

# DART

## DEFENSE ADAPTIVE RED TEAM

**WORKING  
PAPER  
#02-4**

**December 2002**

# **A Practical Guide for Developing and Writing Military Concepts**

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**DART Working Papers address critical issues associated with joint concepts, experimentation, and red teaming best practices. Comments are welcome.**

## Preface

The Defense Adaptive Red Team (DART) is a pilot project. Its mission is to serve as an independent red team that challenges the joint community to develop more robust and resilient concepts for conducting joint operations, and to develop a code of best practices for red teaming. The DART is organized as a network; in its first year of operations, over fifty individuals have participated in concept analysis, experimentation, and studies of red teaming best practices.<sup>1</sup>

While a captain on active duty, John F. Schmitt authored the Marine Corps' keystone doctrinal manuals *Ground Combat Operations*, *Warfighting* and *Campaigning*. He later authored the Marine Corps Doctrinal Publications *Command and Control* (MCDP 6), *Planning* (MCDP 5), and *Expeditionary Operations* (MCDP 3), as well as the revision of *Warfighting* (MCDP 1).

The author would like to acknowledge the following individuals for their assistance. LtGen. Paul K. Van Riper, USMC (Ret), was a partner in every aspect of the development of this paper, collaborating in its organization and structure, contributing to the formulation of ideas, and reviewing every draft. Dr. Jim Miller provided support and encouragement, as well as substantive input, at every stage of development. Gen. Anthony Zinni, USMC (Ret), provided important comments and recommendations on several drafts of the paper. LtCol. Matthew Lopez, USMC, provided significant insights and guidance, and championed the paper in the Joint Staff.

This paper benefited greatly from review at two workshops. Col. John Collins, USMC, Mr. Jeffrey Cooper, Dr. Williamson Murray, and COL Richard Hart Sinnreich, USA (Ret), all provided insightful comments and recommendations at the first workshop; their efforts improved the paper significantly. At the second workshop, Dr. Jim Blaker and COL Mike Starry, USA (Ret), provided detailed and extremely helpful commentary on the second half of the paper. The following individuals also contributed to the paper through their active participation in the second workshop: Col. Gary Anderson, USMC (Ret); LTC Michael Coss, USA; Mr. Shane Deichman; Col. Thomas Hammes, USMC; Maj. William Inserra, USMC; LtCol. Doug King, USMC; LTC Randal Lane, USA; LTC Ronald Miller, USA; Mr. Joe Purser; Mr. David Reeths; CAPT John Sandoz, USN (Ret); Col. Fred Wenger, USMC; and LTC Kevin Woods, USA.

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<sup>1</sup> DART work is conducted under contract # GS-23F-8006H, Delivery Order #: DASW01-01-F-0984 for the Office of the Deputy Undersecretary of Defense for Advanced Systems and Concepts. The publication of this working paper does not indicate endorsement by the Department of Defense, nor should the contents be construed as reflecting the official position of that Agency.

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## 1. Introduction

1.1. Purpose. The purpose of this paper is to provide a common framework and practical guidelines for developing and writing military operating concepts and for evaluating the validity and quality of those concepts, with the ultimate goal of encouraging the development of more thoughtful and useful concepts.

1.2. Background. With the adoption of a concepts-based combat development process, so-called *operational concepts* have proliferated, to the point that an important and useful military term has been rendered practically meaningless. This point was compellingly made in a recent article by Col. David A. Fastabend, “That Elusive Operational Concept.”<sup>2</sup> Some operational concepts are legitimately that; that is, they describe the conduct of military action at the operational level of war. Most, however, are not. The term *operational concept* has come to be applied loosely to any description of military (or even non-military) activity or capability. Consequently, descriptions of purely technical or procedural activities are promoted as operational concepts. As a result, the difference between high-order descriptions of military action and mere procedures can be lost, and the conduct of military action thereby risks being reduced to technique or procedure. A standard web search uncovers “operational concepts” numbering in the hundreds. To name only a few examples from such a search, approved or proposed military “operational concepts” exist for the following:

- Potable Water Support
- Enhanced Fiber Optic Guided Missile (EFOGM) Company Employment
- Air Defense Data Links
- Combat Health Support
- Air Force Electronic Publishing
- Night Vision Goggles
- Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) Program
- Use of Army Bands in Combat Areas
- Combat Service Support

Adding to the confusion, these types of concepts are sometimes also mistakenly referred to as *concepts of operations*, which term properly has a different meaning altogether. Additionally, *Joint Vision 2020* identifies dominant maneuver, precision engagement, focused logistics, and full dimensional protection as operational concepts. These, of course, are modified descriptions of the traditional battlefield functions of maneuver, fires, logistics, and security. These concepts would more properly comprise the main functional elements of a true operational concept.

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<sup>2</sup> *Army*, June 2001. [www.ausa.org/www/armymag.nsf](http://www.ausa.org/www/armymag.nsf).

1.3 Recommendations. This paper proposes to implement the following remedies, which will be adopted throughout the paper:

1.3.1. Define the term *operational concept* narrowly to refer only to the application of military art and science at the operational level of war.

1.3.2. Introduce the generic term *operating concept* to refer more broadly to the description of the application of military art and science, independent of the level of war. Operational, as well as strategic and tactical, concepts would thus be categories of operating concepts.

1.3.3. Establish a hierarchy of military concepts to identify the full range of military concepts, their purposes, and their relationships to one another.

1.4 Caution against prescriptive use. This paper is not meant to prescribe specific steps which must be followed in the writing of military concepts, nor in any other way to mechanize or restrict concept development. Instead, the intent is to offer an intellectual framework to assist concept developers in the exercise of judgment and creativity, both of which are essential to the development of good concepts.

## Part I. A Framework for Military Concepts

### 2. Military Concepts

2.1. Defined. A military concept is the description of a method or scheme for employing specified military capabilities in the achievement of a stated objective or aim. This description may range from broad to narrow. It may range from describing the employment of military forces in the broadest terms and at the highest levels to specifying the employment of a particular technology system or the application of a particular training system.

2.2. Viewed as ends, ways and means. Military concepts can be viewed in terms of ends, ways and means, of which the concept corresponds generally to the ways. The means are the military capabilities to be employed in the given situation. They may range from the full arsenal of military forces available at the operational or strategic levels to a particular capability such as a weapon system, vehicle, training system or specific unit at a lower level. The end is the stated objective, ranging from a broad strategic aim to the accomplishment of a particular task. The ways are the method or scheme (that is, the “concept”) by which the means are applied to accomplish the ends. The essence of a concept is this description of method. A description of a capability by itself does not constitute a concept; capabilities can be created but not used as envisioned, while identical capabilities employed differently would constitute different concepts. Likewise, the description of a desired objective does not constitute a concept; any number of different approaches or methods, employing various capabilities, could conceivably accomplish that objective. The end is necessary to provide context, and the means are needed to describe what resources will be applied, but the essence of the concept is the way in which those capabilities are to be employed. In this sense, military concepts are primarily descriptions of *how* things are done.

2.3 Historical, current and future military concepts. Military concepts may describe past, present or future military actions or capabilities.

