CAPSTONE CONCEPT for

JOINT OPERATIONS

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Chairman's Foreword

Five years into the new millennium we are gaining a clearer understanding of the complex nature of the global security challenges facing the United States. Overcoming these evolving challenges will be the priority of the future joint force.

Today's joint force is transforming even while executing Operations ENDURING FREEDOM and IRAQI FREEDOM. In this Capstone Concept for Joint Operations (CCJO), we incorporate the lessons gleaned from those conflicts while looking to the future to examine the capabilities we will need to fight tomorrow's wars. We are transforming in stride -- conducting operations while preparing for the future fight.

This concept represents a significant step forward in our pursuit of an improved joint force. It is paramount that the broad ideas expressed in this concept be refined in Service and subordinate joint concepts. Moreover, in the face of continued fiscal restraint, the ideas must become the basis and focus of joint experimentation at all levels so they can be fully tested for feasibility, adequacy, and acceptability. A deliberate, rigorous path from transformational concept to tangible joint force capability improvement is critical to supporting the joint warfighter and developing the optimal joint force for the 21st century.

The CCJO revision includes an increased awareness and appreciation for the fact that integrating the full spectrum of military efforts with all other instruments of national power is essential to the achievement of national objectives. While describing a powerful joint force, the CCJO acknowledges that military success is only a part of the Nation's overall strategy to assure our allies while dissuading, deterring, and if necessary, defeating potential aggressors.

RICHARD B. MYERS
Chairman
of the Joint Chiefs of Staff

Summary of Major Changes

The CCJO is written in concept format, with a military problem and proposed solution. It deletes sections that describe the process for writing joint concepts. Such process detail is being incorporated into the revision to CJCSI 3010.02A, "Joint Vision Implementation Master Plan (JIMP), 15 April 2001."

The CCJO focuses on how the joint force will solve the military problem while underscoring the importance of operating in concert with Interagency and multinational partners to achieve broader objectives.

The CCJO describes a systems framework for viewing the environment and potential future operations.

The CCJO lists three fundamental actions that provide potential commonality for integrating joint force efforts with those of interagency and multinational partners.

The CCJO substitutes "subordinate ideas" on how the joint force will operate in lieu of the JOpsC's "core capabilities" and substitutes "characteristics" in lieu of the JOpsC's "attributes."

The CCJO includes an appendix portraying the simultaneity and proportionality of joint activity in a campaign. Its purpose is to initiate joint experimentation on the concept towards the development of an alternative comprehensive campaign framework.

Executive Summary

The Capstone Concept for Joint Operations (CCJO) heads the family of joint operations concepts (JOpsC) that describe how joint forces are expected to operate across the range of military operations in 2012-2025. Its purpose is to lead force development and employment primarily by providing a broad description of how the future joint force will operate. Service concepts and subordinate joint concepts will expand on the CCJO solution. Experimentation will test the concepts and offer recommendations for improvements across doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) and policy.

The CCJO focuses on a strategy for achieving military objectives while contributing to broader national objectives through unified action--integration with other interagency and multinational partners. It postulates potential areas where the joint force and other elements within the US government may find common ground in which to best integrate their efforts. Interagency and multinational partners may therefore find the CCJO useful to assess potential integration requirements and opportunities.

The CCJO articulates an expected future operating environment where the joint force's primary military problem will be represented by adaptive adversaries that attempt to keep the joint force from being successful across the range of military operations. It then proposes a multifaceted solution to resolve the problem. The CCJO proposed solution comprises a central idea and supporting ideas on how the joint force is expected to operate in the future, a systems view of the environment, fundamental actions of the joint force commander and key characteristics of the future joint force.

The central idea describes in aggregate what the future joint force will do to overcome future challenges. The supporting ideas provide more specificity in how the joint force will resolve the stated military problem. The systems framework for viewing the environment incorporates an appreciation for the complexity that human influence brings to the military problem and the difficulty in developing appropriate solutions. Such a view should result in more adaptive planning and more discriminate joint force employment. The fundamental joint actions represent those areas executed by a joint force regardless of the type of operation. The CCJO proposes that those actions are also being done by other interagency members, and therefore represents suitable areas for integration among interagency (and perhaps multinational) partners. The future joint force's key characteristics include being knowledge empowered, networked, interoperable, expeditionary, adaptable/tailorable, enduring, precise, fast, resilient, agile and lethal. They describe a dominant national asset, compelling in all situations and lethal when required. The characteristics in the CCJO are considered "key" because they help guide how

the joint force is developed, organized, trained and equipped. The characteristics noted in the CCJO must be reflected in all Service and subordinate joint future concepts.

Acceptance of the CCJO solution has implications for future concept and joint force development and employment. These implications apply across DOTMLPF and policy. One of the most significant implications is in the area of unified action. The future joint force must gain and maintain the ability to operate effectively with participants of varying capabilities and differing areas of expertise. Greater integration should be a focal point of policy development to clearly delineate roles and responsibilities. This effort may require an overarching national-level concept that presents a method of integration for all US government agencies.

1. Purpose

The CCJO is the overarching concept of the family of joint concepts that guides the development of future joint capabilities. Its purpose is to lead force development and employment primarily by providing a broad description of how the future joint force will operate. Service concepts and subordinate joint operating, functional, and integrating concepts will expand on the CCJO solution. Interagency and multinational partners may use it to assess potential integration requirements and opportunities.

2. Scope

The CCJO broadly describes how future joint forces are expected to operate across the range of military operations in 2012-2025 in support of strategic objectives. It applies to operations around the globe conducted unilaterally or in conjunction with multinational military partners and other government and nongovernment agencies. It envisions military operations conducted within a national strategy that incorporates all instruments of national power. This concept is applicable to combatant commands, the Military Services, Defense agencies, and the Joint Staff for concept development and experimentation.

The CCJO briefly describes the environment and military problem expected to exist in 2012-2025 (from just outside the future years defense program to 20 years in the future). It proposes a solution to meet challenges across the range of military operations and describes key characteristics of the future joint force. This concept concludes by presenting risks and implications associated with this concept.

2.A. Context

2.A.1. Strategic Guidance. The family of joint future concepts is informed by strategic guidance.[1] The CCJO describes a joint force that will support achieving strategic objectives by assuring allies and friends, dissuading adversaries, deterring aggression and coercion, and defeating adversaries should deterrence and dissuasion fail. Political considerations as well as finite economic and military resources demand a selective strategy for engagement. Once a decision to engage is made, the United States achieves its goals by direct and continuous action using all instruments of national power, and in coordination with our partners wherever possible--unified action.[2] The military contribution to this strategy is a joint force with a broad array of capabilities

[1] National Defense Strategy (NDS), National Military Strategy, Transformation Planning Guidance, National Security Strategy, Quadrennial Defense Review and Strategic Planning Guidance.
[2] Unified action is the synergistic application of all instruments of national power and multinational power and includes the action of nonmilitary organizations as well as the military forces (JP 3-0).

that can be employed to prevent and deter crises, defeat any adversary and control, or help control, any situation--full spectrum dominance.

2.A.2. Unified Action. Strategic objectives are determined in the context of the global situation and interaction with a variety of allies and other multinational partners. Achieving these objectives requires integrating joint force actions with those of interagency and perhaps multinational partners. Although the future joint force must maintain a focus on waging and winning our Nation's wars, it must also be capable of supporting national efforts to shape the environment to prevent conflict. Likewise, should combat operations be necessary, the joint force must be able to fight and win while simultaneously facilitating transition to a state of peace and stability in which national interests can be sustained. Toward these ends, military power must be postured to enhance other instruments of national power. Specifically, the Department of Defense must be prepared to support other agencies in proactive engagement/theater shaping as well as post-crisis/conflict reconstruction operations. Conversely, during combat operations, the Defense Department will normally be the supported agency. In all cases, it is necessary to integrate all appropriate agencies and partners through unified action.

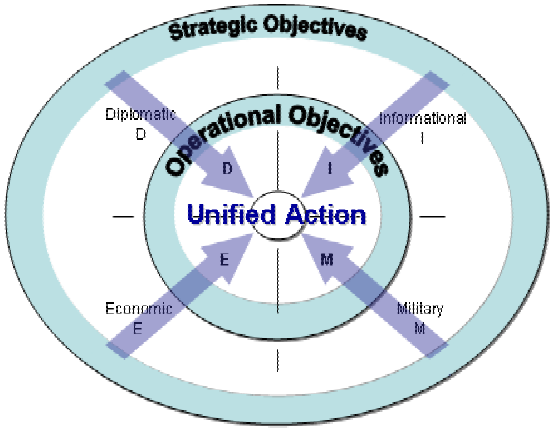

Figure 1 - Unified Action

Figure 1 depicts the diplomatic, information, military, and economic instruments of national power focused through unified action. No one instrument is predominant; all are interrelated. Synergy and coherence are achieved through coordination and integration among the instruments as they are used to accomplish strategic objectives.

