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TRANSFORMING COALITION WARFARE

WITH

NETWORK CENTRIC CAPABILITIES

By

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Introduction

The challenges of preserving peace and prosecuting war are historically and inherently complicated. In today's changing international security environment, however, the traditional challenges of yesterday are today becoming even more complex. The old challenges are today contributing to the emergence of new concepts and new technologies as nations and coalitions transform to confront and resolve the timeless challenges of peace and war.

This paper identifies and summarizes various transformation initiatives that nations and coalitions are today considering and pursuing to meet the demands of tomorrow's strategic environment. The initiatives include such concepts as Network Centric Warfare (NCW), Effects Based Operations (EBO), Collaborative Information Environment (CIE), and many others. A central theme throughout is that the often diverse, unpredictable, and asymmetric nature of evolving threats will require conscious and concerted efforts by nations to cooperate and collaborate. New thinking and new technologies are dominating these initiatives.

Coalitions and multinational partnerships will become more important than ever to successfully defeat worldwide and full spectrum threats. Threats that range from transnational actors to ideological terrorist organizations, from renegade states to emerging nationalism, will present new and dangerous challenges to peace and stability. This new era will require new thoughts and new capabilities.

The challenges are immense and the threats imminent. Therefore, coalition warfare must transform, as individual nations transform, to attempt to set the pace and control the course of future actions in peace and war. This paper is about coalitions and the evolving concepts and technologies that will contribute to their future effectiveness. The collective unity of nations dedicated to human rights, individual freedoms, and self-determination will help define the fate and future of tomorrow's world.

National Interests and Coalitions

The initial and crucial phase in developing coalition political policies and military strategies is to first understand the role of national interests. It's a nation's interests that guide its policies and partnerships. At times a nation may achieve its interests independently or unilaterally and at other times via alliances or coalitions. At times a nation may be a willing member of a multinational partnership and at other times may join because of a perceived sense of necessity. Regardless of the reasons or actions, however, national interests dominate.

In theorizing on national interests and the prosecution of coalition warfare, the classic warfare theorist, Clausewitz, wrote, "One country may support another's cause, but will never take it so seriously as it takes its own." This is a true and subtle acknowledgement. Nations fight first for their interest and second for the interests of others in a coalition. If the interests are mutual that's a positive factor for the coalition. Nonetheless, nations join coalitions, willingly or of necessity, because it's in their interests and rarely, if ever, because of sympathy or a sense of gratitude toward others. This nationalistic view is illustrated by two historical examples.

First, asked if he felt indebted to Russia for helping crush the Hungarian uprising in 1848, the Austrian Prime Minister replied, “Austria will astound the world with the magnitude of her ingratitude.” The Prime Minister instinctively knew that Russia fought for her own interests first and Austria’s second. Therefore, no special thanks were due.

Second, Lord Palmerston, the mid-nineteenth century British Prime Minister, announced “We have no eternal allies and we have no perpetual enemies. Our interests are eternal and perpetual.” Quite simply, nations may suddenly turn on their present friends or embrace past enemies whenever such an action serves their national interests. It’s national interests that influence policies and coalition memberships.

In the Napoleon Wars, for example, numerous coalitions in over two decades of war were formed to fight either with or against France. Furthermore, national allegiances changed fairly often. Similarly, in the World Wars of the past century, adversaries who opposed one another in war later became allies, while wartime foes later became peacetime friends. National interests determine national friendships.

Tactics and technologies as well as strategies and systems may evolve more rapidly in certain countries and more slowly in others. It’s important for coalition members, however, to evolve with shared or identified capabilities in peace to enhance their effectiveness in war. Today a number of national and coalition initiatives and concepts illustrate how nations are striving to change and grow at a measured and shared pace.

Network Centric Warfare

Network Centric Warfare is an emerging concept with an essential objective of translating information superiority into combat power by effectively linking knowledge entities in the battlespace. At the basic level it is to link the “sensor, shooter, decision

maker" to enhance "speed of action" and responsiveness. At the more sophisticated level the function of the network is to facilitate both the sharing and understanding of vast volumes of information, especially with coalition partners.

One critical lesson we are learning in operations in Iraq and Afghanistan, as well as in coalition experiments, is the importance of developing policies, procedures, and technologies to enable multinational information sharing. Information superiority and knowledge management are crucial to NCW. Unless the information is shared, however, its relative value is diminished.

Network Centric Warfare acknowledges the transformation from the Industrial Age to the Information Age and all that this signifies. The concept recognizes the need for transformation because of the changing national security environment. Operationally, this transformation notes the varying characteristics of warfare between the past and present centuries:

Twentieth Century	Twenty-First Century
Massed Force	Dispersed Force
Info Based	Knowledge Based
Reactive	Proactive
Military Centric	Interagency Centric
Deconflicted Operations	Integrated Joint/Coalition Operations
Intermittent Pressure	Continuous Pressure
Precise Targeting	Precise Effects

This transformation in the security environment and the characteristics of warfare has created an increased focus on the application of all elements of national power. The challenge is to connect the various networks with the various instruments of national power to enhance situational awareness and understanding. The intent is to then produce effects that are more precisely tailored to the strategic aims of the coalition.