2.3.1 *An historical* concept describes its subject as it applied in some past context. Often the concept will not have been articulated explicitly at the time, but must be deduced from the historical record. Examples are the concept of *blitzkrieg*, the Napoleonic system of logistics, and the techniques and procedures of ship-to-shore movement practiced in the Second World War. The first two were not explicitly codified at the time, but have been deduced since, while the third was codified before the war, although continuously modified during the war. Historical concepts are both a product and a tool of historical analysis.

2.3.2. *A current* concept describes its subject as it is intended to apply today, with today’s organizations, methods and technologies. A current concept may be explicitly codified in existing doctrinal, tactical, technical or procedural references, or it may be emergent (i.e., arising pragmatically and implicitly from current operating, technological and institutional conditions and identified only historically)—or, more likely, it may combine both explicit and

emergent elements. Current concepts should provide the basis for operations planning and existing military doctrine, organization, materiel acquisition, training, education, tactics, techniques and procedures.

2.3.3. A *future* concept articulates how it is envisioned its subject will apply in some future context. Initially a future concept is untested and should be the subject of rigorous experimentation and debate. This forces it to evolve and eventually validates or invalidates it. In this way a future concept evolves from an untested hypothesis to a more assertive conclusion. Only after the concepts have been experimentally examined to the point that it has been validated with reasonable confidence does it provide the basis for force planning, that “planning associated with the creation and maintenance of military capabilities.” (Joint Pub 1-02) Only at that point is a future concept used to guide the requirements process. Many concepts cannot be fully tested in peacetime. Since by definition future concepts cannot be deduced from past practice or observed in current practice, they must be stated explicitly in order to be understood, debated and tested and to influence the development process. This paper is most interested in future military concepts. **Unless otherwise specified, the concepts discussed hereafter are future concepts.**

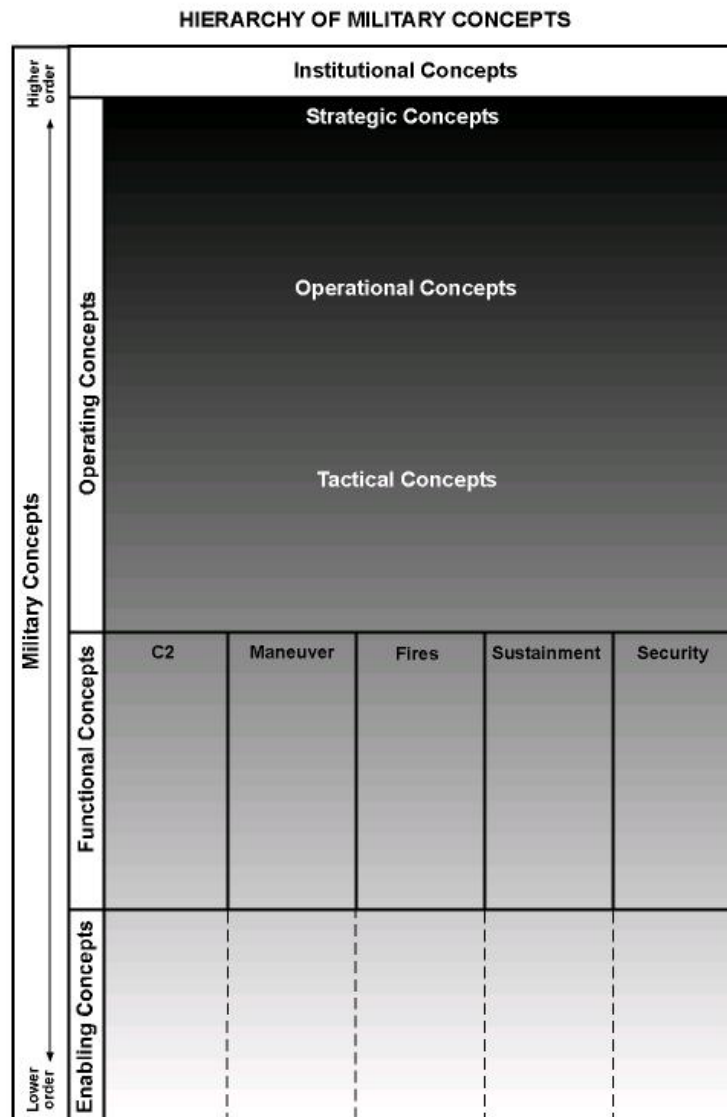
2.4. Concepts and doctrine. Doctrine consists of “fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application.” (Joint Pub 1-02) The term “doctrine” is often used more widely to refer not only to fundamental principles, but also to approved, implemented (that is, “doctrinal”) organizations, training methods, educational programs, etc. Concepts are the core of all doctrine (in both the specific and wider meanings), although concepts are not doctrine until tested, approved and promulgated as such by proper authority. Not all future concepts will become doctrine; many will not (and should not) survive the testing process. The invalidation of a future concept should not be considered a failure of the concept-development process, but a success because the process has invalidated an unsatisfactory concept.

2.5. Current and future concepts not fixed. Current and future military concepts are not fixed, but evolve over time in response to various factors. These factors include technological, political, societal, cultural and other developments that necessitate changes in the concept. As examples, the U.S. Army’s concept for Active Defense evolved into AirLand Battle, and the naval concept “From the Sea” (Sep92) evolved into “Forward ... From the Sea” (Sep94) and then into “The Future ... From the Sea” (Feb00). A concept will also evolve in response to other concepts, our own related concepts as well as those of friends or potential enemies. This evolutionary dynamic is an essential element of the concept development process. Even after a concept is approved as doctrine, the concept will continue to evolve (although the official doctrinal statement of it may not be updated for some time). In this way, concepts continuously evolve in advance of doctrine. Successful future concepts evolve over time and eventually become current concepts, which in turn eventually become historical concepts, at which point they finally become fixed as historical descriptions (although an evolved version may continue to develop as a current concept).

2.6. The Hierarchy of Military Concepts. See Fig. 1.

2.6.1. There are four basic levels of military concepts, which form a hierarchy. From top to bottom, these are:

- institutional concepts, which describe military institutions;
- operating concepts, which describe how military forces operate;
- functional concepts, which describe the performance of individual military functions or sub-functions; and
- enabling concepts, which describe the capabilities required in order to perform military functions or sub-functions.



*Figure 1. The Hierarchy of Military Concepts.*



2.6.2 Military concepts are hierarchical, with their place in the hierarchy depending on the level of generality of the concept. In this way, military concepts have subordinate, superordinate and adjacent relationships to one another. In general, a concept should cover the widest range of situations that can be treated effectively with one set of language and principles. Subordinate concepts are created where more specific guidance is required than can be provided by the higher concept.

2.6.2.1 Concepts dealing in relatively more general terms with a broader subject area can be described as *high-order*. Operating concepts are of a higher order than functional concepts, which are of a higher order than enabling concepts. Higher-order concepts provide context for and guide the development of subordinate, lower-order concepts.