2.A.3. Future Context Reference Documents. The CCJO derived its problem and in part its proposed solution from strategic guidance documents and the following two source documents: 1) *Joint Operational Environment – Into the Future* (JOE),[3] which profiles many of the dominant trends shaping the future security environment over the next 20 years and outlines their consequences for military operations; and 2) *An Evolving Joint Perspective: US*

[3] "*The Joint Operational Environment: Into the Future,"* Coordinating Draft, (Suffolk, VA, US Joint Forces Command: 11 January 2005).

Joint Warfare and Crisis Resolution in the 21st Century,[4] which captures and defines emerging thoughts on the desired shifts in the characteristics and conduct of future joint warfare, and crisis resolution that are fundamentally different from our recent past.

2.B. Joint Operations Concepts (JOpsC) Family

A concept is a notion or statement of an idea--an expression of how something might be done. A concept may, after further development, experimentation, assessment and refinement, lead to an accepted way of doing something. Shown in Figure 2 are the types of joint concepts that comprise the joint operations concepts (JOpsC) family. As the head of the family, the CCJO guides the following: joint operating concepts which address military problems associated with broad joint force operations (e.g., major combat and stability operations); joint functional concepts, which address broad enduring functions across the range of military operations (e.g., force application and battlespace awareness); and joint integrating concepts, which address specific military problems associated with narrowly scoped operations or functions [e.g., global strike and joint logistics (distribution)]. In all cases, subordinate concepts within the JOpsC family are compatible with and supportive of the CCJO.

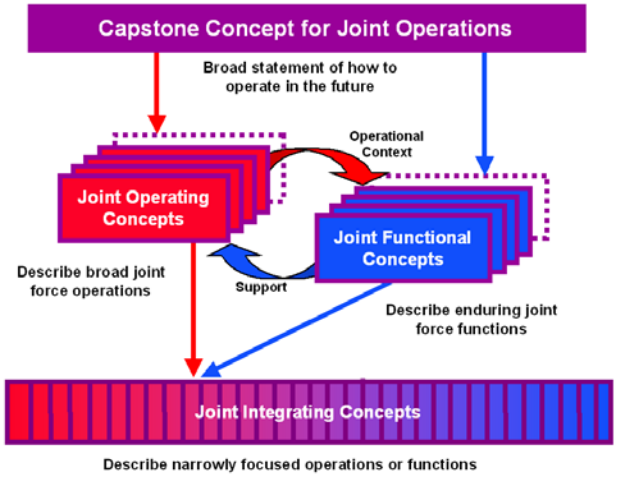

Figure 2 - JOpsC Family

2.C. Relationship to Other Concepts

The CCJO provides broad guidance to Service concepts and other joint concepts outside of the JOpsC family. Those concepts must be compatible with and supportive of the CCJO.

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[4] Joint Requirements Oversight Council (JROC) memorandum 022-03, "*An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution In the 21st Century" White Paper* (Washington, D.C., Joint Staff, J-7: 28 January 2003).

2.D. Assumptions

For the purpose of this concept, an assumption is considered appropriate if it meets the following criteria: 1) It should be a likely future condition, but not a certainty; 2) It should be beyond the purview of the concept; and 3) It should be necessary for the concept to be valid. The CCJO assumes the following:

- Fundamental objectives of current national strategy will remain applicable in 2012-2025.

- The joint force will retain two of its main strengths: 1) a diverse set of capabilities inherent in the various services and other organizations that comprise the force; and 2) an exceptional ability to integrate those capabilities in pursuit of a common aim. That is, the joint force will maintain a broad variety of means it can employ to achieve a wide range of results, and it can effectively integrate its actions to achieve a high level of unity of effort.

- Military, political and social entities and situations are complex, adaptive "systems."

- The JOE accurately describes the most likely security environment in the 2012-2025 timeframe.

3. Description of the Military Problem

In the varied and highly uncertain future security environment that we expect, potential adversaries will increasingly benefit from technology diffusion and access to advanced weapon systems. Complex and adaptive adversaries will likely employ traditional, irregular, disruptive, and catastrophic methods singularly or in combinations which are intended to keep the future joint force from being successful across the range of military operations.

3.A. Synopsis of the Expected Future Joint Operational Environment

The expected future operational environment for military forces will be extremely dynamic. Expanding webs of social, economic, political, military, and information systems will afford opportunity for some regional powers to compete on a broader scale and emerge on the global landscape with considerable influence. Increased globalization is bringing changes to the international strategic landscape based on a rise of new powers, population shifts, competition for natural resources, impacts on governance, a pervasive sense of global insecurity, and evolving coalitions, alliances, partnerships, and

new actors (both national and transnational) that will continually appear and disappear from the scene. Urban environments and other complex terrain will increasingly characterize areas of operation that may include both humanitarian crisis conditions and combat operations. Adaptive and thinking adversaries will continually seek new capabilities and new employment methods to counter the military superiority of the United States and its allies. Traditional advantages enjoyed by global and some regional powers in employing military capabilities will no longer be the norm. As new capabilities, or new methods of employing capabilities, are developed and become more accessible to more players, the conduct of warfare and crisis resolution will change. While the nature of war will remain a violent clash of wills between states or armed groups pursuing advantageous political ends, the conduct of future warfare will include combinations of conventional and unconventional, kinetic and non-kinetic, and military and nonmilitary actions and operations, all of which add to the increasing complexity of the future security environment.

3.B. Potential Threats

The global nature, ever-changing variety and adaptability of multifaceted adversaries pose a significant threat to our national interests. These threats include:

- **Transnational security threats**, including threats from networked ideologues, criminals, or other hostile elements, all of which may operate across the globe without regard to political boundaries and employing terrorism or other methods.

- **Regional, near-peer and emerging global competitors** with significant conventional forces, weapons of mass destruction or effect (WMD/E),[5] and long range delivery means, or niche capabilities with which they might gain an advantage against our forces.

- **Failing or failed states** that afford potential safe haven for terrorist or other criminal elements and which may be ripe for humanitarian or political crises that threaten stability and security in surrounding regions.

Joint forces will increasingly face nontraditional threats. We have historically addressed "adversaries" as combat forces and developed our capabilities accordingly. Future adversaries may not organize or engage US forces as traditional military organizations, but more as "networks" that strive to generate the social and political power necessary to achieve their aims.

[5] The term WMD/E relates to a broad range of adversary capabilities that pose potentially devastating impacts. WMD/E includes chemical, biological, radiological, nuclear, and enhanced high explosive weapons as well as other, more asymmetrical "weapons." They may rely more on disruptive impact than destructive kinetic effects.

Whereas traditional militaries may focus on battlefield victories, these adversaries' goals may be to simply sustain ideas and their organizations until they win a level of political or social legitimacy. Contending with such adversaries will require success beyond the battlefield by all instruments of national power. Nontraditional threats pose unique operational challenges and may have no obvious centers of gravity. Countering such threats, whether they employ terrorism or insurgency, WMD/E or breakthrough technologies, will require the joint force to operate more coherently to resolve future conflicts and crises.

3.C. Emerging Adversarial Challenges

Future adversaries may lack the ability or choose not to oppose the United States through traditional military action. These adversaries will challenge the United States and its multinational partners by adopting and employing asymmetric methods across selected domains against areas of perceived US vulnerability. Many will act and operate without regard for the customary law of war. The National Defense Strategy contains four mature and emerging challenges.

- **Catastrophic** challenges involve the acquisition, possession, and use of weapons of mass destruction/effect (WMD/E) or methods producing WMD/E-like effects.6

- **Irregular** challenges come from those employing "unconventional" methods to counter the traditional advantages of stronger opponents.

- **Disruptive** challenges may come from adversaries who develop and use breakthrough technologies to negate current US advantages in key operational domains.

- **Traditional** challenges are posed by states employing recognized military capabilities and forces in well-understood forms of military competition and conflict.

3.C.1. Catastrophic. Opponents seeking catastrophic effects include rogue states or terrorist actors bent on using WMD/E to paralyze US power. Deterrence of these actors becomes more difficult due to proliferation of these weapons and the inability to effectively find, fix, track, and target them. Additionally, deterring these actors is difficult since they may see benefit in violent action in and of itself, have few overt high-value assets to hold at risk, and often perceive the continuation of the status quo as intolerably costly. Opponents will exploit these weaknesses and seek asymmetric advantages to

[6] The NDS refers to WMD. The CCJO expands WMD to WMD/E (see footnote # 5, above).
[7] The NDS refers to WMD. The CCJO expands WMD to WMD/E (see footnote # 5, above).

impede our ability to dissuade acquisition of catastrophic capabilities, deter their use, and defeat them before they can be used. Particularly, proliferation of WMD/E technology and expertise makes our ability to prevent, and if necessary contend with catastrophic attacks, the highest priority.

