Senior Airman practices rifle fighting techniques during Security Forces Combat Readiness Training

ORGANIZATION THEORIES

Perspectives on Changing National Security Institutions

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The study of national defense and international security has long been a core concern of political scientists. International and interstate security issues fall within a political context of trends, public pressures, and global interests. It is thus not surprising that when it comes to the development and advocacy of particular defense or security strategies, the loudest, or at least the greatest number of voices come from political scientists and not from physicists, linguists, or cultural anthropologists. Yet as has been argued elsewhere, the conduct of national security is more about organization science; it is through the *institutions* of national security that strategies are ultimately implemented and either succeed or fail.[1]

It is one thing to conceive and articulate a defense strategy or an approach to homeland security; it is quite another to implement strategy through a complex web of national and international security institutions and organizations. While the Department of Defense (DOD) may not be a business, as some would suggest, it is an organization; but unfortunately, business theory and organization theory are too often equated with one another.[2] *Organization theory* is about how people every day come together to work for some mutual purpose that in the process creates private or public good.

Much as there is more than one theory or school of thought to explain economic systems, so too with organizations. One pertinent aspect of my years of teaching military officers at a war college and civilian institutions of higher learning is their singular view of what organizations are. Perhaps this is due to the uniformity of thinking that military training tends to foster, but I suspect it also derives from a rather dated view of what organizations are and how they are best managed. The focus of this article, then, is to explain that organizations may be conceived of in a variety of ways and that this diversity constitutes part of the difficulty in managing institutions of national security. Besides describing various forms or perspectives of organization theory, this article also considers the implications for successfully implementing new defense strategies, especially in a globally networked world. This capacity is essential as defense leaders continue to confront new global realities and defense challenges.

The genesis and pressures to alter and adapt defense institutions come from both internal and external sources. Internal pressures are often caused from budgetary constraints and shifts in prevailing doctrine as advocated by different political parties. External pressures have come from the effects of globalization and the resultant rise in terrorism or, as Samuel Huntington would claim, the "clash of civilizations."[3] From

the buzzword of *transformation* during the administration of George W. Bush (as articulated most clearly by Secretary of Defense Donald Rumsfeld) to the call for reform just prior to and now during the administration of President Barack Obama, there always seems to be pressure on the defense establishment to respond to new circumstances. This is probably why General Martin Dempsey explained the latest push for reallocating defense expenditures as indicating the need for the military to act more like "a learning organization."[4] To understand that concept requires some minimal notion of how organizations have been conceived. This article endeavors to shed light on such perspectives and help formulate thoughts about how DOD strategies, regardless of content, can be better implemented through processes of organizational change.

Organization Theories and Perspectives

If leading organizations effectively was a matter of mechanics or science, there would never be a weapons-procurement project that went over budget, friendly fire accidents, or a company that went out of business. All of us have ideas about how organizations operate and how they should function; there is no one theory or model of organizations, nor is there a universal formula for running or commanding effective organizations.

How mental images guide us was elegantly examined by Kenneth Boulding in *The Image: Knowledge in Life and Society* (1956). More recently, Gareth Morgan used images and metaphors to describe a range of ways in which people think about organizations—as machines, organisms, cultures, brains, and political systems.[5] Each reflects a way to understand organizations and has implications for how we think organizations can be changed or transformed.

Organizations as Machines. For thousands of years, the human species made its livelihood outside the context of formal organizations. Pre-agrarian and agrarian societies were based on self-sufficiency and independence. As civilization evolved, more and more people earned their livelihoods from and through formal organizations that

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were seen as means to some goal or end much like tools or instruments. Individuals were assigned specific roles or tasks, and the organization was looked at in terms of how these pieces fit together like a machine.

Many early practices to manage formal organizations originated in the military. Inspired by the legions of the Roman army and the mechanical inventions of his time, Frederick the Great of Prussia (1740–1786) is considered to have developed the modern mechanistic army. This army is characterized by a rigid hierarchical structure and the standardization of personnel and regulations. The individual soldier (worker) had no identity apart from his particular role and was subservient to the whole.

As machines require parts to function and fit together, organizations need jobs to be done and coordinated. The function of management is to identify all those jobs and ensure that people carry out their duties as assigned. This orientation led to the notion of "command and control." Taken to its extreme, supervisors direct or control workers to behave in specific ways. Contributing to this orientation was Frederick Taylor, considered the father of what came to be known as scientific management. Taylor thought that work should be studied and that workers should merely follow what science dictated they do to maximize efficiency.[6] In stable environments where organizational goals and the means to achieve them are unambiguous or remain unchanged over time, efficiency derives from the routinization of work. However, the advantages of this mechanistic approach to production dissipate when new environmental demands emerge (as in different stakeholder or adversarial challenges).