2.6.2.2 Concepts dealing in relatively more specific terms with a narrower subject area can be described as *low-order*. Such a concept describes in greater detail a subset of the subject area described in more general terms by a higher-order concept. Lower-order concepts must be compatible with higher-order concepts to which they are subordinate. While higher-order concepts generally guide the development of lower-order concepts, it should be recognized that influence may also work in the other direction. A breakthrough lower-order concept may make it possible or even necessary to revisit higher-order principles.

2.6.3. Operating concepts provide the authoritative basis and guidance for functional concepts, which likewise provide the authoritative basis and guidance for enabling concepts. Likewise, within each type of military concept, higher-order concepts guide lower-order concepts, and lower-order concepts must be compatible with higher-order concepts.

2.6.4. The hierarchical distinction between the different levels of concepts may become blurred in particular cases. For example, the abstract difference between a low-order operating concept and a high-order functional concept may not be clear—and frankly is probably not very important. A particular concept may bridge the gap between levels. As a practical matter, being able to fix the location of a particular concept on an abstract hierarchy is not nearly as important as being able to fix its proper relationships to other existing concepts.

### 3. Institutional Concepts

3.1. Defined. An institutional concept is a high-order description of the features and functioning of a military institution or institutions. Institutional concepts describe not only the operating policies of the institution, although these may be prominent in the concept since operations are what the military does, but also manpower, training, education, materiel, morale and welfare, and other policies.

3.2. Highest-order. Institutional concepts are the highest-order of all military concepts. They take their guidance directly from the National Security Strategy and the National Military Strategy. They provide context and guidance for all other military concepts, most directly for operating concepts. An example of current institutional concepts promulgated as doctrine is Field Manual (FM) 1, *The Army*.

3.3. Future institutional concepts as vision statements. Future institutional concepts are often promulgated as vision statements applying to some specified future time horizon. An example is *Joint Vision 2020*.

#### 4. Operating Concepts

4.1 Defined. An operating concept is the articulation in broad terms of the application of military art and science within some defined set of parameters. In simplest terms, operating concepts describe how military forces operate.

4.1.1. “...*articulation in broad terms* ...” An operating concept deals in principles and basic themes rather than in specifics. It addresses general cases rather than particular situations. It requires further amplification in subsequent documents. It also requires extensive interpretation in practice.

4.1.2. “... *the application of military art and science* ...” Operating concepts encompass the full scope of military actions rather than limiting themselves to one functional area or battlefield activity, such as sustainment, intelligence, fires or maneuver. These are the appropriate subjects of functional concepts. In this sense, operating concepts are comprehensive: they encompass all the elements of military art and science. In broad terms, they describe what is to be done militarily in a type of situation and how it is to be done; that is, how military power is to be brought to bear.

4.1.3. “... *within some defined set of parameters.*” Each operating concept is delimited by some set of general conditions which provide the defining scope of the concept. This scope may be largely unconstrained, or it may be more narrowly constrained. The less constrained the parameters, the more fundamental and broader should be the terms of the concept. The more limited the parameters, the more specific must be the terms of the concept. There are at least several ways to establish these parameters:

4.1.3.1. *Mission type.* Operating concepts may be categorized according to the various types of missions included within the range of military operations. In other words, there may be different operating concepts for strategic deterrence, peacekeeping, foreign consequence management, regional unconventional war, etc.

4.1.3.2. *Operating environment.* Where the conditions of the operating environment have a defining impact on the conduct of operations, operating concepts may be categorized by those environments, leading to operating concepts for desert operations, littoral operations, low-altitude air operations, military operations on urban terrain (MOUT), amphibious operations, etc.

4.1.3.3. *Force type.* Where organizational type has a defining impact on the conduct of operations, operating concepts may be categorized according to those organizational types, leading to operating concepts for antisubmarine operations, air-assault operations, mechanized operations, theater ballistic missile defense, etc.

4.1.3.4. *Level of war.* Where an operating concept applies to a particular level of war, and where the peculiarities of that level are a defining feature of the concept, operating concepts may be categorized as strategic, operational or tactical. It may not always be preferable to categorize a concept according to level of war, such as if the concept encompasses more than one level of war.

4.2. Use of the term “operating concept.” We have purposely chosen the term *operating concept* over the more common *operational concept* in order to avoid possible confusion over the double meaning of *operational*, which can refer specifically to the operational level of war only, but often also refers generically to any kind of military action. As used here, the term *operating concept* refers to the articulation in broad terms of the conduct of military action, independent of level of war. Some operating concepts may have some application at more than one level.

4.3. Compared to “concept of operations.” An operating concept is distinct from a concept of operations, which is defined in Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, as “a verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called commander's concept or CONOPS.” Where an operating concept describes operations generally by type, a concept of operations describes a course of action chosen for execution in a specific situation. A concept of operations can be thought of as the instantiation of an operating concept under a specific, unique set of conditions.

4.4. The hierarchy of operating concepts: strategic, operational and tactical. Operating concepts are themselves hierarchical and may be further categorized, when there is some value in doing so, according to the levels of war. From higher-order to lower-order, these are: *strategic concepts*, *operational concepts*, and *tactical concepts*.

4.4.1. Within each type of operating concept is a hierarchy as well. For example, a tactical concept that describes the conduct of a wide range of tactical actions in broad terms is of a higher-order than, and provides authoritative guidance to, a tactical concept that describes a particular type of tactical action in greater detail.

4.4.2. Any operating concept must be compatible with a higher-order operating concept to which it is subordinate, or it must make the case that that its conditions are so unique as to invalidate the higher-order principles in its particular case. In other words, it must follow higher-order principles or make the case that it is an exception to them.

4.5. Capstone concepts. The most fundamental operating concepts are *capstone operating concepts* (or sometimes *capstone concepts*). These articulate in broad terms the way military art and science is applied across the fullest possible range of military operations. A capstone operating concept is the primary description of how a joint force or a service operates.

It should cover the widest possible spectrum of military contexts (as described in paragraphs 4.1.3.1 through 4.1.3.4) that can be addressed in common terms and principles. Of necessity, the language will be very general and the principles very broad. In principle, a capstone operating concept provides the philosophy and basic ideas that guide the development of any lower-order military concepts. But because the range of possible military contexts is so broad, it may not be possible to cover that range with one set of language and principles that provide any substantive guidance. Some cases, normally on the extremes of the range of military operations, may be so unique that they fall outside the umbrella provided by the capstone concept.

4.6. The integration of functional activities. Operating concepts describe how various military functional activities, such as maneuver and fires, relate and will be integrated into a cohesive operating system, and for this reason are sometimes referred to as *integrating concepts*. However, an operating concept cannot be merely a collection of lower-order activities without any cohesive idea to provide a higher conceptual meaning.

4.7. The number and structure of potential operating concepts. Given the several ways of defining the parameters of an operating concept, the potential number of operating concepts is open-ended. While the uncontrolled proliferation of current and future operating concepts is a danger, it serves no purpose to arbitrarily limit the number of or to assign a rigid structure for concepts. It is advisable to remain flexible about the adoption of new concepts, which should be considered on case-by-case basis, as long as the relationships among these concepts are explicitly maintained. Any new concept should plainly establish its relationship to existing comparable operating concepts. A significant challenge in developing valuable future operating concepts will be in identifying the combinations of parameters, from among the range of possibilities, that will be most relevant in the future.