3.C.2. Irregular. An irregular opponent is typically a state or nonstate actor who aims to erode our influence, patience and will by adopting unconventional methods in the face of overmatching US conventional capabilities. These adversaries view time as on their side which allows them to impose prohibitive costs in lives and other national treasure with the intent of compelling us to a strategic retreat from a key region or course of action. They seek to operate from relatively safe areas and from areas where they can be indistinguishable from the populace. Extremist ideologies and an absence of effective governance provide fertile ground for their activities. Protecting against irregular challenges is complicated by unclear and overlapping responsibilities of US government agencies for taking action. While efforts to resolve these issues are ongoing, opponents may seek to exploit the seams between agencies to achieve their goals, such as exploiting the different responsibilities between law enforcement and the military. Insufficient cultural knowledge, including language capability, intensifies the difficulty in responding to this challenge. These political and cultural divides make our ability to contend effectively with irregular challenges problematic, and highlight the need for an integrated response from multiple agencies (of a kind we don't currently possess) to best address this challenge.

3.C.3. Disruptive. Some of our potential adversaries may seek to employ breakthrough technologies that can potentially negate US military advantages in an operational domain and disrupt joint force operations. Adversaries, who are able to acquire a technology or technology application breakthrough, or obtain an advantage, will pose a significant danger to joint forces and to the security of the nation. An example is an adversary who attains a breakthrough capability that threatens satellite communication systems essential to maintaining our dominance in the cyber domain. In military operations an adversary able to cause significant disruption to our global positioning satellites could dramatically reduce our precision strike advantage. If not refined, cumbersome and time consuming DOTMLPF[8] change processes may not allow us to counter adversary breakthrough capabilities in time to make a difference.

3.C.4. Traditional. The traditional opponent is a state actor who will employ well-recognized forms of military force on force to challenge our power as well as that of our partners. Currently, our conventional superiority, coupled with the costs of traditional military competition significantly nullifies the incentive of a potential opponent to compete with us, but even with no "peer competitor,"

[8] Joint Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities

the armed forces of the United States must still be prepared to deal with one or more regional traditional challenges. The problem we face is maintaining sufficient capability against this challenge while effectively addressing the other three challenge areas under fiscal and organizational constraints.

3.C.5. Multiple Challenges. These four challenges rarely occur individually and in fact overlap in construct and execution. By choice or from necessity, adversaries can be expected to employ combinations of these challenges commensurate with their own tendencies and means. Adversaries active in one challenge area are expected to reinforce their capabilities with ways and means drawn from the other areas. Future adversaries will seek the space between clearly combatant and clearly criminal to avoid our traditional military strengths. The most dangerous circumstances arise when we face a complex blending of multiple challenges within individual operations or combinations of operations. The problem the joint force faces is providing and sustaining the capacity for simultaneously and effectively countering these challenges across the range of military operations in multiple locations around the world (we can do many things simultaneously but not necessarily with equal effectiveness; and vice versa). Recognizing that we cannot cover the entire globe with forward postured military forces, overcoming time-distance and access challenges will remain key to effectively preventing and responding to crises. Moreover, capability combinations from other instruments of national power will help overcome these challenges.

3.D. Nonadversarial Crisis Response Operations

The joint force must maintain an unsurpassed ability to fight and win the Nation's wars. However, it must recognize the national security implications of operations that do not necessarily include either adversaries or combat. Examples include peacekeeping, humanitarian relief operations and support to civil authorities, both foreign and domestic. These operations can contribute to preventing conflict and may require different types of capabilities or different methods of employing those capabilities than traditionally used for warfighting.

3.E. Joint Issues Relevant to Both Adversarial Challenges and Nonadversarial Crisis Response Operations

Regardless of the type of operation, the future joint force will require new capabilities and processes to help minimize the use of armed force and to most efficiently respond when necessary. This includes the need for engagement before and after warfighting/crisis response, the need for integrated involvement with interagency and multinational partners, and the need for multipurpose capabilities that can be applied across the range of military operations.

3.E.1. Shaping Operations. Maintaining peace and preventing conflict/crises are as important as waging major combat operations. Consequently, in addition to crisis response, the future joint force must be more involved in proactive engagement/crisis prevention. Peacetime shaping operations might be aimed at spreading democracy, creating an environment of peace, stability, and goodwill or even aimed at destabilizing a rogue regime. Shaping operations provide the joint force continuous opportunities to assess the structure and dynamics of potential adversaries and crisis locations to the extent practicable in anticipation of follow-on operations, should they be required. Continuous assessment is important because of the significant limits on precise "understanding" one might have of any adversary or situation. This implies the joint force must actively train and be equipped to be full partners in proactive and robust peacetime interaction activities. The importance of assessment should also be reflected in military education and exchange programs and combatant commander theater security cooperation plans. Such activities complement joint force basing and presence strategies, shaping the environment to establish conditions that enable rapid response should a crisis occur. Success in these activities relies heavily on active support and participation by other elements of national power.

3.E.2. Stability Operations. Winning in war requires achieving desired political aims. Achieving these aims requires resolving crises, winning conventional combat operations, and ensuring stability in affected areas. The joint force must be capable of successfully conducting stability operations prior to, during, and after combat operations or as a stand-alone mission. Stability operations are inherently interagency operations. As a critical component of such integrated operations, the joint force may be required to establish a secure environment and initiate reconstruction efforts to facilitate transition to civilian control. The joint force may also be required to provide security, initial humanitarian assistance, limited governance, restoration of essential public services, and similar types of assistance typically required in reconstruction efforts.

3.E.3. Interagency, Multinational, and Other Partners. Leveraging capabilities of interagency and multinational partners to address security challenges is desirable and increasingly important. However, multi-participant operations in the envisioned environment may exacerbate already significant interoperability challenges and complicate cooperation strategies. Additionally, future joint force operations will likely require interaction with any number of private, nongovernmental, regional and international organizations. Each organization brings its own (sometimes unique) equipment and procedures and its own, (sometimes supporting, sometimes competing) priorities, resulting in additional interoperability and operational integration challenges for the joint force.

3.E.4. Success Across the Range of Military Operations (ROMO). The ROMO in which the future joint force will be expected to succeed is depicted in

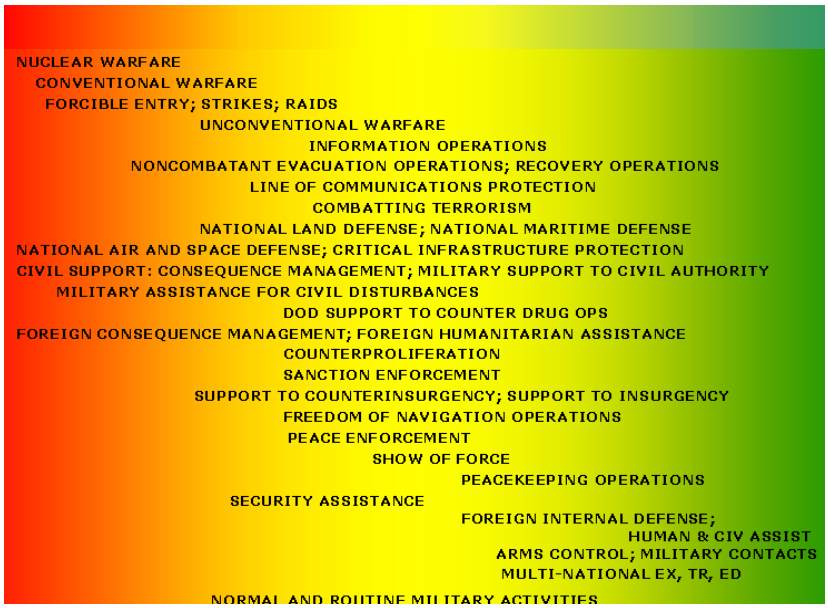

Figure 3 - Range of Military Operations

Figure 3. This figure reflects both adversary-focused and humanitarian non-adversary operations in which the future joint force is expected to engage. The United States will remain continuously engaged across the globe in a continuum ranging from peace and stability (maintained by shaping and deterrent activities), through conflict to reconstruction, with a goal of maintaining or returning to a state of peace and stability in which US national security interests are assured. The joint force commander's (JFC) ability to integrate various operations in the right proportion is key to achieving desired strategic outcomes. The uncertain environment combined with the scope of different operations will demand capabilities that are adaptable and can be applied in multiple types of operations simultaneously. Resource constraints alone will prevent an indefinite number of simultaneous effective responses across the ROMO.

4. Solution

This solution describes in broad terms how joint forces will operate across the full range of military operations in pursuit of strategic objectives and thereby overcome the postulated military problem. Applying the solution will vary with each particular situation, type of adversary and complexity of challenge. Consequently, the joint community will continue to refine potential solutions through subordinate joint concepts.

The CCJO solution offers five interrelated elements that describe how the joint force is expected to resolve the military problem:

- A **Central Idea**
- A **Systems View of the Environment** where all situations (adversary and crisis response) are viewed as involving complex adaptive systems
- The **Fundamental Joint Actions** that are key to designing joint force operations
- The **Supporting Ideas** which describe how the future joint force is expected to operate
- The **Key Characteristics** the joint force must possess to operate as envisioned

4.A. Central Idea

The joint force, in concert with other elements of national and multinational power, will conduct integrated, tempo-controlling actions in multiple domains concurrently to dominate any adversary, and help control any situation in support of strategic objectives.

