and voiced these concerns, especially the consequences of limited operational room for his armored operations. However, he did have reasonable confidence in the plan and executed the plan with fidelity and vigor.²⁶

INCORPORATING NEW INFORMATION

The next critical component is how the commander incorporates new information as the operation unfolds. An operational commander's propensity to incorporate new information and modify their *a priori* concept of how the enemy would react within the initial operations plans is classified as permeable or impermeable. An operational commander is classified as permeable if the probability of their incorporating new information and modifying an existing plan is high. An operational commander is classified as impermeable if the probability of their incorporating new information and modifying an existing plan is low. General George Custer offers a splendid example of a commander who was impermeable. Custer did not integrate new information that indicated the Sioux strength to be greater than originally assumed. Instead Custer focused on his plan to prevent the Sioux from escaping.²⁷ Custer's decision to attack proved to be disastrous.

Permeable commanders are able to process new information, visualize how that information influences the battlespace, and incorporate this information into subsequent decisions. General William Wallace, the commander of US ground forces during the 2003 invasion of Iraq, is an excellent example of the permeable classification. After the drive to Baghdad and the lack of significant Iraqi forces, assumptions focused on the lack of will of insurgents to fight. This assumption proved wrong which Wallace quickly recognized and made subsequent decisions to reflect the reality of the situation.²⁸

Consider the receipt of new information and making decisions as a continual, symbiotic feedback loop. If the commander accepts new information, then the loop is considered open and there is good flow between accepting new information, updating decisions, and determining the effects of those decisions. However, if the commander is resistant to new information, then the loop is closed and the commander is unlikely to accept the information to make a better informed decision. Thus any effects of those decisions cannot be linked to the updated information. The likely responses (similar to Dr. March's cognitive limitations noted earlier) to receiving new information include selective attention (commander may listen only to those he want to listen to or values their opinion), selective reception (the commander hears what he wants to here), selective retention (the commander holds the information he wants in long-term memory), and selective integration (the commander chooses which information to fold into his thinking to make a decision).

***A PRIORI* ASSUMPTIONS AND DISSONANT INFORMATION**

We now combine the concepts of *a priori* assumptions about the plan and incorporating new information. Figure 1 depicts a quadrant where the horizontal axis represents the *a priori* assumptions that are classified as either hard or soft. The vertical axis represents how the operational commander incorporates new information and is classified as either permeable or impermeable. For combining the terms, here is where cognitive dissonance is prevalent. The upper right quadrant represents a soft-permeable (SP) commander. This is a commander who does not overly prescribe to “scripting” what the enemy is likely to do from the initial operations plan and is likely to incorporate new information to modify an existing plan. The upper left quadrant represents a hard-permeable commander (HP) who believes the enemy will act according to the initial operations plan, but

is likely to incorporate new information to modify the plan. However, since he is classified as hard, his propensity to accept new information is less than a soft commander. If the new information differs significantly from his *a priori* assumptions, then the cognitive dissonance will be considerable, thus requiring him to use some mechanism (e.g., selective attention, selective reception, selective retention, and/or selective integration) to reduce the dissonance. In any case, the amount of new information that the HP commander will actually integrate will be less than the SP commander since the dissonance will be greater.

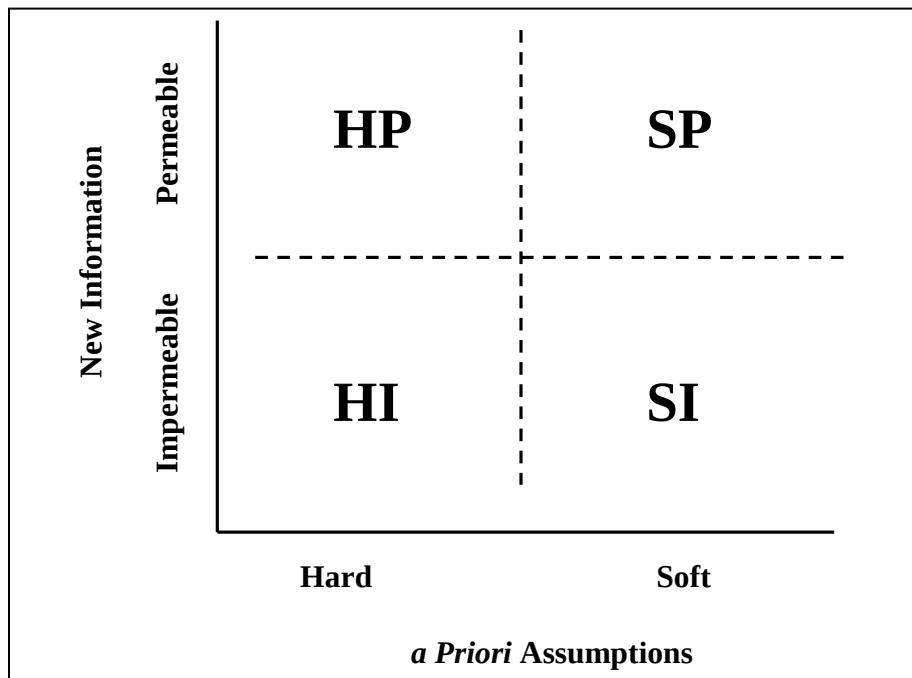


Figure 1. Classification of operational commanders. This classification is based upon hard or soft *a priori* assumptions and permeable or impermeable reception of new information that is dissonant from the *a priori* assumptions.