Viewing organizations as machines means focusing on how well all the parts are

functioning. Are lines of responsibility and communications clear and controlled? Are rules and procedures followed? Do workers (soldiers, sailors) know their jobs and are they trained to do them? While reform may suggest changes in how the machine operates, transformation may imply shifts in what the machine produces.

Organizations as Organisms. A second metaphor for organizations relates to what most of us know best as a functioning, organic system: the human body. Its focal point is not goals or a mission but needs and metabolism. To maintain a functioning body, we need certain inputs (water, food, affection), and we need to adapt to our environment (if only to avoid getting too hot or too cold). Organisms are systems comprised of various parts, each of which may belong to subsystems (for example, the heart and spleen are parts of the body's circulatory system), and there are interdependencies within and between subsystems. A failure in one subsystem is apt to lead to failure in another. Effectiveness is achieved through the proper coordination and balance among efficient subsystems.

As the environment changes, organizations adapt and the rate of change in the internal organizational environment needs to match the rate of change in the external environment.[7] In effect, internal design must match external complexity. For example, special operations forces are easier to deploy and more adaptive to theater conditions than larger conventional forces.

Even as the external environment constrains the growth of certain organizations, it may similarly generate certain opportunities.[8] For example, the development of the Internet has spawned a new generation of organizations (Amazon, Google, FaceBook, YouTube) based on entirely new business models. Of course, these developments created new threats to our national security and provided new tools for our adversaries, but they have also given new life to military forces that deal with asymmetric threats and counterinsurgencies.

If we view national security organizations as organisms, then we need to acknowledge their subsystems and their needs, the relationships among them, and the processes that make the *whole* system work. Consideration should be given to how tightly or loosely coupled the subsystems (for example, military Services and combatant commands)

are, their (inter)dependence, and degree of differentiation. Transforming or reforming the national security sector would suggest changing the composition of its subsystems and/or the relationships among them.[9]

Organizations as Political Systems. All citizens in a democratic society have rights to participate in the decisions that affect them. What happens to those civic rights when individuals enter the portal of their workplaces? If individuals had the same set of needs and wants, answering that question would be easy. Unfortunately, the larger the organization, the more it is apt to employ individuals with different backgrounds, educational levels, and financial needs. The result is conflict between competing needs and wants, from the manner in which compensation is determined to the processes whereby work is assigned.

In organizations, power and influence come from a variety of sources and may be vested in groups of individuals more than with individuals per se. In some situations, groups with shared interests form alliances or participate in coalitions to expand their influence even further. Labor unions, for example, are a traditional way for individuals to assert their civic rights through the power of numbers. However powerful groups form, intergroup conflict may promote helpful competition or destructive adversarial relationships.

over civil-military (civ-mil) relations is based, in part, on the issue of power and politics. Transformation suggests change in that relationship, but constitutional concerns constrain that possibility. If the current distribution of power within the national security system is the cause and consequence of our failure to reform or evolve that system, then how can its key stakeholders produce the reforms that are being advocated today?[10]

Organizations as Cultures. While culture was traditionally used to explain differences between whole societies, it has also become a helpful construct to explain why every organization is different in some way. As organizations accrue experience and resolve problems, they develop distinctive ways of doing things. As cultures, organizations offer their members a framework for shared meaning and the development of common action. Culture provides stability and comfort and can be a pathway or barrier to change. Strong or rigid cultures are less apt to respond effectively to internal or external challenges. On the other hand, changes that are consistent with dominant assumptions or organizational values are readily accepted.

Culture as a system of meaning establishes boundaries between those who share in the culture and those who do not. In that sense, culture can be a source of differentiation or integration between those inside, outside, or within the organization.[11] An

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Power can be used to gain control of vital resources, set policy, determine organizational mission, and control technology. Whether such control is directed toward institutional or personal purposes will depend on the ethical values of those with power, the extent to which personal and institutional goals and objectives are aligned, and the presence of checks and balances embodied in formalized rules and regulations. If power is too diffuse, an organization faces the risk that no one has enough influence to make major decisions or get things done.

Transforming or reforming the national security sector as a system of power suggests altering the relative importance of its different constituencies or the processes whereby decisions are made. The perpetual dialogue

organization needs mechanisms to acculturate new members and sustain itself when members leave. For example, boot camp is a defining experience for military personnel since it transforms a raw recruit into a carrier of a Service's core culture.