4.B. A Systems View of the Environment

The complex environment described in Section 3 of this document requires an explanatory framework for appreciating the nature and dynamics of that environment. The framework used in the CCJO treats adversaries and situations as complex, adaptive "systems" that are the product of the dynamic interactions between connected elements and processes. Because of interconnectedness, no element or process of the system can be considered in isolation; no single approach will suffice to accurately capture the system's complexity, and a multidisciplinary approach becomes necessary (see Appendix C, Applying a Systems Framework).

A goal of this framework is to understand the structure and dynamics of adversaries and situations to the extent possible--and to continue to learn over time. Recognizing the inherent and significant limits on the joint force's ability to fully understand complex systems in general, and particularly the human element, this concept calls for a significant level of humility in expectations of certainty, precision and control. Using this framework allows the joint force to focus on perceived key elements and processes in the "target" system with the objective of causing system-level, vice merely local impact in order to fundamentally alter or influence the state of the system, accomplishing the mission as effectively and efficiently as possible. While systems tend to behave in unpredictable and unruly ways, the behavior of systems is far from merely random and beyond influence. While many events will be unpredictable and uncontrollable, broad patterns often emerge and systems respond to outside

influences, purposeful or otherwise. Recognizing these patterns and applying integrated systemic actions across multiple domains enables the joint force to achieve notable success in complex operational environments. The inability to precisely predict the outcome of actions taken on a system, however, requires an adaptive and flexible approach to joint force operations.

This framework supports an expansion of the current combined-arms approach of joint operations to achieve greater levels of integration at strategic and operational levels in an increasingly complex, multi-dimensional environment. It seeks to allow more effective strategic and operational planning and possibly more discriminate joint force employment as a way of achieving greater mission success.

4.C. Fundamental Joint Actions.[9]

To enable accomplishment of its particular objectives, the joint force, other agencies and multinational partners take many actions. However, certain fundamental actions are primary to organizing and integrating efforts in time, space and purpose. More importantly, through unified action, these actions may provide a common basis for integrating efforts with other agencies and partners. Such commonality should permit a more coordinated and therefore more effective national effort.

Fundamental actions taken by the joint force are:

- **Establish, expand, and secure reach**
- **Acquire, refine, and share knowledge**
- **Identify, create, and exploit effects**

The joint force will employ these actions in every campaign, varying the focus and intensity of each as situations change. These actions can be executed in multiple situations, usually simultaneously and their intensity and associated level of effort will vary during campaigns.

4.C.1. Establish, expand, and secure reach. This action describes the ability of the joint force to access, coordinate and employ essential capabilities available inside and outside the operational area to shape an environment, deter or defeat an adversary, resolve crises, or support other strategic objectives.

Reach, as used here, is an expansion of the military term "operational reach," and includes extending access and building mutually beneficial relationships necessary to support the introduction or continued basing of forces and

[9] These joint actions were derived from three cycles of actionable recommendations developed from lessons learned and experimentation and submitted by USJFCOM to the Joint Requirements Oversight Council (JROC).

sustainment. The JFC constantly assesses the ability of the joint force to conduct military tasks and to support other nonmilitary tasks directed by national leadership. Reach describes the capacity to do so in multiple dimensions and across the physical, virtual, and human domains.

- **Physical reach** is established through military operations or diplomacy either by creating an environment of cooperation and mutual understanding or by forcibly gaining access in the face of adversary strategies and anti-access capabilities. Expanding and securing physical reach is accomplished through kinetic and nonkinetic means to facilitate operational flexibility and to enhance security along all lines of communications (LOCs). Securing physical reach includes protecting LOCs to discourage or prevent adversaries from disrupting operations.

- **Virtual reach** is established through the use of cyberspace (includes all domains through which information flows) to acquire, transmit and monitor information in order to gain knowledge. Expanding virtual reach is accomplished by having adaptive virtual capabilities. Securing virtual reach requires preventing adversaries or other entities from disrupting operations in the virtual domain.

- **Human reach** is established by thoroughly understanding the adversary or other groups through various means--examples include diplomacy, human intelligence, and cultural studies. Expanding human reach is accomplished by continuously engaging and studying the group of interest in order to know when it is adapting and conditions are changing. Securing human reach is gained through mutual trust garnered over time that may discourage or prevent potential adversaries from disrupting operations.

Physical, virtual, and human reach sufficient for success demands the persistent attention of the JFC in day-to-day operations. Reach is best established by integrated and complementary military, diplomatic, economic, information, and societal actions.

4.C.2. Acquire, refine, and share knowledge. This action describes the ability of the JFC to work within and across national and international sources to build and sustain the knowledge necessary to identify required actions and assess effects.

The better we understand our own forces and capabilities, the adversary and the environment, the better we can employ and integrate joint force actions to create decisive effects. Knowledge must be timely, relevant, and accurate to be of value, and it must be acquired, prioritized, refined, and shared vertically (strategic, operational, and tactical) and horizontally (within the joint force and among interagency and multinational partners). All knowledge is built on

information from integrated strategic, operational and tactical sources, both military and civilian. The future joint force must possess the capabilities required to accomplish this integration.

Knowledge allows the joint force to see, understand, and act before an adversary can, or before operational needs go unmet in humanitarian crises. It is essential to the identification, creation and assessment of effects.

4.C.3. Identify, create, and exploit effects. This action describes the ability of the joint force to integrate joint capabilities with those of other instruments of national power to create a desired change in the operational environment or prompt a desired action by an adversary or others.

Effects are the outcomes of actions taken to change unacceptable conditions, behaviors, or freedom of action to achieve desired objectives. This may involve influencing the environment, defeating an adversary, or rebuilding after a crisis. Creating effects depends upon acquiring knowledge and establishing reach. Knowledge of the adversary or situation as a system is required in order to identify actions that will have the greatest likelihood of creating desired effects. Reach is required to bring actions to bear. Identifying, creating, and exploiting effects to achieve assigned objectives is a continuing, iterative process across the diplomatic, information, military, or economic instruments of national power. Effects created by one instrument of national power may influence or change an effect created by another--it is essential that effects be considered holistically by the joint force prior to action. The JFC considers planned diplomatic, information, and economic tasks that, when integrated with military tasks, will cause the desired effects that in turn supports achievement of objectives. The JFC balances among the actions of knowledge, reach, and effects to generate joint synergy and also attempts to harmonize military actions with those of the other instruments to maximize overall impact. Since the outcome of actions taken against a complex system cannot be predicted with precision, it is essential that the effects be continually assessed and actions adjusted until the desired effects are created and objectives are achieved.

4.C.4. Joint Force Commander's Conceptual Battlespace.[10] The fundamental actions of acquiring knowledge, establishing reach, and creating effects overlap to form the JFC's "conceptual battlespace" (Figure 4). This conceptual battlespace and the JFC's actual physical battlespace define where the JFC focuses effort and has the greatest influence. Within this conceptual battlespace the JFC orchestrates military actions within a continuous operations cycle of planning, preparing, executing, and assessing--as depicted in the center of Figure 4.

[10] Within the context of this document, the term "battlespace" is the conceptual or physical area in which the joint force plans and executes operations or engages in activities whether or not actual armed conflict is involved.

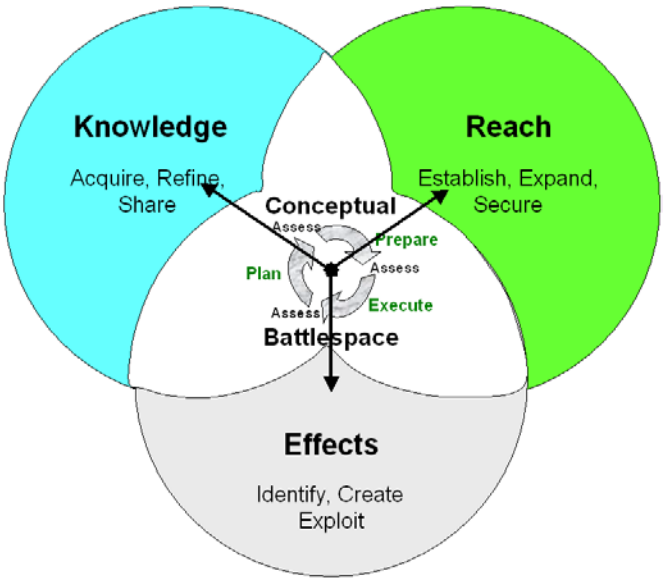

Figure 4 - Conceptual Battlespace

The proportion of effort applied to each action will vary throughout an operation. The JFC will also continuously balance the military effort in concert with other instruments of national power. The JFC harmonizes military with nonmilitary capabilities by identifying shared interests among disparate actors, and coordinating all actions in pursuit of mutually beneficial and complementary objectives.

This document posits that other agencies and partners will also be involved in similar fundamental actions to acquire knowledge, establish reach, and create effects. Just as the JFC operates within a conceptual battlespace, leaders of other agencies, and partners could operate within a similar conceptual "workspace" that along with their physical workspace focuses their effort.