## 5. Functional Concepts

5.1. Defined. A *functional concept* is a description of the performance of a military field of specialization (such as logistics, crisis-action planning, or targeting) within a broader operating context.

5.2. Examples. Examples of historical functional concepts include: the Napoleonic logistical concept of establishing intermediate supply depots in advance of marching columns while also living off the land as much as possible; the rolling artillery barrage employed in the First World War; and the technique of ship-to-shore movement pioneered before the Second World War. Examples of current functional concepts include: the command and control concept of mission-tactics; intelligence preparation of the battlefield; and maritime prepositioning. Examples of future functional concepts are ship-to-objective maneuver (STOM) and sea-based logistics, both supporting to the Marine Corps' operating concept Operational Maneuver from the Sea. The *Joint Vision 2020* concepts *dominant maneuver*, *precision engagement*, *focused logistics*, and *full-dimensional protection* would also properly qualify as future functional concepts.

5.3. Synonymous with tactical sub-concept. The term *functional concept* is essentially synonymous with *tactical sub-concept*, defined in Joint Pub 1-02 as "a statement, in broad

outline, for a specific field of military capability within a tactical concept which provides a common basis both for equipment and weapon system development and for future development of tactical doctrine.”

5.4. Functional areas. There is no official list of functional areas. The traditional functional areas are command and control, fires, maneuver, sustainment and security. This paper does not attempt to establish an official list, nor is it believed that one list is necessarily preferable, as long as a functional concept explains its relationships to other functional concepts; different categorizations may be appropriate in different cases. For example, intelligence is sometimes considered a functional area or is sometimes considered within the command and control functional area. Each functional area can be composed of various sub-functions. If a concept proposes to introduce a new function, it should distinguish that function from existing functions.

5.5. Operating context. Functional concepts rely on the operating concepts they support for their context. A functional concept may be specific to a particular operating concept or it may support multiple operating concepts equally.

5.6. Hierarchy. Functional concepts are subordinate to and support operating concepts. They can themselves also be hierarchical, with some describing entire functional areas in general terms while others describe sub-functions or even individual tasks within those sub-functions in more specific terms.

5.7. The number of functional concepts. Like operating concepts, the number of functional concepts is potentially open-ended, and the requirement for new concepts ought to be considered on a case-by-case basis rather than arbitrarily limited.

## 6. Enabling Concepts

6.1. Defined. An *enabling concept* is a description of how a particular task or procedure is performed, within the context of a broader functional area, using a particular capability, such as a specific technology, training or education program, organization, facility, etc. An enabling concept describes the accomplishment of a particular task that makes possible the performance of a broader military function or sub-function.

6.2. Examples. A description of the envisioned capabilities and employment of a future fire support system might be an enabling concept for a future functional concept on fires. A concept describing the use of a collaborative battlespace visualization technology might be an enabling concept for a future command and control functional concept.

6.3. Level of detail. While still expressed in conceptual terms, enabling concepts are the most specific of all military concepts. They should contain a level of guidance sufficient to lead directly to the establishment of military requirements.

6.4. Often found in requirements documents. Enabling concepts are frequently found in military requirements documents, where they are often mistakenly identified as operational concepts.

## Part II. Developing and Assessing Future Operating Concepts

### 7. Purpose

The purpose of this section is to provide practical guidelines for developing and assessing *future operating concepts*. The principles discussed here apply equally to operating concepts of strategic, operational and tactical scope. They apply equally to joint and service concepts. Many of these principles apply generally to institutional concepts and, to a lesser extent, to functional and enabling concepts as well. Finally, although this guidance is framed in terms of future concepts, many of the principles apply also to historical and current concepts.

### 8. Reasons for a New Operating Concept

There are two possible reasons to advance a new operating concept:

8.1. New military problem. An operating concept may be developed to propose a solution to an anticipated or newly identified military problem for which there is currently no adequate military solution. This new problem is brought about by some new combination of political, social, economic, technological, doctrinal or other factors. The new problem may be brought about by new objectives in an existing situation. For example, a situation itself may be unchanged, but political expectations may have increased, necessitating a new operating concept.

8.2. New solution to an existing military problem. An operating concept may be developed to propose a better solution than currently exists to an existing military problem. This better solution may be made possible by some technological, organizational, tactical, societal or other developments that did not exist previously, or it may be necessitated by the failure of an existing operating concept.

### 9. Foundations of a Good Future Operating Concept

9.1. General. This section discusses the principles that underlie a good future operating concept. It should go without saying that an operating concept should be based on a serious contemplation of the subject of war. All concepts are based on certain beliefs about war, and the validity of a concept depends on the soundness of those beliefs. A future operating concept may or may not address these principles directly, but it should at least be compatible with them or explain why it is not.

9.2. Historical awareness. A future operating concept should reflect an awareness of military history—even though it may propose a revolutionary departure from historical patterns. Useful future concepts are rarely derived from abstract theoretical premises, but instead are speculations about the future informed by the practical lessons of the past. History is the primary means by which we study and understand warfare. A concept that ignores history risks sacrificing credibility. Even worse is a concept that misuses history to support preconceived



theories. A concept should reflect an understanding of its own evolution and antecedents. Concept developers should resist the temptation to believe that the past offers little insight because the factors facing the current age are so unique. They rarely are. Likewise, concept developers should resist the temptation to develop a concept that is viewed as “revolutionary” for the sake of being revolutionary. The desire for a revolutionary breakthrough does not make it possible. Favorable conditions must also exist—and it is only through an understanding of history that one can know if they do. The overwhelming preponderance of change is evolutionary, but this does not make the change any less valuable. Evolutionary future concepts will be the norm. Unfounded claims of revolutionary breakthrough will damage the credibility of a concept. None if this is meant to discourage concept developers from being ambitiously forward thinking, especially early in the concept-development process when the objective is to explore possibilities. There is a difference between appreciating history and being a slave to it. On the contrary, history can help one understand how the world has changed. A true appreciation for history may help identify the emerging technological or other advancements that make dramatic improvements possible. Finally, an appreciation of history will provide a natural skepticism of faddish ideas that have not had to stand the test of time.

9.3. Consistent with the nature and theory of war. Underlying any future operating concept is a system of fundamental beliefs about the nature of war and the successful conduct of military action. These beliefs may be expressed explicitly in the concept, or they may be implicit, but in any event they establish the essential foundation of a future operating concept. Some attributes of war may change, but others are immutable. A future operating concept must capture the attributes that are subject to change without violating the attributes that are not. In other words, a future operating concept must reflect the true nature and theory of war. Two classic authorities on the subject are Carl von Clausewitz' *On War* and Sun Tzu's *The Art of War*. War is essentially a clash between hostile, independent wills each trying to impose itself on the other while denying the other its aims. The antagonists are not inanimate objects, but willful intelligences which will spare no effort to confound the others' designs. These opposing wills are not monolithic forces, but highly adaptive complex systems. The interaction between them unfolds in a fluid, time-driven dynamic of initiative and response and is characterized by friction, uncertainty, unpredictability, disorder, violence, surprise and random chance. Outcomes can be highly nonlinear (i.e., highly and unforeseeably disproportionate to inputs), and unintended consequences are commonplace. Under these conditions, war is a continuous and uncertain struggle to reconcile ends, ways and means. Quantifiable factors such as numerical superiority and attrition matter, but so do intangibles like surprise and boldness. War is fundamentally a creation of politics, economics and culture and will thus be impelled and restrained by these external forces. Military designs must be tied to higher objectives. A credible future operating concept reflects the phenomenon as it is rather than distorts the phenomenon to conform to the desires of the concept. If a concept contradicts the consistent experience of war, the burden is on the concept to make its case. In other words, if a concept professes to change the conduct of war so dramatically that the old "rules" do not apply, it is obligated to explain convincingly how.

