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Cases in Joint Force Development

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14. ABSTRACT This report contains the teaching syllabus and lesson plans for a course on joint force development developed by the Institute for Defense Analyses at the request of the Dean of the Air War College. This elective course fills a void in the College's course offerings and increases emphasis in its curriculum on joint matters. It is designed to give the student both an overview of Service force development processes and the opportunity to discuss trends that may portend changes to these processes in the future. The course consists of 3 parts, presented in 15 instructional periods (IPS). Part I defines and delineates "force development." Part II contains a series of case studies (Army "Force XXI; Marine Corps "Urban warfare; Navy "Mine warfare; Air Force "Composite wings; TRANSCOM "Strategic airlift). Each case study lesson is followed by a lesson dedicated to the "official" policies and regulations that guide each respective player's actions and decisions in the force development process. Part III allows the student to take an in-depth look at a number of current and prospective issues that may or may not impact the manner in which the Department of Defense develops forces in the future.

15. SUBJECT TERMS Force Development; Joint Force Development; Air War College Curriculum; Force Planning; Military Planning; Joint Capabilities; Jointness; Interoperability; Transformation; Senior Service School; War Colleges; Joint Requirements Oversight Council; Joint Forces Command; Requirements Generation System; Unified Combatant Commands; Doctrine; Joint Doctrine; Resource Planning; Resource Allocation
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PREFACE

This research was conducted under the Independent Research Program of the Institute for Defense Analyses.

The authors owe thanks to several people who generously assisted our efforts. Dean Stephen Fought of the Air War College helped us understand the College's pedagogical approach, while Professor Michael Hickok reviewed drafts of reading lists and course outlines as well as contributing to the drafting of Instructional Period 1. Messrs. Michael Leonard and Phil Major at IDA supported the work and offered many helpful suggestions, while Dr. Michael Fischerkeller reviewed the draft of this paper. Thanks are also due to Ms. Shelley Smith and Ms. Bernie Aylor for their assistance in the editing and producing the paper.

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CASES IN FORCE DEVELOPMENT

This paper presents the results of a project chartered to design a course of study in “Joint Force Development” for the Air War College. The text presents the background to the project, an overview of the process used to design the lessons, and an overview of the course itself. The course’s fifteen lesson plans (or “scope sheets” in AWC terminology) are provided in appendix A.

A. BACKGROUND

The Dean of the Air War College (AWC), Dr. Stephen Fought, approached the Institute for Defense Analyses during the spring of 2000 requesting assistance in developing courses for the College. Dr. Fought viewed the course development as part of his overall plan for updating the College’s curriculum with subjects relevant to 21st century military issues and the ongoing transformation of the U. S. Armed Forces, particularly the Air Force. Following some preliminary research, IDA presented AWC with a list of potential subject areas in which IDA could provide assistance. The AWC faculty showed particular interest in pursuing a course on joint force development, both to fill a void in the College’s course offerings and to increase emphasis in its curriculum on joint matters.

B. FORCE DEVELOPMENT

Most military professionals assume that they understand the concept of “force development.” However, since there is no definition of the term in Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms*, many fail to understand the difference between “force planning” and “force development.” Force planning, on the one hand, often has a resource management connotation, but the term is also commonly used to mean planning for force mix and size. Force development, on the other hand, has a broader and more comprehensive definition. Force development is the process of:

1. identifying required future military capabilities;
2. designing forces that can provide those capabilities when employing specified operational concepts and doctrine;

3. elaborating requirements for technology, material, personnel, and training based on the force design; and,
4. determining whether the result fits within resource limits.

It follows from this definition that “joint force development” encompasses the same four elements in a joint context. It involves identifying future required joint capabilities, designing a joint force to provide them, elaborating what such a joint force will require, and determining whether resources will be adequate.

Thinking in terms of force planning and not force development tends to produce a focus on the programmatic mid-term, i.e., point 3, above, and especially point 4. Force planning tends to accept force design as given and that future requirements have been correctly understood. By contrast, force development in its truest sense requires a longer-term view and an equal focus on the changing security environment and evolving operational concepts and technologies (i.e., points 1 and 2 as well as 3 and 4).