4.C.5. Fundamental Actions in the Context of Unified Action. Through unified action, the instruments of national power coordinate the execution of their fundamental actions. Other actors, such as multinational partners and international organizations, will also be orchestrating fundamental actions in a manner similar to the joint force. Coordination links, greater mutual understanding between partners and practiced procedures assist in attaining unified action. To the degree fundamental actions of multiple partners can be coordinated to be mutually supporting, the greater the likelihood of magnifying the overall impact. This has the potential to significantly enhance the effects created through the application of complementary capabilities, and in turn, should help realize more effective and enduring accomplishment of strategic objectives.

4.D. How the Future Joint Force Will Operate-Supporting Ideas

To solve the military problem described in section 3, the joint force is expected to operate in the following manner:

4.D.1. Act from multiple directions in multiple domains concurrently. To resolve and counter several of the adversarial challenges previously described, the joint force will operate from multiple directions in multiple domains (listed in Figure 5). Operationalizing this idea will enable the joint force to turn time to its advantage, diminish advantages an adversary seeks by employing irregular methods, assist in identifying and finding specific catastrophic threats, and negate the advantage sought by an adversary's employment of a disruptive method.

Physical	Virtual	Human
Air	Cyber	Social
Sea	Information	Moral
Land		Cognitive
Space		

Figure 5 - Domains

"Multiple domains" refers to any potential operating "space" through which the target system can be influenced--not only the domains of land, sea, air, and space, but also the virtual (information and cyber) and human (cognitive, moral, and social) domains. Likewise "multiple directions" applies not only to spatial directions--as in physically moving on multiple lines of communication--but more broadly to any potential approach within any domain. It is critical to operate from multiple directions in multiple domains because most complex redundant systems are resilient and tend to survive the overload of any one variable. To overcome this resilience, the joint force will strive to create systemic effects. Creating systemic effects generally requires multiple actions originating from dispersed locations at any point on the globe or in space and concentrated against key processes and elements within an adversary's system. These actions may be distributed across the entire globe or across the depth and breadth of a more focused battlespace.

Executing joint actions concurrently where and when appropriate, is implicit within this idea. Although it may not be possible, or always desirable, to execute all actions simultaneously, acting concurrently generally contributes to systemic impact by precluding a system from adapting to any one action. This approach is particularly appropriate given the complexity of the operational environment and wide array of potential future threats and adversaries. Operating in this manner is designed to place an adversary in a dilemma that overwhelms his ability to effectively act, limiting his ability to adapt, thereby reducing his options and hastening the disintegration of his cohesion. This idea of concurrent execution extends beyond the application of kinetic, military means. It may include synchronizing joint force actions with actions of interagency and multinational partners.

4.D.2. Conduct integrated and interdependent actions. Integrating joint force actions toward a common goal maximizes the complementary and reinforcing results of those actions, enhancing effectiveness and providing a "bigger bang for the buck," a quality especially critical to a force operating globally with finite resources. The idea of integrated actions applies to Department of Defense and other elements--multinational military partners and nonmilitary agencies acting in concert with the joint force. It also applies more broadly to unified action involving the joint force and other elements of national power. US agencies must operate with expected levels of integration in order to most effectively and efficiently achieve strategic objectives.

Interdependence is a Service's purposeful reliance on an other Service's capabilities to maximize complementary and reinforcing effects, while minimizing relative vulnerabilities in order to achieve the mission requirements of the JFC. Interdependence reduces unnecessary redundancy without reducing effectiveness. Prerequisites for interdependence are: interoperable systems, broad understanding of the differing strengths and limitations of each Service's capabilities and how they are applied, clear agreement about how those capabilities will be integrated in any given operational setting, and absolute mutual trust in and commitment to interdependence throughout the joint force. Taken too far, reliance on interdependent capabilities could deprive future warfighters of necessary capabilities for success in combat. Force development and force employment decisions must therefore emphasize effectiveness over efficiency. Possible areas for increased interdependence include joint fires, force projection, sustainment, battle command, and air and missile defense.

Conducting integrated and interdependent actions is a necessary adaptation to the complexity of the operational environment. It is intended to fully leverage joint force capabilities to realize the synergy necessary to effectively counter multiple threats and challenges across the range of military operations conducted simultaneously around the world. This idea explicitly recognizes there may be "capability shortages" within any one domain that can be offset through the integrated and interdependent application of capabilities resident in other domains. Applying this idea will enhance joint force agility and speed of action, and enhance joint force capacity to deter, prevent, and defeat the challenges posited for the future operating environment.

4.D.3. Project and Sustain the Force. The ability to project and sustain from intertheater and intratheater distances enables the joint force to maneuver to strategic and operational positions of advantage. The joint force will exploit all available military and commercial lift, including advanced military lift platforms. Advanced platforms will allow the joint force to avoid deploying into predictable and vulnerable ports and airheads, posing increased

dilemmas to the adversary. This ability also allows the joint force to respond in a matter of days rather than weeks.

Conducting operational maneuver from intertheater distances requires continuous acquisition, refinement, and sharing of knowledge, which begins at home stations, accelerates during initial entry, and continues throughout deployment. Continuous connectivity between deploying joint forces and elements already in the theater is essential to creating increased agility for the joint force and greater options for the JFC.

Distributed support and sustainment will provide the means for maintaining freedom of action for committed forces throughout a campaign, throughout the battlespace, and with the smallest feasible deployed logistical footprint. The joint force will continue to preposition stocks and supplies, both ashore and afloat, to support initial and sustained force projection. In particular, sea basing should improve responsiveness and enhance operational flexibility.

Intertheater and intratheater operational maneuver and sustainment enhance joint force agility and reach, and are required to meet traditional, as well as irregular, catastrophic, or disruptive challenges. All joint force operations will require the same ability to refocus assets rapidly from one geographic location to another. The joint force, responding to stability and homeland security requirements, will capitalize on the same agility, modularity, and distributed sustainment system that support combat operations.

4.D.4. Act directly upon perceived key elements and processes in the target system. This concept envisions acting directly upon perceived key elements and processes of a target system in order to produce systemic (i.e., operational and strategic) vice merely local results. Systemic results may be achieved through the creation and exploitation of effects through both direct and indirect approaches. This means acting upon those key elements and processes that are expected to produce direct consequences as well as those that should propagate through the target system in increasing magnitude toward the desired result. Conversely, this means forgoing those actions and bypassing those parts of the target system that do not contribute to desired results.

In a combat operation, this could involve penetrating adversary defenses to strike directly at a strategic or operational objective rather than attacking on a broad front to systematically destroy adversary tactical formations. In a stability operation, acting directly upon perceived key elements and processes might involve training indigenous forces, undermining support for insurgent forces, or co-opting external parties, any of which could be key to establishing a secure environment. Applying this idea enables more effective and efficient joint force actions and operations, and focuses joint force actions on the elements of the target system that must be controlled or defeated for enduring

success. Striking directly at key elements and processes aids the joint force in rapidly achieving objectives, while minimizing unproductive actions and unintended effects. A benefit of this approach may be to minimize costs--potentially to all parties, since it will often be desirable to minimize the level of damage.

4.D.5. Control tempo. Tempo is the pace at which actions occur. Controlling tempo enables the joint force to seize the initiative and counter the advantage of time often exploited by an adversary, or to rapidly establish a sense of normalcy during a humanitarian crisis. Speed is relative and generally the goal is maintaining a higher tempo than the target system, whether it is an adversary or a humanitarian crisis. In a combat situation, controlling tempo can effectively counteract adaptive adversaries by establishing a tempo they cannot match, overwhelming their ability to effectively adapt. In a humanitarian disaster, being able to act more quickly than the deteriorating situation can allow a force to change the dynamics of a developing crisis and restore stability. An imminent catastrophic threat in particular may demand speed of action. The capacity for rapid action enhances flexibility and adaptability across the range of military operations regardless of the challenge.

There is more to controlling tempo, however, than simply speed of action. While speed can be an important asset, speed for its own sake is rarely useful. Controlling tempo may mean biding time when the situation calls for patience. The appropriate speed of action that directly supports gaining or maintaining desired tempo is the goal.

4.D.6. Transition quickly and smoothly among the various actions. Most systems, such as future adversaries employing multiple operational methods (e.g., traditional, irregular, catastrophic, disruptive), may be resistant to a single action against them. Instead, they may require combinations of actions, sequenced actions and complementary actions to establish conditions enabling subsequent actions that eventually achieve desired results. Since it is generally impossible to act upon a system with any foreknowledge of the precise results, the joint force must plan for and quickly exploit anticipated and fleeting conditions that result from joint force actions while the opportunities exist. The joint force must have a comprehensive capability to assess changing conditions, in order to anticipate transition opportunities, and the capacity to quickly and effectively transition. Recognizing such opportunities and transitioning smoothly and quickly in the face of unexpected or unanticipated system behavior is essential to effectively dealing with adaptive adversaries and complex humanitarian crises and, while perhaps difficult, helps control tempo and maintain initiative.

