



INDUSTRIAL COLLEGE OF THE ARMED FORCES

Pulling Back

The Industrial College of the Armed Forces (ICAF), one of three Joint Senior Level Education Institutions, is an integral component of the Department of Defense's Joint Professional Military Education system. The college provides a 10-month academic program that awards its graduates a master's degree in resourcing the U.S. national security strategy. During orientation, the Dean of Faculty and Academic Programs welcomes the student body of approximately 320 military, government, and industry leaders and challenges them to embark on a journey to develop their strategic thinking skills.

The primary objective of the ICAF curriculum is to prepare students for work at the strategic leader level. This objective implies that students need to understand what strategic thinking is as well as those thinking skills required at the strategic leader level. While the entire ICAF curriculum is designed to enhance strategic thinking skills, the Strategic Leadership (SL) Department has particularly embraced this undertaking, as evidenced by the department mission

statement: "to educate and develop leaders to bring strategic thinking skills and innovative approaches to the challenges of transforming organizations, and formulating and resourcing our future national security strategy."¹

This article addresses the first half of this mission statement: to educate and develop leaders in strategic thinking skills. While multiple strategic thinking skills are discussed in the SL course, this article addresses one particular theory and several concepts for student reflection as they progress on their developmental journey. The *stratified systems theory* (SST)² explains why strategic leaders need to be strategic thinkers and offers a general overview of the difference in the nature of leader tasks and work among direct, operational, and strategic level leadership positions. The three concepts to be examined—*strategic thinking*, *conceptual capacity*, and *mental models*—provide a foundation for student understanding and development of strategic thinking skills. Thus, this article has a four-fold purpose. It is intended to enhance student understanding of why strategic leaders need to be strategic thinkers, what

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National Defense University (Katherine Lewis)

the Curtain

Developing Strategic Thinkers at ICAF

By MARK MCGUIRE

strategic thinking is, what a strategic thinker is, and how strategic thinkers are developed at ICAF.

Strategic Leader Skills

The types of strategic leader skills discussed in the SL course can be categorized as conceptual, interpersonal, and technical.³ Many of the skills in these three categories are similar to ones that students have used during their careers, such as team-building, consensus-building, and critical thinking. However, a major premise in the SL course is that strategic leaders exhibit these skills to a different extent and in a different context than they did over the first 20 years of their career.

For example, consensus-building can be considered part of the interpersonal skill set. Strategic leaders using this skill have an enhanced requirement to deal with leaders outside of their chain of command—peers across other organizations, agencies, and nations. The increase in the requirement to use consensus-building skills coincides with a decrease in the degree of authoritarian power

over the people whose cooperation is needed to solve problems and make decisions. Examples of strategic leaders who invested a great deal of their time building consensus include Generals Dwight Eisenhower as the Supreme Allied Commander and David Petraeus as the Multi-National Force–Iraq Commander.

Some strategic leadership authors emphasize one set of strategic leader skills more than others. For example, two authors suggest that the critical individual difference variable in leader effectiveness is the conceptual competence to do the required work.⁴ Another suggests that social capacities are equally as important as conceptual ones. This author defines social capacities as including both interactional skills (persuasion, negotiation, conflict management) and reasoning skills of social perceptiveness (the capacity to be insightful regarding the needs, goals, demands, and problems of multiple organizational constituencies) and judgment.⁵ ICAF students study the interpersonal (team-building, consensus decisionmaking, and negotiation) and the social intelligence (emotional, political, and cultural) skills in the SL course and are encouraged to reflect on which set of skills is most important for strategic leaders via

their own experiences as well as through questioning the many military, government, and industry leaders who are guest speakers during the 10-month program. Regardless of which type of strategic leader skill is considered most important, the current literature recognizes that strategic thinking is a requisite skill.

Every Leader a Strategic Leader?

What makes strategic leaders different than leaders at other levels? SST provides a general overview of the difference in the nature of leader tasks and work among direct, operational, and strategic leadership positions. This theory was developed based on initial research of an industrial age organization in the United Kingdom in the 1960s and tested via interviews in a study with Army three- and four-star flag officers.⁶ Students are introduced to SST in the first week of school through an article that describes how General Colin Powell, then Chairman of the Joint Chiefs of Staff, visited National Defense University annually to convey to students the differences between leadership at the operational and strategic levels—positions from which some students had come and to which some might go.⁷ SST supports Powell's arguments

Dr. Mark McGuire is a Professor in the Department of Strategic Leadership in the Industrial College of the Armed Forces at the National Defense University.