The team began its work with a survey of existing professional military education courses that dealt with the subject of force development. We found that only two such courses existed, one at the Army War College and the other at the Navy War College. However, neither of these was directly adaptable for use by the Air War College. Both were Service-specific in orientation and heavily process-oriented (as opposed to treating the theories and issues that affect force development in a joint context).

The team also found that there is little published material that specifically discusses “joint” force development. Thus, much of the material included in the course reading list, is intended to generate discussion and analysis on the need for a joint focus in force development. We view the lack of literature on joint force development in both a positive and a negative light. On the negative side, there is an absence of an “authoritative” viewpoint(s) to use as reference or a base point. More positively, this allows instructors and students a great deal of freedom to generate new ideas and discuss the pros and cons of Service-oriented versus Joint-oriented force development. Through a broad and varied reading list presenting a range of ideas, and through classroom discussions, each student will be able to synthesize what he/she has learned and apply this knowledge in the context of a transforming military that today places more and more emphasis on joint operations in a changing security environment.

Historically, and even today, force development, as practiced by the United States Army, Navy, Air Force, and Marine Corps, is more art than science. Although there is

guidance from the Office of the Secretary of Defense detailing the mechanics of force development, each of the Services tends to view and practice the process differently.

At the same time, the increasing emphasis on jointness and interoperability may be altering the traditional manner in which military forces are developed. Over the past decade several processes and institutions at the Department of Defense and Joint Staff level (such as the 5000-series acquisition directives, the Senior Readiness Oversight Council, the Joint Requirements Oversight Council and the Joint Monthly Readiness Review) have been created or strengthened. These new joint processes have begun altering force development from the traditional Service-centric model toward a more joint approach. To date, though, these changes are not self-conscious with respect to force development. Exploring how this change is taking place and the implications for future force development is the core objective of the course.

C. COURSE OVERVIEW

This Air War College elective course is designed to provide the student both an overview of Service force development processes and the opportunity to discuss trends that may portend changes to these processes in the future. Using case studies of actual force development actions and decisions, the student will examine a number of issues that affected in the past, and may affect in the future, the development of forces.

The course was designed at a level appropriate for a graduate student. Each of the readings was selected to present ideas and viewpoints that should lead the student to think critically about the current force development processes and the direction that these processes perhaps should go in the future. We have tried to develop a balance between theoretical, issue-oriented readings and pure process-oriented readings. Although the number and length of readings varies from lesson to lesson, they tend to be around 100 pages for the first three and last four lessons. The readings for the middle portion of the course, the case studies, amount to approximately 150 pages for each set of two lessons. The reduced reading load during the middle portion of the course is intended to leave time for students to work on their course research papers

The course consists essentially of 3 parts, presented in 15 instructional periods (IPs).

1. Part I — Introduction

The first part of the course (IP 01-03) is an overview, where “force development” is defined and delineated. Its purpose is to help the student better understand what factors ought to be considered when developing a force, as well as the myriad internal and external issues that may impact the force developer’s decisions. The overall purpose of this part is not to make the students professional “force developers,” but to give them a common and well-grounded grasp of what force development is.

The course begins with an overview of the global security environment and begins the discussion of how changes in this environment are affecting/resulting in changes in how the United States military develops forces. It then goes on to consider what factors should be taken into account during the force development process—a process that can be loosely described as follows: determination of missions (based on strategy)¹ that drive requirements² which in turn lead to a number of alternative solution sets. Through application of operational concepts and extensive testing, experimentation, and analysis, a preferred force and capability solution is determined.³ Individual solutions are then integrated across mission areas to arrive at the proposed total force.

As mentioned earlier, the force development process has traditionally been almost exclusively Service-centric. This results in a number of issues that impact the force development process, at times positively and at other times negatively. Throughout the course, as the student evaluates the functionality and utility of the current processes, he or she will be asked to keep these issues in mind and consider their impact. These issues include: service culture; the need to match existing or future operational concepts with current or evolving strategy, the impact of evolving technology, the utility of force developers using Service core competencies as a paradigm, and the impact of politics (both internal bureaucratic politics and national-level politics) on force development processes and decisions.

Historically, the Services have developed their force structures essentially independent of one another. Although many of the formal processes are specified in overarching DoD regulations, each Service has individually generated its requirements and developed forces and programs to meet them. Until recently, synchronization or

¹ Step one in the four-part definition of force development given above.