4.D.7. Manage perceptions and expectations. Military operations, whether combat or humanitarian in nature, involve human social systems. Because

social systems are dynamic and include cultural, religious and regional perspectives, managing perceptions and expectations is critical, but will manifest differently depending on circumstances. In humanitarian operations, the objective generally is to make a clear and compelling case for the aim and conduct of our actions in order to foster support. In combat operations, an objective may be to deceive or confuse the adversary as to true friendly intentions. By comparison, effective deterrence may depend on the adversary clearly understanding what behavior is unacceptable and knowing the consequences of such behavior. Managing perceptions and expectations is also key to gaining support of the local populace that irregular threats rely on for their existence, and in countering the ability of an adversary to employ a technology or capability in a manner potentially disruptive to joint force operations. Success in this arena of instant, global communications will also require unified action.

4.D.8. Act discriminately. The joint force will act discriminately to the degree possible and desirable under the circumstances, in order to minimize collateral damage and unintended consequences. "Collateral damage" refers to more than unintended physical damage. It includes any unintended effects that detract from the objective. For example, given the high stakes in dealing with a nuclear capable adversary, it is critical to act discriminately in order to help avoid unintended catastrophic results. The joint force should not expect perfect knowledge about a target system or a high level of precision in manipulating that system before acting--both are unrealistic expectations. Rather, the joint force should strive to be cognizant of how any actions might propagate unintended consequences throughout the target system. Discriminate actions are particularly important when confronting irregular challenges, where the joint force can expect to confront adversaries operating in and among the local populace. Discriminate actions are also applicable when confronting catastrophic challenges, where precision is key and unintended consequences could result in undesirable effects.

4.E. Characteristics of the Joint Force

In order to operate as described in the previous section, the joint force must have certain key characteristics.[11] These particular characteristics (Figure 6) are considered important because they will

The future joint force must be:

Knowledge Empowered
Networked
Interoperable
Expeditionary
Adaptable/Tailorable
Enduring/Persistent
Precise
Fast
Resilient
Agile
Lethal

Figure 6 - Joint Force Characteristics

[11] Characteristics are traits, qualities or properties that distinguish an individual, group, or type. *Webster's Third New International Dictionary*, Merriam-Webster Inc., 1986.

guide how the joint force is developed, organized, trained and equipped and must be reflected in all subordinate concepts in the JOpsC family. Such a force is designed to be a dominant national asset, compelling in all situations, and lethal when required.

4.E.1. Knowledge Empowered. The future joint force will emphasize better decisions made faster throughout all levels of command. The fundamentals of this knowledge empowerment are experienced and empowered decision makers benefiting from an enhanced understanding of the environment, potential adversaries and cultures, as well as enhanced collaborative decision-making processes. Although we will never eliminate the fog of war, an increased level of understanding should empower leaders throughout the joint force. This will enable them to anticipate and act as opportunities are presented, apply innovative solutions, mitigate risk, and increase the pace, coherence, and effectiveness of operations even in complex environments. A knowledge-empowered force, capable of effective information sharing across all agencies and partners, will be able to make better decisions quicker, increasing joint force effectiveness.

4.E.2. Networked. All joint force elements will be connected and synchronized in time and purpose to facilitate integrated and interdependent operations across the global battlespace. A networked joint force can extend the benefits of decentralization-initiative, adaptability, and increased tempo--without sacrificing the coordination or unity of effort emblematic of centralization. The joint force will capitalize on being networked by making user-defined information and expertise available anywhere within the network, and will exploit network connectivity among dispersed joint force elements to improve information sharing, collaboration, coordinated maneuver, and integrated situational awareness. Networks should extend to interagency and multinational partners, where possible, to support and enhance unified action.

4.E.3. Interoperable. Interoperability is a necessary prerequisite to integrated and interdependent joint operations. The future joint force will be able to share and exchange knowledge and services between units and commands at all levels. The interoperable joint force can act in an integrated and ultimately an interdependent way among joint force components and capabilities, facilitating more effective interoperability with interagency and multinational partners. Interoperability implies systems, capabilities and organizations working in harmony across all joint force elements; however, it involves more than systems and equipment. Interoperability includes a cultural change at all levels that extends through DOTMLPF.

4.E.4. Expeditionary. An expeditionary joint force is organized, postured and capable of rapid and simultaneous deployment, employment, and sustainment. Implicit in this is a joint force that converges mission-tailored capabilities at the desired point of action from dispersed locations around the globe,

regardless of anti-access or area-denial environments. As elusive and adaptive adversaries seek refuge in remote and inaccessible areas, the norm will be short-notice operations, austere operational environments, incomplete information and the requirement to fight on arrival throughout the battlespace and to dominate potential adversaries for the duration of a campaign. The future joint force will be immediately employable even in austere conditions and largely independent of existing infrastructure. As a situation evolves, these elements will be readily capable of transitioning to sustained operations, blending into new capability packages to execute follow-on or different operations, or dispersing until otherwise required. The term "expeditionary" also describes the joint force mindset that inculcates an expeditionary perspective into all aspects of force planning, training, and education. The future joint force will increasingly require a mechanism to enable global sourcing of military forces and capabilities; in order to leverage the most responsive, best positioned forces at the time of need.

4.E.5. Adaptable/Tailorable. An adaptable/tailorable joint force is versatile in handling disparate missions with equal success; scalable in applying appropriate mass and weight of effort; agile in shifting between different types of missions without loss of momentum; responsive to changing conditions and environments; and whose leaders are intellectually empowered by a background of experience and education. Adaptability ensures that the joint force can rapidly shift from one operation to another across the range of military operations, and adjust operations based on changing conditions. An adaptive mindset and flexible force capabilities are essential for success in countering the full spectrum of anticipated threats and challenges and enhance the joint force ability to respond with unmatched speed of decision and action.

4.E.6. Enduring/Persistent. This has both a mental and physical aspect. The mental aspect can be expressed as will, while the physical aspect can be expressed as the staying power of the joint force--in both cases, sustaining ours while breaking the adversaries. This characteristic is especially important given the interaction between the anticipated environment, joint force operations, and unanticipated events in any complex and adaptive system. It demands that the joint force possess the depth and capacity to sustain operations over time, regardless of the situation or adversary.

4.E.7. Precise. The ability to act directly upon key elements and processes demands precisely executed joint actions. Precision extends beyond surgical strikes to the exact application of all joint force capabilities to achieve greater success at less risk. Knowledge gained in all dimensions will enhance the capability of the JFC to understand a situation, determine the effects desired, select a course of action and the forces to execute it, accurately assess the effects of that action and reengage as necessary. Regardless of its application in combat or noncombat operations, the capability to engage precisely allows

commanders to shape situations or battlespace in order to generate the desired effects while minimizing unintended effects and contributing to the most effective use of resources. The overall effect of precision is far-reaching with considerable payoff in terms of combat effectiveness.

4.E.8. Fast. Key to effectively controlling tempo is the ability to be faster than the adversary or situational events. The speed at which forces maneuver and engage, or decisions are made, or relief is provided, will largely determine operational successes or failures. Successfully overcoming future challenges may require speed of action across all domains. Acting fast is in itself a force multiplier and often a requisite for the effective application of military capabilities.

4.E.9. Resilient. To operate successfully, the future joint force must be able to protect and sustain its capabilities from the effects of adversaries or adverse conditions. It must also be able to withstand pressure or absorb punishment without permanently losing its focus, structure, momentum, or integrity. Resilience provides joint forces with the ability to sustain performance at high levels, despite losses, setbacks, or similar developments. The future joint force must be resilient to meet the demands of being successful across the ROMO in an uncertain future security environment.

4.E.10. Agile. An agile joint force has the ability to move quickly and seamlessly to defuse (or help defuse) a crisis situation or effectively operate inside the decision loop of even the most capable adversary. Agility is about timeliness--thinking, planning, communicating, and acting in a manner that allows effective and efficient adaptation to an unfolding situation. Agility permits JFCs to exploit fleeting opportunities, protect friendly vulnerabilities, and adapt rapidly to changes in the operational environment--a characteristic essential to a force that is expected to succeed across the range of military operations.

4.E.11. Lethal. This is the ability to destroy an adversary and/or his systems in all conditions and environments when required. It includes the use of kinetic and/or nonkinetic means, while leveraging technological advances in greater precision and more devastating target effects at both longer-ranges and in close combat.

5. Concept Risk and Mitigation[12]

Fundamental to the central idea of this concept is that the future joint force will act in an integrated manner on "key elements and processes" within a

[12] This section addresses a potential risk associated with following this concept as opposed to alternatives. It does not address the operational risk of failure inherent in conducting any particular mission.

target system in order to more efficiently and effectively achieve operational or strategic goals. This approach emphasizes precision and the exploitation of available knowledge. Taken to the extreme, it could lead to developing an inflexible force that overly focuses on finesse in planning and executing military operations. The risk is that the future joint force and its supporting national base may lose their ability to fight protracted conflicts. We must retain the ability to operate in an environment where we may not be able to identify or affect key elements and processes. The nature of war and the ability of adversaries to mask actions and act in unexpected ways require that we mitigate this specific risk by maintaining a force with the staying power and depth capable of applying sufficient mass and force when required.