The lower left quadrant is a hard-impermeable (HI) commander. This is a commander who considers the *a priori* assumptions and plan relatively certain and is unlikely to incorporate any new information that is likely to contradict his beliefs. The lower right quadrant is a soft-impermeable (SI) commander. This is a commander who does not

overly prescribe to “scripting” what the enemy is likely to do from the initial operations plan, but is unlikely to incorporate new information to modify an existing plan. Both types of these commanders will use mechanisms to reduce cognitive dissonance, however, the SI commander may be more likely to incorporate new information than the HI commander since his *a priori* assumptions are not as strongly held.

To compare these four types of commanders, we will use recent operations to provide examples. An example of an SP commander is Lieutenant General David Petraeus who served as commander of the 101st Airborne Division (Air Assault) and commander of the Multi-National Security Transition Command (Iraq). In each of these capacities, he exhibited flexibility in his approaches and the ability to modify existing methods and plans to adapt to a changing environment.²⁹ Although his planners developed detailed plans, Petraeus did not necessarily overly prescribe to assumptions as to what the enemy (Iraqi ground forces or insurgents) would do and incorporated new information to update subsequent plans and orders.

On the other spectrum, General Tommy Franks represents an HI commander. As the Combatant Commander for US Central Command during Operation Iraqi Freedom, Franks focused on a traditional ground threat of the Iraqi forces. Gordon and Trainor argue that Franks failed to recognize the threat of irregular forces (Saddam Fedayeen) in his initial plans. Furthermore, even when presented new information concerning the prevalence of irregular forces (especially from then Lieutenant General William Wallace); Franks did not incorporate this information, but instead threatened to fire Wallace when Wallace told the press that the US was facing a different enemy than the one the US had planned against.³⁰ Thus, Franks had strong *a priori* assumptions concerning who the enemy was and the plans

needed to defeat the enemy. However, even when new information was received that contradicted these beliefs; Franks remained impermeable and did not incorporate this information.

From personal experience, I consider Major General Geoffrey Miller (Mobile Strike Force Commander for US Training and Doctrine Command) to be an example of an HP commander. From 1994-1995, the US Army was testing new doctrine, organizations, and concepts for warfighting with Miller as the commander. Miller had strong opinions on how the enemy (a fictional red force based primarily upon North Korean doctrine) would fight, and thus the plans developed were primarily influenced by his *a priori* assumptions. Miller had many disagreements over the assumptions and subsequent plans with Brigadier General (Ret.) Huba Wass De Cega who was serving as an advisor. However, once the operation unfolded (via simulation), Miller was able to incorporate the new information indicating that De Cega's interpretations were correct. Miller's plans focused on using the deep fight to destroy the enemy, however, by using deep fires, the enemy never fully committed to its maneuver or course of action. Instead the enemy would simply regroup and change its maneuver scheme. After Miller recognized what the enemy was doing, he modified his deep fight plans to let the enemy commit to their maneuver scheme and instead of relying only on deep fight assets, he was willing to have his units engage in the close fight. Although Miller had strong *a priori* assumptions about the enemy and his plan, he was receptive to new information that was readily incorporated into his subsequent decisions.

An example of an SI commander is Major General Franklin Hagenbeck who served as the Coalition Joint Task Force Mountain in Afghanistan during Operation Anaconda. During the March 2002 operations in Afghanistan, Hagenbeck recognized the fluidity of the

enemy and did not overly prescribe to what he believed the enemy would do. He illustrated the soft classification by retaining flexibility in his initial plans by identifying a reserve that would reinforce any success during the operation. However, during Operation Anaconda, the enemy continuously infiltrated ground fighters into the area of operation increasing the threat size to almost 700 enemy combatants. However, Hagenbeck initially estimated only 150 to 200 enemy combatants, but did not significantly alter his operational concept even when he became aware that the enemy was infiltrating additional combatants.³¹ Thus, although he recognized the need for flexibility to adapt to a changing environment, Hagenbeck did not capitalize on new information that required modifying his operational plan.