² Steps two and three.

³ Step four.

cross matching requirements occurred only at the highest DoD management levels. At the end of Part I, the readings provide a brief overview of the overarching DoD-level policies and regulations that guide force development and that attempt to keep all players marching down a similar path. How well they do so will be explored in Part II.

2. Part II — Case Studies

Part two of the course (IP 04-11) contains a series of case studies, one from each Service and one from a unified command. Each case study was selected because it presents a real world example, either current or historical, of a force development issue. The five case studies are:

- Army – Force XXI
- Marine Corps – Urban warfare
- Navy – Mine warfare
- Air Force – Composite wings
- TRANSCOM – Strategic airlift

Each case study lesson is followed by a lesson dedicated to the “official” policies and regulations that guide each respective player’s actions and decisions in the force development process. Although overarching guidance from DoD does generally guide each Service as it makes force development decisions, we found that there is often plenty of room for varying interpretations and ways of applying this basic guidance.

The case study lessons are each designed as a set, with the process-oriented readings explaining how the respective organization says it does force development, and the case study example illustrating how force development was or is done in practice.

3. Part III — Current Issues

The final portion of the course (IP 12-15) is designed to allow the student to take an in-depth look at a number of current and prospective issues that may or may not/should or should not impact the manner in which the Department of Defense develops forces in the future. We begin by looking at future mission sets and discussing two questions:

- Technology Push: Has technology created the possibility of a “new” kind of joint force?

- Mission Pull: Will the joint forces of the future be capable of performing the likely missions?

We then move on to an in-depth discussion of the future force development process. The underlying assumption the course makes (implicitly) and that hopefully will become explicitly clear to the student, is that the continuation of the traditional, Service-centric approach to force development is not a valid model for the changing security landscape and call for “jointness” envisioned in the 21st century. Three potential alternatives are explored:

1. *Coordination of force development at the joint level by policy.* Each Service would continue to act independently as a force developer. Services would be free to design their own force development processes within the requirements of DoD directives, with the Joint Requirements Oversight Council (JROC) used to integrate the products of these separate processes into a coherent and useful joint force.
2. *Assigning a Unified Commander responsibility for development of joint battle management and control.* USSOCOM performs this function now for special operations forces. It develops programs and controls Service program implementation via Major Force Program 11. A similar approach could be used to ensure that joint warfighting capabilities are properly integrated, perhaps using Joint Forces Command as the developer.
3. *Creation of a true “purple” (Title 10) force developer and integrator.* This possibility goes further than the second option by creating an entity that would function in effect as a Military Department with a separate budget and the ability to raise, train, and equip headquarters elements and supporting units integral to joint warfighting capabilities.

The course’s final lesson begins with a discussion of several proposals for change that are designed to deal with some of the pitfalls of the current force development process. None of the proposals are all encompassing, nor do they necessarily advocate wholesale changes in the process. But they do provide a degree of improvement to a process that is not necessarily optimized for the joint community. The course concludes with a “reality check.” Despite good intentions and well-thought-out plans for changing the force development process, nothing is done in a political vacuum. Politics is a fact of American life, and any discussion of change must take that into account.

D. COURSE REQUIREMENTS

In keeping with the dictates of a graduate-level course, there are three graded activities that together make up the final course grade: class participation, a written prospectus outlining the term paper, and a term paper.

1. Class Participation (30%)

It is imperative that the students come to each class meeting prepared to participate in the class discussions and able to both analyze and critique the ideas and concepts from the readings. They must also be able to extrapolate how the US military process for developing forces might be modified in the future. Therefore, each student is expected to come to class fully prepared to discuss critically the material presented in the required readings. (Students are encouraged to read the suggested additional readings, as they present greater depth and variations on the required readings). To assist in creating an environment where informed and enthusiastic participation is the norm, one or two students will be selected for each lesson (after IP 01) to present a 10-minute summary/overview of the readings to the class.

2. Term Paper Prospectus (20%)

A term paper prospectus of no more than 5 double-spaced pages is due no later than the end of IP 06. In this prospectus, the student should present the topic to be handled in the term paper and discuss briefly its contextual relevance.