6. Implications

The CCJO proposes a solution for successfully conducting future military operations. Acceptance of the solution within this concept has implications for future concept and joint force development and employment. These implications apply across DOTMLPF and policy, the specifics of which should be derived from subordinate concept development. Some of the broader implications of this concept are addressed below.

6.A. Joint Doctrine

To reflect the changing nature of the environment and how we operate, the joint doctrine process must become more efficient and streamlined, leveraging results from concept development and experimentation. Additionally, the changing conduct of war suggests a review of the Principles of War in the context of 21st century warfare and crisis resolution.

6.B. Leadership and Education

Execution of complex operations as described in the solution, requires knowledgeable, empowered, innovative, and decisive leaders, capable of leading the networked joint force to success in fluid and perhaps chaotic operating environments. Future joint leaders will require more comprehensive knowledge of interagency and foreign cultures and capabilities.

6.C. Joint Capabilities Identification and Development

Just as our challenges change continuously, so too must our military capabilities. The current joint force is most capable of contending with traditional security challenges. However, other challenges are increasing, and we must therefore increase our capabilities for handling them. Subordinate concepts in the JOpsC family must address capability development that allows the future joint force to contend with an array of security challenges, with an

emphasis on those capabilities that help resolve disruptive, catastrophic, and irregular challenges.

6.D. Transforming Towards Unified Action

A significant premise of this concept involves integrating the actions of the joint force with those of interagency and multinational partners to achieve broader national objectives. However, different capabilities and rates of transformation among these partners may increasingly pose challenges for effective unified action. As a result, the future joint force must gain and maintain the ability to operate effectively with participants of varying capabilities. Currently, such integration is typically *ad hoc* and unsuitable for dealing with the future environment. Greater integration should be a focal point of policy development to clearly delineate roles and mutual responsibilities. This effort may require an overarching national-level concept that provides direction to all US government agencies. This would include more robust planning, coordination, and execution processes at all levels, to include expanding a collaborative information environment throughout the interagency community and multinational partners. Such an initiative would likely have wide-ranging DOTMLPF impacts throughout the joint force. Finally, within US government agencies alone, the differences between cultures and objectives may be significant, which implies that the United States should continue to expand education and training as a means of enhancing mutual understanding and overcoming cultural and technical differences. Areas of potential interagency/multinational involvement include:

- Policy Coordination
- Resources
- Security Operations
- Infrastructure Development
- Economic Development
- Governance
- Rule of Law

The areas listed above, except for policy coordination, are already under review by the US Department of State, the efforts of which may result in interagency capabilities and offer potential candidates for joint experimentation. Interagency and multinational capabilities should be exercised continuously to support future integrated operations and to build trust and understanding. This is particularly important in light of command relationships that may vary between “supporting” and “supported.”

6.E. Comprehensive Campaign Framework

A comprehensive campaign framework is necessary to integrate the efforts of multiple entities for coherent actions. This framework should include military components as well as various government and nongovernment, national, and multinational partners. A common framework will assist all partners in developing mutually supportive strategic and operational plans and actions. It should be applicable globally, across the range of military operations. Appendix D proposes a first step towards the development of an appropriate campaign framework through joint experimentation.

Appendix A

Reference Documents

Secretary of Defense, Strategic Planning Guidance, 2006-2011

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Appendix B

Abbreviations and Acronyms

CCJO	Capstone Concept for Joint Operations
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership and Education, People and Facilities
JETCD	Joint Experimentation Transformation and Concepts Division
JFC	Joint Force Commander
JOE	Joint Operational Environment
JOpsC	Joint Operations Concepts
NDS	National Defense Strategy
ROMO	Range of Military Operations
WMD/E	Weapons of Mass Destruction or Effect

Appendix C

Applying a Systems Framework

Defining a System

Understanding the idea of a "system" is essential to understanding this concept. A system is any complex set of elements that are interconnected with one another.[13] A system's variables--the things about a system that change, the things that can be acted upon to influence the system--include the elements that make up the system and the processes by which those elements interact with one another. The behavior of a system is the product of the dynamic interaction of its various elements and processes. Systems by this definition can take any number of forms. A military organization, large or small, is a system, the output of which is the actual or potential generation of combat power through various command and control, logistic, maneuver, protection, fires and other processes. Two or more military organizations locked in an engagement, battle, campaign, or war constitute a system, the outcome of which is changes in the state of each organization, in the surrounding environment and possibly in the mutual relationship. Governments, populations, economies, and cities are all systems. These social systems tend to exhibit a willful behavior that is often messy and unpredictable. Conversely, railway networks, and electrical power grids are also examples of systems often of military interest, but which tend to exhibit more mechanistic and predictable behavior.

Success Mechanism

A key element of the systems framework is the success mechanism, the causal interaction by which the implementation of this concept is expected to bring about success--in whatever manner success may be defined. The broad success mechanism of this concept is to fundamentally alter or influence the balance of a target system in ways intended to render it more amenable to our objectives through the multiple, integrated and simultaneous actions directed at critical system elements and processes.

This broad success mechanism could take various forms in practice depending on the actual situation. In the case of combat, for example, the success mechanism could be crippling or paralyzing the adversary system so that it can no longer function as a cohesive, purposeful whole--even if entire components of that system may remain undamaged. By contrast, in the case of disaster-relief operations, the success mechanism could be transforming the effected

[13] Ludwig von Bertalanffy, *General System Theory: Foundations, Development, Applications* (New York: George Braziller, 1968), p. 33. Also Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1997), p. 6.

social system--the local government and population--into a cohesive, functioning and stable whole able to sustain itself once again. In the case of strategic deterrence, the success mechanism would be convincing the targeted decision-making system to consider only a narrow, acceptable range of courses of action.

While a particular success mechanism may be desirable from our point of view, whether it will produce the desired result in the target system depends not primarily on our desires but on the internal dynamics of that system. Some systems are amenable to certain approaches, while others simply are not. As mentioned, many systems can be highly resistant to efforts to change their state, nearly regardless of the amount of effort expended. As an example, while in combat it may be desirable to cripple an adversary systemically, depending on the adversary (and our ability to understand its inner workings) there may be little choice but to defeat the adversary system cumulatively by wearing down each of its elements.

What this Framework is Not

It is not an argument that most systems can be understood with anything resembling certainty or that systems can be manipulated with anything resembling deterministic mastery or precision. This framework is not a call for a systems engineering approach to the conduct of military operations. The conduct of war will always be as much an art as a science. Although the systems approach is helpful in understanding the complex nature of a given target, it cannot account for all variables. Most systems will confound detailed understanding; their elements and processes cannot be accurately mapped; much of their inner dynamics will remain opaque to comprehension. Systems will often exhibit unpredictable, surprising and uncontrollable behaviors. Sometimes systems will absorb outside actions with little or no change in system state, while at other times systems will submit to outside influences, although the results will rarely be exactly as expected. Unintended consequences will be commonplace. Most systems will react to the actions taken upon them. While some subsystems of military interest are essentially mechanical systems and will submit to analytical methods, most systems of military interest ultimately are not amenable to analytical or engineered solutions. End states will rarely be determinable in advance of operations. Instead, this concept calls for a significant level of humility in expectations of certainty, precision and control. This concept argues rather for a framework that sees operations as learning--that is, military actions themselves become an experiential means of learning about a target system. Rather than being an engineered solution, a military operation evolves as the joint force adapts responsively to the target system adapting to it.

Appendix D

Integration of Joint Activity

Simultaneity and Proportionality of Effort in Joint Campaigning

Purpose

This appendix describes an approach to examine joint campaigning as a first step towards the development of an alternative comprehensive campaign framework. It is offered to initiate joint experimentation.

This proposed framework goes beyond the traditional use of "phasing" by aggregating joint activities into specified "lines of effort." It emphasizes simultaneous actions in multiple lines of effort, executed proportionately to accomplish the JFC's campaign objectives. It also underscores the increased importance and need for UA in campaign planning, execution, and assessment.

Factors to Consider in Application

This proposal provides a flexible method for conceptualizing and organizing the activities considered necessary for a given campaign. It is intended to support, not replace, a JFC's "operational design" required for mission accomplishment.

Developing a campaign for an operational scenario will vary according to the strategic objectives, the adversary, terrain and weather, capabilities and support available, time available, and civil considerations. The increased importance of UA demands that interagency and multinational force capabilities, and objectives also be considered and integrated where appropriate.

A campaign framework should be adaptable, allowing a single framework to be used for various operations within a changing environment. It takes into account the full range of military options and must be flexible enough to also account for the likely incorporation of interagency and multinational partner capabilities and objectives throughout a campaign. Regardless of this framework's impact, some aspects of campaign design, such as "objectives," are not likely to change.