9.4. Balance between military art and science. In order to qualify as an operating concept, a concept must encompass both military art and science as they apply within the parameters of the concept. From the classical period of history until the 17th century warfare was viewed mainly as an art best understood through historical study. The Scientific Revolution



ushered in new and vastly different technologies and a different approach to war—that of science. For more than 300 years a tension has thus existed between military art and science. Each has its proper and required role. A future operating concept should envision an appropriate balance between art and science; it may stress one or the other, but it should not ignore either. With the growing dominance of science in nearly all aspects of human endeavor, the military profession has seen a more-or-less continuous tendency to shift this balance toward science by making an increasing part of warfare scientific. Developers of operating concepts should be aware of this tendency because there are limits to the extent to which military operations can be turned into procedure. An operating concept that proposes a dramatic shift in the traditional balance between art and science (usually by proceduralizing an activity that has traditionally been viewed as belonging to art) should describe the factors that make the shift possible and desirable.

9.5. Embedded in the proper military-technological context. Most future concepts are designed to exploit new technologies or to respond to the proliferation of new technologies. Any such concept must understand those technologies. It must comprehend the military-technological context within which it is meant to apply. It is not the primary purpose of a concept to envision new technologies, but to envision new ways of operating with technologies that are likely to exist. A concept must not assume the existence of technologies that are unlikely within the future time horizon of the concept. A concept that does this is fantasy, and not the proper basis for the combat development process. Conversely, a concept must not ignore the existence of technologies that will likely be in use within the time horizon of the concept. A concept that does envision a technology breakthrough must also strive to envision the resulting countermeasures, which may take the form of new operating methods or new technologies themselves, that are likely to emerge in response to the breakthrough, since no innovation has been introduced that did not generate counter-innovations to mitigate it. In envisioning an appropriate military-technological context, concept developers should remember that war is ultimately a clash between human wills and that the human dimension is therefore dominant. A future operating concept should be careful not to describe war as essentially an interaction between technologies. The principle of envisioning proper context applies not only to technology, but also to political, societal, cultural, economic and other factors.

9.6. Recognition of the American Approach to War. A future operating concept should be aware of American military predilections, which together constitute an American approach to war. This American approach is an informal product of civil-military consensus built up over time rather than a formal policy. It is based on popular values and the national experience in war and is reinforced by strong cultural and institutional forces created by those values and experiences. Any future concept will be part of this larger cultural context and should be compatible with it. A future operating concept that ignores these factors is not likely to be acceptable to the military or the society. The American approach to war is not ideologically monolithic, but historically has been a pragmatic approach. Nonetheless, certain attributes have been generally consistent and can be expected to persist more or less, depending on circumstances. As examples, in present form, the American approach to war is characterized by efforts to control the tempo of operations as a way of gaining and maintaining the initiative. It emphasizes unity of command, significantly through deliberate, centralized planning. It includes a general desire to expand the battlespace, for several reasons: in order to provide security to

forces and interests, to increase friendly opportunities for maneuver or other action, to strain enemy resources and command and control, and to exploit advantages in standoff technologies. It is characterized by a reliance on technology solutions, especially in an effort to achieve long-range standoff and precise results, and therefore by a strong preference for open, mobile, platform-based warfare. Finally, the American approach to war features a general desire to minimize casualties and collateral damage on all sides (which is sometimes interpreted also to mean a policy-dictating intolerance of American casualties). While some of these principles are more fundamental than others, it is important to recognize that all of them are conditional. For example, casualty rates that would be intolerable in one set of conditions could be perfectly acceptable in another. This is not to say that an operating concept cannot propose changes to the American practice of war, especially incrementally. Some proposed changes might be compatible with the contemporary values that shape the cultural context at that time, while others may not. Dramatic proposed changes can expect to meet with strong resistance. Conversely, a new operating concept does not by definition propose essential changes to the American manner of war. In fact, many new concepts are simply examples of the current American approach taken to the next level by enabling technologies. The point is merely that any concept that ignores the American way of war and the factors that influence it is not likely to be accepted.

## 10. Elements of Future Operating Concepts

10.1. General. This section discusses the topics that a valid operating concept should specifically address. There may be other elements than these, depending on the nature of the concept, but these should be considered a minimum. This section is not meant to prescribe an outline for operating concepts, but only to describe the elements that a concept should contain.

10.2 Purpose of the concept. Every future operating concept should begin with a statement of purpose which lays out the intended uses of the concept. Often a concept will have more than one purpose. The purpose or purposes of a concept at any given time will likely depend on the concept's stage of development. Early in the development of a concept, the purpose may be to generate thinking about how to cope with new operating challenges or how to exploit potential opportunities provided by technology or other developments. Later on, the purpose may be to provide the basis for military experiments and exercises. The purpose may be to explore approaches to conducting operations in certain circumstances in order to affect thinking about potential concepts of operations. At later stages, after the concept has been validated, the purpose may be to provide guidance to the combat development process or context for the development and evaluation of lower-order concepts.

10.3. Time horizon, assumptions and risks. A future operating concept should explicitly specify the future time period within which it is meant to apply. After a concept has started to gain validation, in order to assist the combat development process, the concept may identify milestones when elements or implications of the concept are meant to take effect. To the extent possible, a concept should explicitly identify any critical assumptions upon which the concept is dependent. These establish the limits of the concept. The less restrictive the assumptions, the wider the applicability the concept will have. Additionally to the extent possible, a concept should specify any identified risks so that these may be explored and addressed during continued concept development.

10.4. Description of the military problem. In most basic terms, a future operating concept supposes a military problem and then proposes solutions to it. A future operating concept must therefore include a description of the military problem the concept is meant to solve. This provides the context within which the concept applies. Equally important, it establishes the conditions under which the concept does not apply. The problem description should include the broader context within which the problem exists. In the case of a strategic concept this would be the wider political situation. In the case of an operational concept, it would be the envisioned political-strategic situation. In the case of a tactical concept, it would be the operational situation. The problem description must include a statement of the type of mission to be accomplished. The mission type may be as broad as defeating enemy military forces in conventional combat, or it may be more narrowly defined. To the extent that geography or physical environment are factors in the concept, it should describe them. A central element of the problem description should be a description of the security environment envisioned to apply in the timeframe of the concept. This environment includes a description of the character and form of the envisioned threat, including organization, tactics, and weaponry and other key types of equipment and technology. It also includes any governmental, economic, societal or other factors that may impact on the conduct of military action. A concept may explicitly take its context from a higher-order operating concept, in which case it need not restate that context in full, but need only amplify where necessary.