Network Centric Warfare is about more than information and knowledge as well as the supporting systems and technologies. It's also about human and organizational behavior. It's about adopting new ways of thinking and applying it to military operations. It's about multiple human factors and how people interact with and effectively use technology.

Effects Based Operations

Effects Based Operations is a concept and term that focuses first on the identification of effects, results, or outcomes and second on the actions to achieve them. Commands and operators in Afghanistan and Iraq have commented, for example, that the planning process is somewhat "reverse engineering" in that its emphasis is on new Information Age effects as opposed to old Industrial Age actions.

As an emerging concept, many profess that EBO is nothing new or ask "What's new about EBO?" In some respects, EBO may be nothing new. As for "What's new?" the answer, depending upon your perspective, may be either a lot or a little. What is new is that EBO emphasizes, to a greater degree than before, the effects of all potential instruments of national power much more than only military centric actions. It's effects oriented as opposed to actions oriented. This may be a subtle distinction, but a critical one to achieving a meaningful peace as opposed to simply winning a war.

The new EBO concept has multiple definitions and interpretations. A synthesis of these may be that EBO is coordinated sets of actions (Diplomatic, Information, Military, Economic) directed at influencing, shaping, modifying, or controlling the behavior of friends, foes, and neutrals in peace, crisis, and war. One critical distinction is its focus on all elements of national power as opposed to military centric considerations. Therefore,

the evaluated effects to be achieved are richer, broader, and deeper than those in most past planning constructs.

The EBO planning process first identifies and considers the “effects” to be achieved. Second, it focuses on those “nodes,” which are people, material, facilities, information, and similar systems, that represent where action is to be applied. Third, it considers “actions’ such as attack, defend, isolate, neutralize, or compromise to achieve the desired effects. Fourth, it estimates the “resources” required to support the “actions” to obtain the desired “effects.”

In experiments and selected implementations of various aspects of EBO, the planning process is often considered complicated and challenging. This is because we’re primarily learning to become familiar with new emerging concepts and new advancing technologies. But what seems to challenge us the most is to learn a new way of thinking. Within the challenges, however, we’re discovering new opportunities in a concept with much promise and potential.

We’re learning, for example, that we can leverage the new thinking and technologies of NCW to link diverse and geographically separated capabilities to explore a wider range of options to tailor actions to achieve the desired effects. Our objective is a responsive and networked force to influence and adapt to an adversary’s actions by enabling us to shape and reshape our options and actions amid the uncertainty of battle and crisis situations.

Collaborative Information Environment

The Collaborative Information Environment initiative is a concept that enables the collaboration and information sharing necessary in a NCW and EBO environment. In the

current Information Age the speed and sources of data are increasing exponentially. Technology is redefining the traditional command and control models. The quest for information is becoming paramount and the CIE is one concept that facilitates information or knowledge based operations.

The United States Joint Forces Command White Paper defines the CIE as “The aggregation of individuals, organizations, systems, infrastructure, and processes structured for the common purpose of creating and sharing data, information, and knowledge necessary to plan, execute, and assess joint force operations and enable the commander to make better and faster decisions than the adversary.” The goal is information, knowledge, and decision superiority.

As a collaborative information sharing and decision superiority concept, the CIE planning process is cross-functionally organized to conduct effects based planning in a network centric environment. The focus is on managing the flow of information and knowledge to facilitate decision making and to integrate military force options within the broader context that includes all elements of national power.

Staffs and planning teams are integrated with members from other functional areas to reinforce the belief that no barriers exist to limit full operations, planning, and logistics cross-team functionality. This collaborative planning and execution approach promotes the transition from the traditional vertical or hierarchical serial planning and execution process to a more horizontal and parallel integrated process.

One fundamental objective of the CIE is to create a “virtual information enterprise warehouse” as a repository for information products. The task is to develop a technology based infrastructure to collect, maintain, and access such information.

Science and technology influence command and control in many positive as well as negative aspects. We may become so overwhelmed with information that it diminishes our ability to focus on the relevant. We may focus too much on technology and too little on human factors, which are major factors in decision making.

Technology by itself rarely, if ever, makes decisions. It's a decision making tool. Decision making is a human enterprise. The human mind may be more adept with the subjective factors of risks and uncertainties, while technology may be more proficient with the objective ones of quantifiable and qualitative certainty. The goal of the CIE is to create a venue within which the human mind and technology come together to work together to form an information based system that provides for better and more timely decisions.