Integrated Lines of Effort

Phases have traditionally been used to organize the overall campaign effort. They allow for the systematic planning of activities to achieve objectives, which might not be attainable all at once. They also help JFCs and staffs visualize and consider the entire operation or campaign while defining requirements in

terms of forces, resources, time, space and purpose. Phases, however, tend to imply a sequential approach to campaigns with an associated lack of flexibility and inadequately reflect the importance of integrated effort among all interagency players.

The CCJO acknowledges that "complex adaptive" adversaries and other situations will demand an integrated and flexible approach. A new campaign framework should provide a means to plan, execute and assess campaigns in an integrated manner. This appendix retains the traditional phase titles and includes proposed new phase titles--portrayed as lines of effort (Figure D-1).

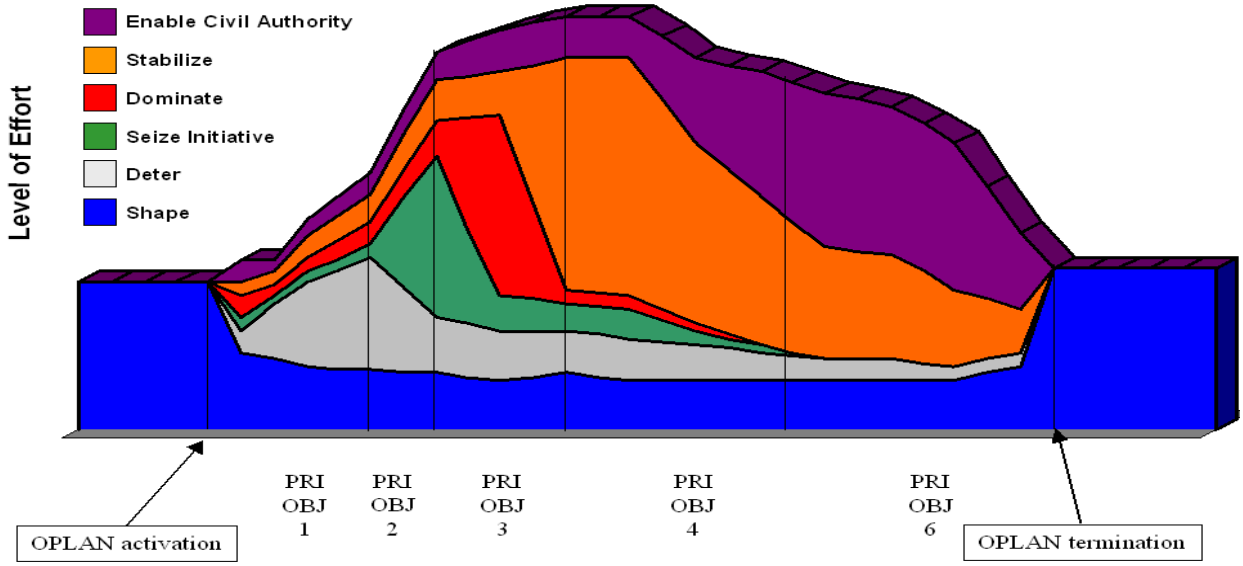

Figure D - 1 - Lines of Effort in Planning

Instead of showing these lines of effort in a traditional horizontal array, however, it stacks them vertically, emphasizing the potential for all lines of effort to be applicable throughout a campaign. The lines of effort represent the activities in which a JFC must engage to successfully accomplish objectives during a campaign. They are titled *Shape, Deter, Seize Initiative, Dominate, Stabilize and Enable Civil Authority*. The aggregate of all lines of effort equate to the full level of effort necessary (in planning or execution) or available (in execution or assessment) to accomplish objectives.

Benefit of Using Lines of Effort

The simultaneous execution of activities within each line of effort reinforces the need to continuously consider activities across all lines of effort during campaign planning and execution. This approach also captures the proportionate levels of activity that may be required to achieve priority objectives. In so doing, it helps the JFC visualize the required activities for

future transitions and subsequent operations, reflecting increasing or decreasing levels of effort. As the campaign is executed, the JFC acquires knowledge, extends reach and creates effects. Concurrently, the JFC assesses the changing operational environment and varies the amount of effort within each applicable line while focusing on a series of priority objectives that contribute to achieving the strategic objective. The level of effort will vary depending on the type of operation, and the actual events that occur. Figure D-2 depicts a proportional level of effort for a notional campaign where actual events have modified the framework from what was originally planned (Figure D-1).

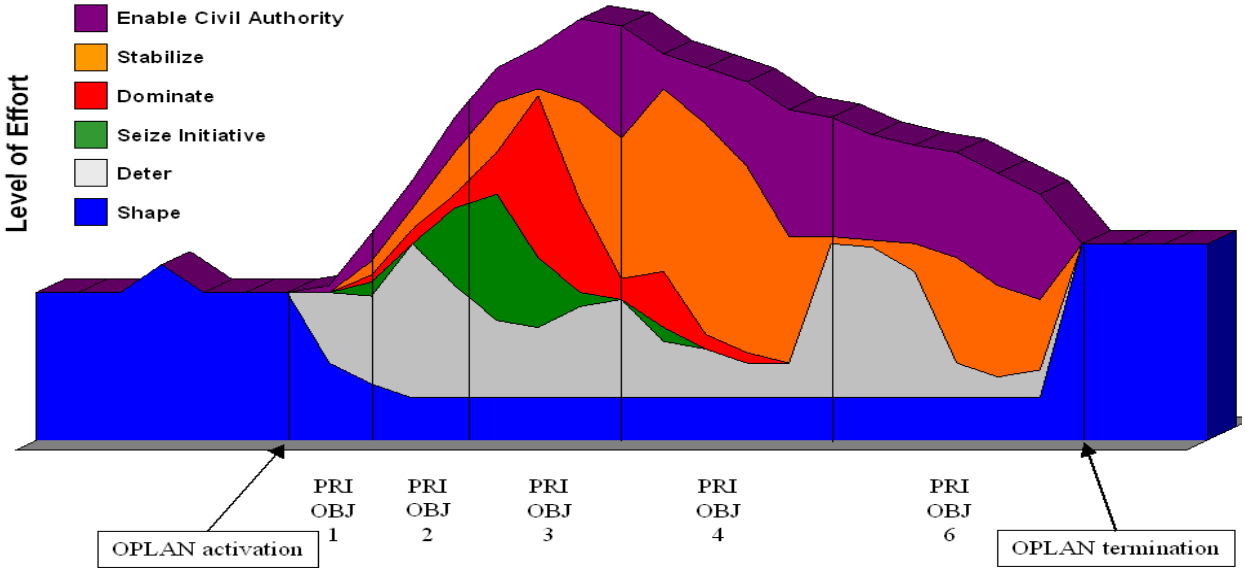

Figure D - 2 - Lines of Effort in Execution

Lines of effort demonstrate a more sophisticated approach the future joint force could take in planning, executing, and analyzing campaigns. Although all lines of effort are considered concurrently, some lines will be given priority due to their relevance to the specific objectives assigned. Identifying priorities will help the JFC allocate and re-allocate resources between lines of effort. Figures 1 and 2 reflect the likely need for multiple instruments of national power to engage based on the objectives and therefore helps reinforce the need to integrate interagency activities throughout the campaign.

Applying a JFC's Conceptual Battlespace

The CCJO delineates how the fundamental joint actions of acquiring knowledge, establishing reach, and creating effects overlap to form the JFC's conceptual battlespace. This conceptual battlespace and the actual physical battlespace define where the JFC focuses effort and has the greatest influence.

These fundamental actions also form the basis for how a JFC might organize the campaign.

Within the lines of effort, all instruments of national power may be engaged simultaneously, proportionate to the operational conditions and objectives. Therefore, when possible, JFCs, either as a supported commander or in support of another agency, will attempt to acquire knowledge, extend reach, and create effects in concert with diplomatic, information, and economic efforts. This will allow for more holistic accomplishment of national security objectives than what might be gained from military activity alone.

The JFC's vision of how a campaign should unfold will drive subsequent decisions regarding the selection of specific activities within each line of effort and which lines of effort will be accentuated. It de-emphasizes sequencing and emphasizes simultaneity. By integrating the JFC's conceptual battlespace with a comprehensive campaign framework, JFCs may be able to better articulate their intent and assign the most relevant tasks to subordinate commanders. By arranging operations and activities into subsets, the JFC can better integrate and synchronize subordinate operations in time, space, and purpose. This coordinated action may enable the successful accomplishment of certain activities early in a campaign that subsequently reduces the overall effort needed to achieve future objectives.

Transitions and Multifunctional Capabilities

The need to refocus from one objective to another within the campaign will normally be reflected by a vertical expansion of the lines of effort associated with the new priority objective and a vertical contraction of the lines of effort associated with the previous objective. A change in focus will not occur on a predetermined time schedule, but will normally occur by an assessment that a given objective was achieved. It may also result from a change in the original operational conditions. The future joint force will possess capabilities that may be suitable to creating effects within multiple lines of effort. These "multifunctional capabilities" allow flexibility in addressing challenges and efficiency in resolving them.

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