10.5. Synopsis of the central idea. The centerpiece of any future operating concept is a high-level description that encapsulates the “how” of the concept in a paragraph or two. Think of this as a concept of the concept. It captures the "big idea" of the concept, ideally in terms that differentiate the concept clearly from others. This synopsis should aim to capture the essence of the concept in the most fundamental and widest terms possible that retain practical meaning. Included in this synopsis should be a description of the "success mechanism," a statement of how it envisioned this concept will accomplish the stated mission. This success mechanism should be stated in terms sufficiently broad that it can be widely applied. Basing a future operating concept on the eventuality of a single, narrowly conceived success mechanism neglects the friction that is a primary and timeless attribute of war.

10.5.1. Example: The following is a synopsis of the Napoleonic operational concept, taken from David G. Chandler’s *The Campaigns of Napoleon*:

... Napoleon was insistent that the battle was an integral part of the strategical planning. Every successful campaign, in his mind, could be broken down into three parts: the move to contact, the battle, and, lastly, the pursuit and general exploitation phase. ...

Napoleon laid down five principles for opening a campaign ... First: an army must have only one line of operations; that is to say, the target must be clearly defined and every possible formation directed toward it. ... Second: the main enemy army should always be the objective; only by destroying an opponent’s field forces could he be induced to give up the struggle. ... Third: the French Army must move in such a way as to place itself on the enemy’s flank and rear, for psychological as well as strategical reasons ... Fourth: the French Army

must always strive to turn the enemy's most exposed flank—that is to say, cut him off from his depots, neighboring friendly forces, or his capital. Fifth and last: the Emperor stressed the need to keep the French Army's own lines of communication both safe and open.<sup>3</sup>

10.5.2. Example: The following excerpt provides a synopsis of a future operational concept for a possible Pacific War written in 1923 as a Naval War College thesis by Chester Nimitz:

[T]he operations imposed on Blue [the U.S., in a future Pacific war] will require the Blue Fleet to advance westward with an enormous train in order to be able to seize and establish bases en route. . . . The possession by Orange [Japan] of numerous bases in the Western Pacific will give her fleet a maximum of mobility while the lack of such bases imposes on Blue the necessity of refueling at sea en route or of seizing a base from Orange for this purpose in order to maintain even a limited degree of mobility.<sup>4</sup>

10.5.3. Example: The following is a synopsis of the U.S. Army's tactical and operational operating concept of 1982, taken from Field Manual (FM) 100-5, *Operations*:

The Army's basic operational concept is called AirLand Battle doctrine. This doctrine is based upon securing or retaining the initiative and exercising it aggressively to defeat the enemy. Destruction of the opposing force is achieved by throwing the enemy off balance with powerful initial blows from unexpected directions and then following up rapidly to prevent his recovery. The best results are obtained with initial blows struck against critical units and areas whose loss will degrade the coherence of enemy operations, rather than merely against the enemy's leading formations.<sup>5</sup>

10.5.4. Example: The following excerpt from Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*, is a synopsis of the operating concept that is the basis of the Marine Corps' maneuver warfare doctrine:

*Maneuver warfare is a warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope.*

Rather than wearing down an enemy's defenses, maneuver warfare attempts to bypass these defenses in order to *penetrate* the enemy system and tear it apart. The aim is to render the enemy incapable of resisting effectively by shattering his moral, mental and physical cohesion—his ability to fight as an effective, coordinated whole—rather

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<sup>3</sup> (New York: Macmillan Publishing Co., 1966), p. 162.

<sup>4</sup> *Naval War College Review*, Nov-Dec 1983, pp. 12-13. As quoted in Williamson Murray, "Red Team: Its contribution to Past Military Effectiveness," Draft DART Working Paper, September 2002, p. 40.

<sup>5</sup> Headquarters, Department of the Army, Washington, DC, 20 August 1982, p. 2-1.

than to destroy him physically through the incremental attrition of each of his components, which generally is more costly and time-consuming. Ideally, the components of his physical strength that remain are irrelevant because we have disrupted his ability to use them effectively. Even if an outmaneuvered enemy continues to fight as individuals or small units, we can destroy the remnants with relative ease because we have eliminated his ability to fight effectively as a force.<sup>6</sup>

10.6. Application and integration of military functions. An operating concept should include a description of how the various military functions, are applied and, importantly, how those capabilities are integrated per the concept into a cohesive operating system. Again, these functions traditionally consist of command and control, fires, maneuver, sustainment and security, although an operating concept may include others. It may be possible to conceive of a radical new construct for describing the conduct of military operations that does not include the traditional military functions. (This would probably constitute a truly revolutionary concept.) If so, the burden is on the concept to make the case that this is a valid construct. In any event, this description should elucidate each of the pertinent functions. This is not a generic description of those functions, but a description of how they apply specifically within the context of the operating concept. These provide the basis for the subsequent development of supporting functional concepts. A concept may rely on a particular approach to logistical support or a particular use of fires, which would be summarized in the operating concept and then fleshed out supporting functional concepts. As an example, the operating concept of maneuver warfare described in paragraph 10.4.4 above is supported by a concept of decentralized command and control based on mission-tactics, as seen in the following excerpt from MCDP 1, *Warfighting*:

It is essential that our philosophy of command support the way we fight. First and foremost, *in order to generate the tempo of operations we desire and to best cope with the uncertainty, disorder, and fluidity of combat, command and control must be decentralized.* That is, subordinate commanders must make decisions on their own initiative, based on their understanding of their senior's intent, rather than passing information up the chain of command and waiting for the decision to be passed down. ...<sup>7</sup>

Included in this description of functions should be the relative importance of the various functions, and their relationships to one another. For example, the relative balance and interaction between maneuver and fires has often been a defining characteristic especially of tactical concepts—with wide variances through history. The functional activities are the basic components of the operating concept—they are what military forces *do*—and these synopses constitute the primary substance of the concept. In this sense, an operating concept can be thought of as the unique combination of the various military functions and sub-functions applied to some military problem. In fact, one criterion for deciding if a new operating concept is needed is whether the combination of functional requirements is so unique in the given set of parameters that a new description of the integration of those functions is necessary. In the end, however, an operating concept must be more than merely a collection of functional synopses without any higher idea to provide cohesion.

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<sup>6</sup> Headquarters, United States Marine Corps, Washington, DC, 20 June 1997, p. 73. Italics in original.

<sup>7</sup> Ibid., p. 78. Italics in original.



10.7. Necessary capabilities. The concept should describe the capabilities that it is envisioned will be required to implement the concept successfully. This description refers to the general capabilities of the force rather than to any particular doctrinal, materiel, organizational or other capabilities as might be specified in requirements documents. The description should be made in qualitative vice quantitative terms. The concept generally should not dictate how the capability is to be created and should not specify any particular branch, service, system or organization. Examples of such capabilities descriptions might include “the ability to engage two enemy echelons simultaneously,” “the ability to neutralize enemy air defenses,” “the ability to conduct forcible entry,” or “the ability to operate almost exclusively from sea bases.”