Students create and recommend new national security strategy report during exercise



National Defense University

by depicting how performance demands change qualitatively at particular points in the organizational structure:

The model contains three layers that reflect three functional domains. These layers incorporate seven strata . . . each successive layer and stratum represents an increasingly complex operating environment with a longer

that every leader is a strategic leader. The argument suggests that in today's real-time, around-the-clock media coverage environment, every leader's decision has the potential to make a strategic impact. Granted, leaders at direct and operational levels of organizations can and do make international news and can have a strategic impact at any time, but just having a strategic impact does not constitute

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*time span for the conduct of leadership processes. In each of these seven levels, there is an explicit complexity of work, which may be defined not only by the scope and scale of the work, but also by the required cognitive processes of incumbents.*⁸

The concept of time span used in the SST is an index of the leader's scope of vision of action over time as well as a measure of the leader's ability to provide a meaningful context for subordinates.⁹ The authors of the SST claim that the mental models of strategic leaders must be more complex than those of leaders at lower organizational levels to accommodate the many more causal variables and the interconnections among them in the environment.¹⁰ The research results of the SST strongly suggest that strategic thinking skills are essential for effective strategic leaders.

Despite Powell's lectures and the research provided by SST, some still posit

being a strategic leader, who is someone who continuously performs the requisite work and operates on the time horizon as addressed in the SST.¹¹ Thus, a strategic leader is someone

who is immersed in the thinking, decision-making, planning, resourcing, and execution required by the work at that level, not simply a leader whose actions or decisions may have a single or an occasional strategic impact. Given this examination of the SST as the foundation for understanding strategic leadership and the necessity for strategic leaders to be strategic thinkers, students next explore what strategic thinking is.

What Is Strategic Thinking?

Several authors have proffered a definition of strategic thinking, three of which are outlined here. Gregory Foster states that strategic thinking is the "very essence of strategic leadership" and is an expected quality of leaders at the upper echelons of organizations, institutions, or states that claim superpower status. He defines *strategic thinking* as having "far less to do with substantive content of what one thinks about than with the process of how one goes about thinking."¹² Finally, Foster claims that leaders who think strategically must:

*take the long view, to focus on the big picture, to recognize the inherent interrelatedness of all things otherwise seemingly unrelated, to appreciate the residual and hidden consequences of action (and inaction), to anticipate and prevent unwanted events and conditions, and to identify the underlying causes of big problems rather than reacting to the more proximate, visible symptoms of the moment that dominate politics, public policy, and public management.*¹³

ICAF students travel to conduct fieldwork at sites related to national security



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Another definition of strategic thinking proposed by Mark Grandstaff and Georgia Sorenson is that it:

*focuses more on long term problems and processes from a systems perspective rather than short term crises, and deals with more tenuous situations that are not susceptible to easy answers. ST [strategic thinking] includes different lenses and thought processes that are useful in any endeavor, but they are critical for senior leaders in a time of accelerating change that brings both threats and opportunities. In short, ST deals with problems that are much wider in scope, more intertwined with other problems, laden with ethical dilemmas, and that sometimes must be managed rather than solved.*¹⁴

T. Owen Jacobs does not directly define strategic thinking but does offer that the ICAF experience focuses on thinking skills in general and strategic capacity in particular. Jacobs defines *strategic capacity* not so much as the different facts that the decisionmaker knows, but rather as the meaning the facts have within the strategic context. Thus, he contends that the primary objective at ICAF is to build the meaning-making skills of analysis, synthesis, and evaluation in students, as those will be the tools students will use during the remainder of their career and beyond. Similar to the concept of strategic thinking, Jacobs defines a strategic leader's *conceptual and decision skills* as the ability to:

*gather information from external and internal sources, make sense of it, and provide interpretations to subordinate echelons. They frequently are in a better position than most others to have the "big picture" information needed to understand a complex unfolding situation in a way that permits early adaptive action. The importance of this critical function stems from the very long time-spans required for strategic initiatives to get planned, resourced, and implemented. Lead-time is consequently of immense value. To the extent that leaders can think further ahead, or think through complexity faster, they can create lead-time advantage for their organizations that can then be turned into competitive advantage.*¹⁵

Jacobs goes on to identify seven key functions concerning a strategic leader's conceptual skills that can be used to enhance this competitive advantage: environmental

scanning; decisionmaking where options are consequential, situations may not have clear cause-and-effect outcomes, and/or a plausible course of action may not yet have been developed or identified; reducing complexity; systems understanding; understanding indirect effects; future focus and vision; and proactive reasoning.¹⁶

A synthesis of the three definitions above may provide the best explanation of what is involved in strategic thinking. All three of the aforementioned definitions

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offer several similar characteristics about the nature of strategic thinking. These characteristics include aspects of the required long-term, multiple, and systems (big picture) perspective in dealing with more complex problems that have more indirect, consequential, and far-reaching outcomes than nonstrategic thinking. There is also an appreciation that strategic thinking requires a proactive and anticipatory nature in scanning the environment, and identifying and dealing with future threats and opportunities.

In addition to the aforementioned qualities of strategic thinking, the SL course addresses several specific types of skills that are important components of strategic thinking (see table). While students certainly used these thinking processes and exercised these skills in their previous leadership experiences, the scope and quality (power) of the mental models used in employing these skills at the strategic leadership level are what set them apart.

The SL course also introduces students to the concept of the *mental model*, or the decisionmaker's dynamic representation of the decision space with which he or she must deal. It can be considered a mini-decision support system as it reveals cause and effect linkages if it is accurate and comprehensive.¹⁷ Students are told that they will read the newspaper differently by the time they graduate from ICAF because they will change and develop their mental models on all aspects of national security issues as they progress through the program. Peter Senge states that "mental models are deeply ingrained

assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."¹⁸ Awareness that everyone has mental models and that they may be susceptible to individual biases, memory faults, and perception errors is a critical first step in student development. Each of our mental models is shaped by our experiences and hence carries all the biases from the experiences with it. That is why it is so important for strategic leaders to be aware of their own biases and limitations, to solicit other perspectives in thinking and decisionmaking, and to continue to expand their exposure to other sources of perspectives to enhance their own mental model of situations and problems.

Strategic Thinking Skills Addressed in the Strategic Leadership Course
Creative thinking
Critical thinking
Intuitive thinking
Conceptual capacity
Environmental scanning
Future focus and vision
Mental models
Metacognition/self-awareness
Proactive reasoning
Reflective thinking
Reframing/perspective-taking
Systems thinking
Understanding indirect effects and consequential decisionmaking

What Is a Strategic Thinker?

Quite simply, a strategic thinker is someone who exercises strategic thinking. In order to understand how to develop strategic thinkers, a more in-depth look at the concept is warranted. A strategic thinker is one who has and can use mental models that are sufficiently complex to address strategic issues. Becoming a strategic thinker depends on having the requisite conceptual capacity for and experience from which these mental models are built. Conceptual capacity, according to Philip Lewis and T. Owen Jacobs, is the “breadth and complexity with which an individual organizes his or her experience . . . [it] reflects the level of sophistication of an individual’s organizing processes . . . [and is a] description of the nature of the meaning making process.”¹⁹ As these experiences become increasingly complex, with more obscure cause-and-effect relationships, individuals require more abstract thinking abilities to develop the requisite cognitive maps.²⁰ Lewis and Jacobs suggest that for leaders, “There are advantages to having a conceptual work capacity that somewhat exceeds one’s current conceptual work requirements.”²¹

So conceptual capacity, or cognitive horsepower, is the initial component required to be a strategic thinker. But a strategic thinker must also possess the requisite experience of operating and making decisions in a strategic context. George Forsythe and H.F. Barber reinforce the importance of challenging, high-level work experiences in developing the leader’s cognitive structures required for action at the strategic level.²² This experience is not typically obtained in a person’s first 20 years of leadership, and thus most students who graduate from ICAF are not finished strategic thinkers but only on the path toward becoming one.