IMPLICATIONS / RECOMMENDATIONS FOR OPERATIONAL COMMANDERS

What are the implications of these classifications? Certainly the military wants diversity of thinking amongst their operational commanders and does not want to prescribe to a policy of one size fits all. However, based upon the precepts of the Global War on Terrorism and the likely threats we will face in the future, a commander possessing the SP attributes is best suited to this environment. Furthermore, the military is stressing a network-centric operating environment which will increase the amount of information available. Although additional work needs to be done to better siphon the important nuggets of information from a plethora of information, the issue will still remain how the operational commander will use that information.

An operational commander possessing the SP classification is best suited since this commander possesses the agile, flexible, and adaptable thinking necessary to modify plan execution and will most likely incorporate new information into his thinking. If the commander is soft in his *a priori* assumptions, he will experience far less dissonance than a

commander who is hard. This, in turn, will make it easier for a soft commander to receive new information. Additionally if that commander is considered permeable, then the maximum effect of that new information will be integrated into his decision making.

Recall we do not necessarily want all operational commanders to be of an SP type. However the question still exists of how we can best train operational commanders? Certainly experience is an important, if not the most, critical factor. Experience in operational decision making should be developed from operational tours combined with self-study and formal military education. Senior service colleges offer the opportunity for future operational commanders to assess how they perceive initial operations plans and the impact of streaming updated information.

However, experience alone can present a catch-22 dilemma. We want our commanders to be flexible, yet decisive, but if they believe their experience outweighs other factors, this may make them impermeable. If they believe they have encountered a similar situation previously (e.g., naturalistic decision making), then they may discount new information that creates dissonance from a previous situation. Thus, outside of experience, operational commanders must conduct a thorough self-assessment as to how they treat *a priori* assumptions and plans and how they incorporate new information. This awareness will enable the commander to determine if they are using some blocking mechanism in their resistance to incorporating new information. Furthermore, if the operational commander shares what type of decision maker they are with their staff, then the staff will be better able to present dissonant information or at least preface their presentation with remarks that highlight the dissonance. Staff officers who recognize and understand how operational

commanders make decisions can be better prepared to present new information that changes how the enemy is progressing during the operation.

Current and future operational commanders will face an increasing number of complex decision making opportunities due to a network-centric environment, non-traditional threats, and a battlefield cluttered with non-combatants and various agencies. Having commanders with resolve is important, however, flexibility in adaptive decision making in a rapidly changing environment is even more important. The military wants its commanders to have confidence in its plans, but certainly does not want them to lack creativity in altering plans if necessary. A commander possessing SP characteristics is one well-suited to understanding the fluidity of the environment and capable of incorporating new information that may be dissonant from *a priori* beliefs and assumptions. Although no one type of operational commander is capable of infallible decision making, an SP commander has essential attributes needed to operate in complex and ambiguous environments.

NOTES

1. Ardant Du Picq, *Battle Studies Ancient and Modern Battles*, (London, AMS Press, 1947), p. 44.
2. Michael C. Sevcik, *Force XXI Technology and the Cognitive Approach to the Military Decision Making Process (MDMP)*, (Fort Leavenworth, KS: School of Advanced Military Studies, 2000), p. 1.
3. Wilson A. Shoffner, *The Military Decision Making Process: Time for a Change*, (Fort Leavenworth, KS: School of Advanced Military Studies, 2000), p. 15.
4. James D. Lee, *Information Dominance in Military Decision Making*, (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1999), p. 2.
5. John J. Marr, *The Military Decision Making Process: Making Better Decisions Versus Making Decisions Better*, (Fort Leavenworth, KS: School of Advanced Military Studies, 2001), p. 46.
6. David A. Danikowski, *Personality and the Planning Process*, (Fort Leavenworth, KS: School of Advanced Military Studies, 2001), p. 18.
7. Kenneth R. Smith, *Using the Same Decisionmaking Process for Joint and Army Operations*, (Fort Leavenworth, KS: School of Advanced Military Studies, 1999), p. 8.
8. George E. Rector, *Decision Making for the Strategic Leader*, (Carlisle Barracks, PA: U.S. Army War College, 1997), p. 9.
9. Shoffner, p. 28.
10. *Ibid*, p. 29.
11. Marr, p. 47.
12. Paul K. Davis, Jonathan Kulick, and Michael Egner, *Implications of Modern Decision Science for Military Decision-Support Systems*, (Santa Monica, CA: RAND Corporation, 2005), p. 17.
13. Kevin C.M. Benson, *Decision Making in the Information Age: A Case for Updating the Military Decision Making Process*, (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2002), p. 12.
14. William R. Duggan, *Coup d'oeil: Strategic Intuition in Army Planning*, (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2005), p. v.