10.8. Spatial and temporal dimensions. Military actions occur in time and space, and an operating concept should discuss these dimensions. It is difficult to describe distances, ranges, tempo and duration with precision because these factors are situationally dependent, but a future operating concept should provide at least a general appreciation for the scale of these dimensions as they apply within the concept, even if that appreciation is only relative or qualitative. For examples, a concept might describe actions taking place at “tactical standoff distances” or as “maintaining a higher operating tempo than the enemy.” Where appropriate, an operating concept should describe any envisioned sequence of actions, not necessarily as the designated phases of an operation, but as a description of the expected general flow of events over time. For example, the concept should describe any required build-up phase or envisioned preliminary actions.

10.9. Note: The last four elements—the synopsis of the central idea, the application and integration of military functions, the qualitative description of necessary capabilities, and the spatial and temporal dimensions—together provide the essential description of how the force will operate. The synopsis of the central idea provides context for the functions, capabilities and dimensions. The descriptions of functions, capabilities and dimensions provide substance to the synopsis. The synopsis is a top-down description of the concept, while the others describe the concept from the bottom up. The four are complementary elements, and a tight and direct linkage should exist between them. In the case of the functions, capabilities and dimensions, it may not be possible, or even desirable, to describe these elements separately of one another.

## **11. Attributes of a Good Future Operating Concept**

11.1. General. This section discusses those attributes that tend to make for a good future operating concept. These are not substantive elements that the concept must address, but generally are rhetorical and structural qualities.

11.2. Serves stated purpose. The foremost quality of a good future operating concept is that it serves its own stated purpose (as discussed in paragraph 10.2). That is, it provides meaningful guidance that can support the developmental activities described by the purpose of the concept. This guidance should be sufficiently specific that it can be acted upon, but not so specific that it permits no latitude in interpretation.

11.3 Stated in language that can be acted upon. Future military concepts do not exist for their own sake, but are meant to serve the combat development process. As such they should be written in unambiguous language that can be acted upon. A future concept starts as an untested hypothesis. It should be written as a hypothesis rather than as a bald assertion, which is to say it should set up criteria for testing its feasibility through experimentation. The concept must be falsifiable; it cannot be written in such a way that is impervious to historical or experimental evidence. The ultimate objective is not the approval of the concept regardless of its merits, but rather an unbiased examination of its merits. Only after the concept (or part of it) has been validated does it begin to drive requirements. Here the concept must be acted upon in other ways. At this point, the implications as to capabilities required to implement the concept ought to be clearly deducible in the concept.

11.4. Accepts the burden of proof. A future concept should be written in language that acknowledges its burden of proof. A new concept warrants no assumption of validity, but recognizes that it will meet with skepticism and must make its case. It should reflect depth of thought and research. It should be written in language that recognizes its hypothetical nature rather than in pronouncements that suggest the concept is axiomatic or manifestly true. In other words, a good concept is written in language that is open to criticism. A concept that survives to eventual acceptance will be stronger as a result. As evidence accumulates through experimentation and analysis that the concept is valid, later iterations of the concept will naturally take on a more assertive language.

11.5. Differentiated. A good future operating concept is clearly differentiated from other concepts. It may do this by describing a unique operating problem which it addresses, or it may do this by describing a unique approach to a common operating problem. In either case, the synopsis of the central idea and the description of the application and integration of military functions are the primary areas in which a concept can differentiate itself. A concept can generally distinguish itself by presenting its essential characteristics clearly in stark, fundamental terms. In this sense, broad descriptions are often better than numerous details, which can tend to obscure the basic themes. A concept may also differentiate itself by explicitly comparing and contrasting itself with other concepts—historical and current concepts as well as other future concepts. In other words, it may often be more effective to describe a new concept in relation to a known reference point than to describe the new concept purely on its own terms.

11.6. Explicit relationships to other concepts. A future operating concept should establish its relationships with other concepts in the same general concept space. Those relationships may be:

- Subordinate—describing one part of a higher-order concept in greater detail
- Superordinate—containing one or more lower-order concepts
- Adjacent—generally on the same order as other concepts, with a common superordinate concept
- Superseding—succeeding or replacing another concept
- Competing—offering an alternative to another concept defined by the same set of parameters.

11.7. Clarity and precision of language. A future operating concept should be presented in clear and precise language. The concept should generally avoid the invention and use of new terms, using accepted and well understood terms as much as possible. Terms should generally be defined on first usage and used consistently thereafter. Concepts should likewise minimize the invention and use of acronyms and catchphrases. Concepts should use simple, straightforward language, avoiding elaborate phraseology and artistic descriptions that are meant to evoke meaning rather than express it directly.

11.8. Concise. A future operating concept should be presented concisely and economically so its message can be absorbed and kept in mind while being acted upon. It should provide no more explanation than is necessary to serve its stated purpose. Additional explanation rarely serves to clarify, but instead tends to obscure the message and can unnecessarily restrict judgment in application. Instead, brevity rather than comprehensiveness is usually a sign of a good concept. The concept should make its points and move on; a concept that tries several different ways to communicate its message is likely still searching for its message. There are no rules as to length, but some well-founded operating concepts have ranged from about 10-20 single-spaced pages. A concept that is significantly longer than this likely contains too much detail or too many subordinate concepts. In such cases, it is often better to create several more concise, hierarchically related concepts.

11.9. Robust. Some future operating concepts may accurately predict the operating environment in which they are eventually applied, but predicting the specific future is not a necessary quality of a good operating concept. A good operating concept should apply to a variety of possible futures. That is, it should deal successfully with multiple possible scenarios within its defining parameters, as opposed to applying only to a specific combination of conditions. A concept that applies only to a specific combination of conditions, or that is easily invalidated if one or more conditions are not met—especially unlikely conditions—is fragile rather than robust. A concept with a very narrow range of applicability borders on being a concept of operations as opposed to an operating concept.

11.10. Promotes debate. Open and meaningful debate is an essential element of the concept development process, and a future operating concept should promote this. Debate is the means by which concepts are evaluated, strengthened, validated and eventually accepted by an institution. Concepts can promote debate, first, by providing their descriptions in clear, fundamental terms that are readily understood, allowing interested parties to get to issues of substance rather than haggling over meaning. Using established, commonly understood terminology helps in this way, whereas invented terms often necessitate clarification. Operating concepts need not be intentionally overstated or ideological in order to promote debate, which is not the same as provoking reaction. In fact, an overstated concept can inhibit meaningful debate by encouraging overstated reactions. An even-handed concept with a strong intellectual foundation, a clearly differentiated view of future military operations, and a concise and precise description of its essential elements is likely to promote debate naturally.



## 12. Epilogue: The Concept Development and Validation Process

12.1 General. This section describes the development and validation process through which a concept must pass on the way to successful adoption by the institution. A military concept is not created to exist by itself, but drives a broader process of development and validation. This process is informed by strong institutional and cultural forces. In order to reach eventual successful adoption, a future concept must be managed with an understanding of these factors. This section is not meant to provide the mechanics of this process—there are numerous documents which do that already—but rather to describe the essence of how the process should work.