While conceptual capacity and strategic leader experience are essential for becoming a strategic thinker, mastery in the art of strategic thinking is achieved by understanding when and how to exercise the strategic thinking skills listed in the table. A proposed description or definition of the mastery involved in being a strategic thinker is one who possesses the conceptual understanding of the increasing levels of sophistication in the breadth and complexity of the variables in the strategic environment. The strategic thinker is conscious of the limita-

tions of her/his mental models and understands how to compensate for them. She/he uses multiple frames of reference (her/his own and that of her/his executive team) and a multidimensional systems perspective to solve complex wicked problems. She/he reframes the problem as more information/evidence from the environment is acquired and continuously considers the long-term, multiple-order consequences of her/his projected decisions.

Developing Strategic Thinkers at ICAF

ICAF provides a valuable transformational opportunity for students to develop their strategic thinking skills. While the curriculum cannot provide direct, hands-on strategic level experience, it is designed to enhance student conceptual capacity as well as to provide vicarious strategic-level experience through its seminar discussions, readings, and exposure to strategic leaders across the military, government, and private sector via the guest speaker program. According to Forsythe and Barber, “It is not enough simply to expose students to a large amount of information; they must be challenged to organize the information into meaningful categories and to form interconnections among elements.”²³ Through reading and reflecting on assigned readings and contributing to seminar discussions throughout the year, students learn and develop the concepts that define the strategic environment and national security issues.

Each of the ICAF courses tasks students via exercises, paper requirements, and discussions to develop their conceptual capacity by analyzing, evaluating, and synthesizing the knowledge they acquire. And while ICAF pushes them through its curriculum, it will be up to each student to make sense of these complex global and national security issues. For those students willing to apply themselves to the readings, papers, and exercises and, more important, to reflect upon, discuss, and challenge their current mental models of the many global and national security issues, then they will see a remarkable growth in their conceptual capacity by graduation. While this year cannot provide students the requisite experience of a strategic leader, it will serve as a catalyst to enhance student conceptual capacity, which is essential as the foundation for becoming a strategic thinker. **JFQ**

NOTES

¹ Industrial College of the Armed Forces, Department of Strategic Leadership, 2011 Strategic Leadership Syllabus and Anthology, i.

² T. Owen Jacobs and Elliott Jaques, “Leadership in Complex Systems,” in *Human Productivity Enhancement*, ed. Joseph A. Zeidner, vol. 2 (New York: Praeger, 1987), 7–65.

³ T. Owen Jacobs, *Strategic Leadership: The Competitive Edge*, rev. ed. (Washington, DC: National Defense University, 2009), 84–88.

⁴ Philip M. Lewis and T. Owen Jacobs, “Individual Differences in Strategic Leadership Capacity: A Constructive/Development View,” in *Strategic Leadership: A Multiorganizational-level Perspective*, ed. Robert L. Phillips and James G. Hunt (Westport, CT: Quorum, 1992), 121–137.

⁵ Stephen J. Zaccarro, *The Nature of Executive Leadership: A Conceptual and Empirical Analysis of Success* (Washington, DC: American Psychological Association, 2001), 293–294.

⁶ Jacobs and Jaques.

⁷ George McAleer, “Leaders in Transition: Advice from Colin Powell and Other Strategic Thinkers,” *Military Psychology* 15, no. 4 (October 2003), 309–322.

⁸ Zaccarro, 26.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Jacobs, 35; Zaccarro, 25–30.

¹² Gregory Foster, *Teaching Strategic Thinking to Strategic Leaders* (Washington, DC: National Defense University, 2005), 2–3.

¹³ Ibid.

¹⁴ Mark Grandstaff and Georgia Sorenson, *Strategic Leadership: The General’s Art* (Vienna, VA: Management Concepts, 2009), xxiv.

¹⁵ Jacobs, 86.

¹⁶ Ibid., 86–88.

¹⁷ Ibid., 67.

¹⁸ Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Doubleday, 1990), 8, 174–176.

¹⁹ Lewis and Jacobs, 124.

²⁰ Zaccarro, 26.

²¹ Lewis and Jacobs, 132.

²² George B. Forsythe and H.F. Barber, “Military-Strategic Thinking: Expert-Novice Differences in the Structure and Content of Cognitive Representations,” paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, April 1992.

²³ Ibid.