15. Walter L. Perry and James Moffat, *Information Sharing Among Military Headquarters: The Effects on Decisionmaking*, (Santa Monica, CA: RAND Corporation, 2004), p. 91.
16. Marr, p. 48.
17. *Ibid*, p. 50.
18. Shoffner, p. 28.
19. Danikowski, p. 16.
20. *Ibid*, p. 37.
21. Elliot Aronson, "Back to the Future: Retrospective Review of Leon Festinger's "A Theory of Cognitive Dissonance," *The American Journal of Psychology*, Vol. 110, No.1, (Spring, 1997): p. 129.
22. *Ibid*, p. 128.
23. Kenneth R. Smith, *Incorporating Feedback into the Military Decisionmaking Process to Improve Decisionmaking*, (Fort Leavenworth, KS: School of Advanced Military Studies, 1998), 1.
24. Smith (1999), p. 2.
25. Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (New York: Back Bay Books, 1995), p. 145.
26. *Ibid*, p. 175.
27. Steven M. Leonard, *Clausewitz, Complexity, and Custer: An Analysis of Decision Making in a Nonlinear System*, (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2001), p. 16.
28. Robert Kerr, "Meet the press: New Combined Arms Center commander discusses Iraq, training, leaders, lessons-learned," *Fort Leavenworth Lamp*, August 28, 2003, p. 1.
29. Rod Nordland, "Mission Impossible," *Newsweek*, July 5, 2005, p. 39.
30. Michael R. Gordon and Bernard E. Trainor. *Cobra II: The Inside Story of the Invasion and Occupation of Iraq*, (New York: Pantheon Books, 2006), p. 185.
31. *Operation Anaconda Briefing in Afghanistan* [article on-line]; available from <http://transcripts.cnn.com/TRANSCRIPTS/0203/06/se.01.html>, Internet: accessed 25 April 2006.

BIBLIOGRAPHY

- Aronson, Elliot. "Back to the Future: Retrospective Review of Leon Festinger's "A Theory of Cognitive Dissonance." *The American Journal of Psychology*, Vol. 110, No.1, Spring, 1997, 127-137.
- Benson, Kevin C.M. *Decision Making in the Information Age: A Case for Updating the Military Decision Making Process*. Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2002.
- Danikowski, David A. *Personality and the Planning Process*. Fort Leavenworth, KS: School of Advanced Military Studies, 2001.
- Davis, Paul K., Jonathan Kulick, and Michael Egner. *Implications of Modern Decision Science for Military Decision-Support Systems*. Santa Monica, CA: RAND Corporation, 2005.
- Duggan, William R. *Coup d'oeil: Strategic Intuition in Army Planning*. Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2005.
- Du Picq, Ardant. *Battle Studies Ancient and Modern Battles*. London, AMS Press, 1947.
- Gordon, Michael R. and Bernard E. Trainor. *The Generals' War: The Inside Story of the Conflict in the Gulf*. New York: Back Bay Books, 1995.
- _____. *Cobra II: The Inside Story of the Invasion and Occupation of Iraq*. New York: Pantheon Books, 2006.
- Kerr, Robert. "Meet the press: New Combined Arms Center commander discusses Iraq, training, leaders, lessons-learned." *Fort Leavenworth Lamp*, August 28, 2003, 1-2.
- Lee, James D. *Information Dominance in Military Decision Making*. Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1999.
- Leonard, Steven M. *Clausewitz, Complexity, and Custer: An Analysis of Decision Making in a Nonlinear System*. Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2001.
- Marr, John J. *The Military Decision Making Process: Making Better Decisions Versus Making Decisions Better*. Fort Leavenworth, KS: School of Advanced Military Studies, 2001.
- Nordland, Rod. "Mission Impossible." *Newsweek*, July 5, 2005, 35-42.

“Operation Anaconda Briefing in Afghanistan.” CNN. Database on-line. Available from <http://transcripts.cnn.com/TRANSCRIPTS/0203/06/se.01.html>. Accessed 25 April 2006.

Perry, Walter L. and James Moffat. *Information Sharing Among Military Headquarters: The Effects on Decisionmaking*. Santa Monica, CA: RAND Corporation, 2004.

Rector, George E. *Decision Making for the Strategic Leader*. Carlisle Barracks, PA: U.S. Army War College, 1997.

Sevcik, Michael C. *Force XXI Technology and the Cognitive Approach to the Military Decision Making Process (MDMP)*. Fort Leavenworth, KS: School of Advanced Military Studies, 2000.

Shoffner, Wilson A. *The Military Decision Making Process: Time for a Change*. Fort Leavenworth, KS: School of Advanced Military Studies, 2000.

Smith, Kenneth R. *Incorporating Feedback into the Military Decisionmaking Process to Improve Decisionmaking*. Fort Leavenworth, KS: School of Advanced Military Studies, 1998.

_____. *Using the Same Decisionmaking Process for Joint and Army Operations*. Fort Leavenworth, KS: School of Advanced Military Studies, 1999.