If we view national security as a constellation of distinct cultures represented by the differences between (and within) military Services and civilian agencies, then culture may be more of a force for fragmentation than integration. Yet if national security professionals, military and civilian, share some aspects of culture, reform can be expedited if it is predicated on those shared values. One key is understanding the valence of values that promote commonality of interests among stakeholders versus those

that make them different. For example, all Americans value individual freedom even though they differ about how such freedom can be ensured.

Organizations as Brains. Cognitive functioning is an essential element in making good decisions. In organizations, all sorts of decisions need to be made, from the choice of hiring criteria to selecting work assignments to developing strategy. Organizations are systems in which vast amounts of information and knowledge are processed and used for a variety of purposes, not just decision-making. With the advent of computerized information systems, contemporary organizations have an expanded capacity to process and store knowledge. Yet choices still have to be made about what knowledge needs to be acquired or is worth retaining. Another issue pertains to who will have access to what institutional knowledge and how that knowledge is made available.

The metaphor of the brain implies one central repository for knowledge and information processing. However, holography suggests that brain functioning can occur at multiple nodes or locations.[12] In effect, knowledge and the capacity to process it can be replicated at different locations. Organizations may have a central office or headquarters, but if knowledge and knowledge processing is replicated elsewhere, then decisions can be made closest to where their impact will be felt. Information exchange has been characterized as having the properties of "stickiness" in that barriers to knowledge flow and application can constrain the effectiveness of any system.[13]

If we view the national security system as a collective brain, then its capabilities would be represented by the information, knowledge, and intelligence it acquires, retains, disseminates, and uses. Transformation suggests changes in any one of these processes or in the nature of the information itself. For example, today's asymmetric threats could be responded to more effectively if knowledge processing was handled on a more localized basis with less dependence on the Pentagon or the Central Intelligence Agency. An interagency approach would consider how information processing could best be coordinated across a diverse set of organizational actors.[14]

Other Views of What Organizations Are (or Should Be)

Much as human experience evolves, so too does the nature of organizations and our perceptions of them. The following section outlines some of the latest thinking about what organizations are or need to become.

Organizations as Chaords. When VISA International was established in the 1970s, it searched for a business model that would help it operate in a diverse, fast-paced environment in over 200 countries. Dee Hock, its founder, coined the term *chaordic* (chaos + order) to refer to any complex, self-organizing, self-governing, adaptive, nonlinear system.[15] Hock believed that VISA needed to be a chaordic organization, a system that balanced the need for both flexibility and stability. Effective organizational performance requires mechanisms to build a shared culture while allowing for adaptation to local circumstances and shifting environmental demands. The breadth of U.S. national security operations and the mix of functional (military Services and civilian agencies) and geographic units (regional combatant commands) reflects characteristics of chaords.

Organizations as Learning Systems. In an article published in the *Harvard Business Review* in 1988, Arie DeGeus, former chairman of Royal Dutch Shell, made the claim that a company's ability to learn may be its own sustainable competitive advantage. This insight was followed soon thereafter by Peter Senge's breakthrough book *The Fifth Discipline*, and the search for the learning organization was on.[16] However, subsequent research has suggested that all organizations, including the military, are learning systems.[17]

This view suggests that transformation requires changing learning capabilities to meet current security challenges. Of course, time marches on, and now we are much more apt to hear about "learning cultures" than "learning organizations." That may make General Dempsey's statement a bit dated, but it is certainly more contemporary than other views of what DOD is or should become. The need for continuous learning is also a capacity fundamental to counterinsurgency, as often expressed by General David Petraeus, its key architect.[18]

Organizations as Networks. In classical theory, organizations are configured and designed with particular attention to the vertical relationships between operational units (line functions) and administrative units (staff functions). In contrast, today's networked organizations focus on horizontal relationships and independent action. By emphasizing the latter, organizational architects enable decisionmaking at the periphery (cells or nodes) of an organization by deemphasizing the power of a central office whose chief focus becomes coordination rather than control.[19]

Transforming our national security system as a network would require changing the number or nature of nodes in that network and the relationships between them.[20] That sort of transformation has already been promoted in the private sector.[21] The term *network-centric warfare* encapsulates this view within military operations.[22]

Each of the brief depictions presented so far offers one way to understand national security organizations, and each has implications for transformation or reform in the national security sector and how it can be expedited. Table 1 lists each of the eight metaphors and their associated goal or focal point. For example, the key issue or concern in a machine is efficiency, while for an organism it is stability.