12.2 Development. Very few military concepts are created initially in full form or fully realized in their first incarnations. Like most ideas, military concepts tend to form iteratively and incrementally over time. This is no criticism of concept developers, but simply a reflection of the limits of human foresight. This is the nature of concept development. It is not an orderly, sequential process. Concepts are not engineered solutions. Developing a concept is not like building a house, in which the final result is fully blueprinted at the beginning of the process. Instead, concept development is more often a process of exploration and experimentation and tends to unfold as a hypothesis-antithesis-synthesis dialogue. The initial exploration of ideas may typically involve workshops, conferences and articles in professional journals. These are typically followed by seminar and manual war games and only later by larger-scale exercises and simulations. Concepts may evolve in response to formal or informal experimentation, to criticisms and recommendations, to red teaming, or simply to continued contemplation of the subject. They may evolve in response to emerging technologies or economic, political, societal or other developments. They may evolve in response to other concepts—both adversarial concepts which they must counter or related concepts with which they may trade elements. For this reason, competing operating concepts should explicitly be promoted. Concepts generally require a certain unavoidable period of time for maturation. As a result, good concepts can rarely be developed instantly or in secret. Instead, they should generally be developed in the open and should allow adequate time for evolution at each iteration. This is not to say that concept development must follow a committee approach in which any interested party has editorial authority. In fact, good concepts are rarely consensus products, but rather reflect a single vision. This is best ensured by assigning a single responsible agent who, although ultimately responsible for content, remains open to outside inputs. It is a dangerous conceit to believe that a valid military concept can be developed and presented to the institution without undergoing this development process. That said, sometimes it may be possible to commit to a concept and then develop it along the way. This approach invariably will suffer from trial and error, but may be necessary depending on circumstances. In this case especially, but generally also, successful concept development requires a strong commander to drive the process to closure; otherwise the process will tend toward interminable staffing.

12.3 Validation. A successful concept must undergo a validation process by which it is tested and eventually accepted or rejected by the institution. Any important military concept under consideration should be the subject of an open and honest debate within the institution. The validation process provides a sort of crucible through which the concept must pass—

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strengthening the concept in the process if it survives. In this way validation and development are closely linked. Like development, validation often tends to be disorderly. It occurs both formally and informally. Both are necessary in validating a concept. A concept may have been officially approved, but is not truly validated until it has been accepted by the stakeholders of the institution. Formal validation takes place through workshops, war games, experiments or other activities held by proper authority for the express purpose of evaluating the concept. Informal validation occurs in the operating forces, professional schools and the institution at large in the form of field and map exercises and articles in professional journals. All are important in validating the concept. Acceptance takes some unavoidable period to grow. Some elements of a concept may gain acceptance more quickly than others. Some elements may gain acceptance while others are rejected. Just as it is in the development process, strong leadership is essential during the validation process. As a concept gains acceptance over time it transforms from a tentative hypothesis to a more-or-less accepted conclusion. Reflecting this, the language of the concept document may become increasingly assertive over the various iterations. By the time a concept is formally validated, the institution should be comfortable with it or should at least have had adequate time to weigh in on the subject.

## Annotated Glossary

### Command and control

The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (Joint Pub 1-02)

### Concept of operations

A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called commander's concept or CONOPS. (Joint Pub 1-02)

### Doctrine

Fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application. (Joint Pub 102)

### Fires

The effects of lethal or nonlethal weapons. (Joint Pub 1-02)

### Force planning

Planning associated with the creation and maintenance of military capabilities. (Joint Pub 1-02)

### Force protection

Actions taken to prevent or mitigate hostile actions against Department of Defense personnel (to include family members), resources, facilities, and critical information. These actions conserve the force's fighting potential so it can be applied at the decisive time and place and incorporate the coordinated and synchronized offensive and defensive measures to enable the effective employment of the joint force while degrading opportunities for the enemy. Force protection does not include actions to defeat the enemy or protect against accidents, weather, or disease. Also called FP. See also force; protection; terrorist threat condition. (Joint Pub 1-02)

### Maneuver

1. A movement to place ships, aircraft, or land forces in a position of advantage over the enemy.
2. A tactical exercise carried out at sea, in the air, on the ground, or on a map in imitation of war.
3. The operation of a ship, aircraft, or vehicle, to cause it to perform desired movements.
4. Employment of forces in the battlespace through movement in combination with fires to

achieve a position of advantage in respect to the enemy in order to accomplish the mission. (Joint Pub 1-02)

**Military requirement**

An established need justifying the timely allocation of resources to achieve a capability to accomplish approved military objectives, missions, or tasks. (Joint Pub 1-02)

**Operation**

1. A military action or the carrying out of a strategic, operational, tactical, service, training, or administrative military mission.
2. The process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign. (Joint Pub 1-02)

**Operational level of war**

The level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or other operational areas. Activities at this level link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives, sequencing events to achieve the operational objectives, initiating actions, and applying resources to bring about and sustain these events. These activities imply a broader dimension of time or space than do tactics; they ensure the logistic and administrative support of tactical forces, and provide the means by which tactical successes are exploited to achieve strategic objectives. See also strategic level of war; tactical level of war. (Joint Pub 1-02)

**Security**

Measures taken by a military unit, activity, or installation to protect itself against all acts designed to, or which may, impair its effectiveness. (Joint Pub 1-02) [Note: See also force protection.]

**Strategic concept**

The course of action accepted as the result of the estimate of the strategic situation. It is a statement of what is to be done in broad terms sufficiently flexible to permit its use in framing the military, diplomatic, economic, informational, and other measures which stem from it. See also basic undertakings. (Joint Pub 1-02) [Note: This definition does not apply within the context of operating concept. It has more in common with the concept of operations; it is essentially a concept of operations at the strategic level.]

**Strategic level of war**

The level of war at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) security objectives and guidance, and develops and uses national resources to accomplish these objectives. Activities at this level establish national and multinational military objectives; sequence initiatives; define limits and assess risks for the use of military and other instruments of national power; develop global plans or theater war plans to achieve these objectives; and provide military forces and other capabilities in accordance with strategic plans. See also operational level of war; tactical level of war. (Joint Pub 1-02)

**Sustainment**

The provision of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective. (Joint Pub 1-02)

**Tactical concept**

A statement, in broad outline, which provides a common basis for future development of tactical doctrine. See also tactical sub-concept. (Joint Pub 1-02)

**Tactical level of war**

The level of war at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical units or task forces. Activities at this level focus on the ordered arrangement and maneuver of combat elements in relation to each other and to the enemy to achieve combat objectives. See also operational level of war; strategic level of war. (Joint Pub 1-02)

**Tactical sub-concept**

A statement, in broad outline, for a specific field of military capability within a tactical concept which provides a common basis both for equipment and weapon system development and for future development of tactical doctrine. See also tactical concept. (Joint Pub 1-02) [Note: This established term is essentially synonymous with the term *functional concept* used in this paper.]