NATO's Strategic Vision

The acceptance of new concepts and technologies as well as transformation initiatives is important to individual nations and collective coalitions. In recognition of this need to change to meet the military challenges of tomorrow, for example, NATO representatives wrote a 1 March 2004 draft document "Strategic Vision: The Military Challenge" to guide member nations. The paper is an integral part of the Alliance's plan for transformation. The vision is an outline within which members can "plan the development of their own future capabilities."

This initiative demonstrates that coalitions and nations are pursuing evolutionary or revolutionary change and transformation. While nations may either accelerate or moderate transformation initiative timeframes, virtually all are convinced that change is inevitable. NATO's intent is to continue to develop innovative concepts and more

adaptive capabilities. Concurrently, the alliance is determined that new joining nations be integrated into the alliance with appropriate capabilities.

One of the stated challenges of NATO's strategic vision is to "transform current forces and capabilities to undertake effects based operations" as well as to network the member nations to facilitate collaboration and information sharing. Accordingly, selected nations are planning and conducting multinational experiments and workshops. The experiments and exchanges of ideas are also contributing to the development of new thoughts and complementary concepts to expand transformation initiatives.

To promote transformation, NATO Allied Command Transformation hosted a NATO Network Enabled Capability Conference in Norfolk, Virginia, USA, 29-30 March 2004. The basic purpose of the conference was to inform, educate, and stimulate debate in NATO and nations regarding transformation. The strategic vision and conference were capstone documents and meetings to generate discussion from which "future conceptual work and experimentation will cascade." Transformation is spreading worldwide.

Challenges and Conclusions

The security and warfare challenges today are somewhat traditional and historical ones: to develop rather precise tactics and technologies; rather precise strategies and systems; rather precise concepts and coalitions, for relatively imprecise future contingencies. We're confronted by the uncertainty of the future, but we're certain that we much change. We must transform. This transformation is sometimes frustrating and at times painful. Yet, it's essential. Concepts and experiments may fail, but we can never fail to explore and experiment. The challenges and conclusions of coalition transformation are numerous. The identification and discussion of a few include:

~Coping with Cultural and Doctrinal Issues. We often acknowledge “interoperability” concerns, but focus primarily on weapons systems, communications assets, and equipment. The more critical interoperability issues, however, are those associated with cultural and doctrinal differences among nations.
~Establishing Trust and Confidence. The impersonal, indirect, machine oriented interactions within the collaborative and distributive technologies contrast with the personal, face-to-face, human interactions of the past. This requires new Information Age leader competencies.
~Exploiting Speed and Decision Making. The speed with which information can be collected today is ever-increasing. The challenge is to then effectively organize and assess the information and to then apply it toward making better and faster decisions. In the final analysis, however, speed of action is more crucial than speed of decision.
~Ensuring Sharing and Dissemination. The current classification regulations and rules to release information restrict the sharing and dissemination of sensitive information. The challenge is to develop procedures to facilitate better sharing of information among coalition nations.
~Mastering Information Overload. The challenge today may be operating with too much information as opposed to too little information. It becomes apparent that information overload or an overwhelming abundance of data could be a potential detriment. Therefore, prioritizing information needs becomes important.
~Partnering with Civilian Authorities. Today’s emerging concepts include an increased role for civilian and non-government agency advice and actions. The previous perceived autonomy or exclusive military or civilian roles are merging to become more mutually interdependent. Command relationships are needed to enhance coordination.

Summary

As we explore the challenges and opportunities of Network Centric Warfare, Effects Based Operations, Collaborative Information Environment, and numerous other emerging concepts and technologies, we’re discovering that our missions are becoming more complex and our adversaries more unpredictable. We’re learning the challenges of employing conventional forces against the forces of terrorism; conducting private or sensitive diplomatic discussions amidst openly debated public opinion polls; witnessing the actions of an individual Sergeant Squad Leader in an isolated engagement that is nonetheless broadcast by the media to collective millions of people worldwide. The information and discretion required to develop plans and execute actions are becoming

more diverse while our information needs and sensitivities are becoming more specific and publicized.

Operationally, these new concepts require further maturation and experimentation. We have much to do before we fully transfer them to the field or operational commands. Yet, various aspects of the concepts are now being partially implemented and refined in the laboratory of war. The concepts represent the future and we are experimenting and implementing the concepts to explore and evaluate their contributions to tomorrow's international security environment.

Ultimately, success in war may be more dependent upon our ability to deal with what we may never know as opposed to what we know. Although these new concepts and technologies are information and knowledge based, they help us learn how to accept risks and respond to uncertainty in the absence of perfect information. Therefore, it's the combination of machines and mankind as well as new concepts and new thinking that may determine future success.

While the emerging concepts are works in progress, they represent true progress. The collective goal of the new thinking is to use knowledge to enhance "speed of decision" and to use "speed of decision" to enhance "speed of action." The conceptual goal is to contribute to a practical one—empower action through information and decision superiority.