Table 1. Organizational Theory Images	
Image	**Goal/Focus**
Machine	Achieving maximum efficiency
Organism	Maintaining stability
Political System	Gaining control
Culture	Propagating values
Brain	Storing and accessing knowledge
Chaord	Balancing integration and differentiation
Learning Organization	Self-realization
Network	Distributed resources and command

The Challenge of Ongoing Change in Military Affairs

A major dilemma for DOD is that it is faced with managing a continuous process to integrate new technologies, all the way from the slingshot of Biblical days to the drone aircraft of today. That process often requires fundamental changes in how military personnel think about and execute strategy. Even as the technology of battle evolves, and with it the organizational structures that support it, so does the role of the military in society. With the recent trend toward democratization, especially in the Middle East, the challenge of reform is not a matter of simply integrating new technologies but adapting the military to the current environment of political realities. In discussing the prerequisites for democracy today, Michael Hardt and Antonio Negri acknowledge the historical revolution in military affairs in *Multitude*.[23] In doing so, they point out that military reform is guided by historical theories of war and battle, but there is a shortage of theory or guiding principles when considering how to manage the military's evolving role in today's democratic societies.[24]

This shortcoming is exacerbated by the capacity to see and understand organizations in the multiple ways already described. When it comes to changing organizations, individuals also have different views about what change is, whether it is classified as transformational, incremental, or reform, and how it can be managed or achieved. Theories on the processes of organizational change have been characterized as four types: lifecycle, evolution, dialectic, and teleology.[25] Table 2 shows how various characteristics of the theories described above match up against these four types of change theory.

Lifecycle theories focus on stage development based on changes caused by organic growth. Whether prompted by external or environmental change or internal factors, change is an inevitable outcome of time and experience. Change processes are linear and irreversible.

Change may also be framed as *teleology* guided by a desirable result, outcome, or purpose. How an entity moves or changes and progresses toward that result is not preordained through some prescriptive set of steps. Goals may shift over time prompting new periods of change, reform, or transformation.

Table 2. Types of Images with Characteristics			
Type	Image	Lever	Progress
Evolution	- Machine - Brain	Adaptation	Cumulative
Lifecycle	- Organism - Culture	Growth over time	Linear stages
Dialectic	- Political System	Conflict	Synthesis
Teleology	- Chaord - Learning Organization - Network	Collaboration	Movement toward goal

One commonly understood change process is *evolution*. Much as it has been used to describe the development of species, it can be used to classify organizational change. The evolutionary cycle of change is precipitated by the competition for resources and the adaptation between internal and external characteristics. Change is cumulative and progressive as organizations become more adapted and less adaptable.

A fourth and final type of change theory is *dialectic* based on the Hegelian notion of ongoing conflict between thesis and antithesis leading to synthesis. As the relative power of organizational actors shifts and arguments for one thesis or another win out, the opportunity for change arises. Conflict resolution begets change, but the outcome may lead to worsening rather than improved performance.

Implications

Changing or reforming our national security apparatus is an imposing challenge given this theoretical potpourri. On the one hand, there are theories about what organizations are, and on the other there is a typology about how and why organizations change. Yet as shown in table 2, there is some correspondence between the two. For example, for organisms and cultures, change is linear and prompted by developmental growth that is characteristic of lifecycle theories.

Developing implications from these theoretical orientations for implementing change might best proceed via a series of questions. First, when you think of some branch of the military, what images arise in your mind and how do those images shape your thinking about one Service versus another? If military organizations

are cultures, then how do the protocols in the military reflect fundamental cultural assumptions? The role of DOD has been to take action to deter our foes or, failing that, to wage war against them. Nowadays, the military is being asked to serve as "nation-builders," which can be viewed as transformational, compared to the image of the military as a "warfighting machine."

The closer a military command is to the field of execution, the greater the concern for efficiency and machine-like or mechanistic-like functioning. However, the greater the role of the command in the development of strategy, the more organic-like its features must be. Once a war starts, it is impossible to know what course it will take and what the results will be. That need, to acknowledge how ambiguity will always be an element of military operations, is what Robert NcNamara conveyed with his "fog of war" metaphor.[26] Unfortunately, at the highest levels of strategy formulation, the drive to eliminate uncertainty can lead to incorrect inferences.

Winning wars may take precision to put ordnance on a target with fixed GPS coordinates, but many demands placed on our national security apparatus require working with and within a shifting environment. Organic rather than mechanistic metaphors or images would seem better suited for these challenges. That perhaps is one of the key reasons for the introduction of network-centric warfare into the battlespace. What remains to be seen is how such an approach can mesh with or within traditional command and control structures.

Ensuring national security today requires interagency operations, or what has been referred to as a whole-of-government approach.[27] Reform requires not only changing

individual organizations but also changing a network of organizations and the relationships between them. That requirement is bound to be difficult when our network of national security organizations seems like an organized anarchy.[28] As suggested by change theories based on teleology, progress can be made by slow movement toward the

are decentralized or embedded in a network structure?[31] As J.M. Kreighbaum suggests, DOD needs to free itself from policies that reinforce mechanistic metaphors or images of its organization.[32]

When civilians enter the military, they are trained (some might say socialized) to execute orders and not ask questions.

Lao Tzu), so too are there multiple ways to think about organizations. To what extent are military and national security leaders aware of the organizational images they carry and their implications? What models, paradigms, or theories do they hold with regard to how such organizations are changed? When senior DOD managers think about and run their operations like a military machine, it should not come as a surprise when they do not operate that way. The bureaucratic nature of a public organization such as the Pentagon provides a sharp contrast with command and control operations in the field of battle.

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whole-of-government approach currently advocated. The change process should not be to reach development stages but to enable incremental steps.

For example, it is one thing for the U.S. Army to support a battalion or brigade in a specific theater of war, but it is quite another to manage a joint command or an organization based at the Pentagon or nested in a coalition. The more diverse the set of organizations involved in some coalition, the more difficult it is to coordinate them. However, the ease of using common images to compare and contrast organizations demonstrates that organizations do have a lot in common. Perhaps when Arthur Cebrowski explained transformation in terms of changes in beliefs, attitudes, and cognition, he referred to the ability to work with different types of organizations simultaneously.[29]

In a speech at the U.S. Military Academy at West Point, former Secretary of Defense Robert Gates stated that "in order to succeed in the asymmetric battlefields of the 21st century—the dominant combat environment in the decades to come, in my view—our Army will require leaders of uncommon agility, resourcefulness, and imagination; leaders willing and able to think and act creatively and decisively in a different kind of world, in a different kind of conflict than we have prepared for the last six decades."[30]

Metaphoric thinking is a way to promote creativity and understand national security organizations (and those of our adversaries) from multiple perspectives. This is not to promote or advocate for any one perspective but to incorporate multiple perspectives into our mental models. If our generals view (and treat) our military Services as machines, how can we effectively respond to asymmetric threats and adversaries whose command and control functions

Execution is expedited when assumptions are not challenged or tested, and that is a good thing when one is facing an adversary ready to kill him. The training that military personnel receive to standardize their responses to combat situations creates a uniformity of mental models and constrains seeing the world from multiple perspectives. Uniformity of thinking is more justifiable at the tactical level, but at the strategic or flag officer level, it is counterproductive. If all staff officers within a command think alike, their commander has to work with redundancy.

The question remains as to what images will best fit national security organizations in an age that contains both evolving asymmetric threats and the potential for traditional threats. Do we shift from a machine to a network or do we alter the properties of the machine? Either way generates change, but one could argue that only the former represents true transformation. The larger question is how we make such a transformation. Given the political context of our national security apparatus, a dialectic framing of the task ahead seems appropriate. That means enlarging our capacity to resolve conflict.

While the Project on National Security Reform provided a vision of where we need to go, the challenge remains how to get there.[33] In our pluralistic society governed by a political system comprised of checks and balances, radical and discontinuous change is highly unlikely. Perhaps military transformation sounds too daunting a task so we no longer hear of it. Although reforming national security seems more palatable and less challenging, it remains on the periphery.

The key takeaway from this article should be a recognition that much as there is more than one mindset about warfare and how to beat the enemy (as typified by the classical thinkers Carl von Clausewitz and

Both the opacity and multiplicity of organization theory contribute to the challenge of working in an interagency or joint environment. It is best to recognize that in those contexts military leaders and civilian managers will have diverse and potentially contradictory views about what organizations are and how they can be changed. Many of us are barely aware of our own theories much less those held by our counterparts who lead other organizations in an interagency or joint context. **JFQ**

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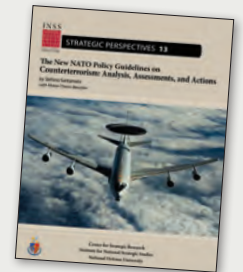33 Project on National Security Reform (PNSR), *Forging a New Shield* (Washington, DC: PNSR, December 2008).