3. Term Paper (50%)

A term paper of no more than 30 double-spaced pages is due no later than the end of lesson 14. Students have the choice to either:

1. Critically analyze the current force development process from the perspective of a military department/Service or a player in the joint community.
2. Take an issue/theme presented and discussed in the course and apply it to a problem in force development—either a historical example (e.g., How would this issue be approached differently today given the contemporary security or organizational environment?); or a current example (e.g., How does the current approach to a force development issue compare with the way it would have been approached in the past?).

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Appendix A
LESSON SCOPE SHEETS

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LESSON SCOPE SHEETS

This appendix presents 15 lesson scope sheets (lesson plans) that IDA developed for the Air War College course in accordance with the standard Air University format. Each scope sheet presents a short lesson *Introduction*, followed by the *Lesson Objective*, *Questions for Study and Discussion*, and the *Assigned and Suggested Additional Readings*.

A. INSTRUCTIONAL PERIOD 01

1. Introduction to Force Development?

Both the National Security Strategy and Joint Vision 2020 assert that the development of new military capabilities is predicated by the need to “prepare now for tomorrow’s uncertain future.” Though this seems a self-evident maxim, it poses one of the most difficult challenges for military planners. Stephen Peter Rosen argues (see assigned reading):

The fundamental problem of managing military research and development is that the uncertainties about the enemy and about the costs of and benefits of new technologies make it impossible to identify the single best route to innovation. This logic suggests that it might be reasonable to give up the search for an optimum tegy and concentrate instead on ways of living with uncertainties. If the future is uncertain, then it pays to be flexible.

This argument for flexibility in force development assumes, however, that America can and should continue to engage globally as it seeks to demonstrate a preponderance of force across the full spectrum of conflict. Although this grand strategy may have been effective during the Cold War, both Richard Haass and Christopher Layne contend in their articles that the ability to assert power in a post-Cold War world does not translate readily into a vision for when and where America actually should prepare to use military force. Haass argues specifically that, despite the inability to predict the future with certainty, “the sizing and shaping of the U.S. armed forces is a long-term enterprise that must be based on a vision of the world’s future and America’s purpose within it.”

It is this sense of America’s future purpose that will guide military force development. The ability to fight across the full spectrum of conflict does not necessarily mean that the United States will do so. Choices are made in war as choices are made in foreign policy. As Layne

points out, “to preserve a security framework favorable to interdependence, the United States does not, in fact, intervene everywhere.”

Therefore, in thinking about the process of force development and the case studies to be addressed in the following instructional periods, it is useful to consider what the different authors suggest about the possible evolutions in American grand strategy over the next decade. Out of these strategic visions will come the possible roles and missions that will define the possible templates for force structures in an environment constrained by limited resources and political realities.

2. Lesson Objective

To understand why changes in the post-Cold War international system are prompting decision-makers to rethink how American military planners approach force development.

3. Desired Learning Outcomes

1. Compare the arguments made by Haass and Layne about the nature of America’s future grand strategy.
2. Analyze the implications for possible roles and missions in these two strategic visions.
3. Determine the validity of Rosen’s argument about the role of technological change in force development given the changing international system following the collapse of the Soviet Union.

4. Questions for Study and Discussion

1. How would each of the authors construe the idea that flexibility is the key to military power?
2. What are the fundamental differences between Haass and Layne as they consider what America’s grand strategy should be?
3. Which of the readings best captures your sense of the constraints and the opportunities for planning a future military force? In other words, whose vision offers the clearest guidance and is that clarity, in fact, useful?
4. All the authors talk about the unpredictable impact of technological change on force development. How do the authors differ in terms of their analysis of this impact?

5. Assigned Readings

1. Haass, Richard N. *The Reluctant Sheriff: The United States After the Cold War*. New York: Council on Foreign Relations, 1997. -- [pp. 1-9 (Introduction) & 21-48 (Chapter 2)].
2. Layne, Christopher. "From Preponderance to Offshore Balancing: America's Future Grand Strategy." *International Security*. Vol. 1, No. 1 (Summer 1997): 86-124.
3. Rosen, Stephen Peter. *Winning the Next War: Innovation and the Modern Military*. Ithaca: Cornell University Press, 1994. -- [Skim: Chapter 8 (Strategies for Managing Uncertainty)].
4. Department of the Army. *The Joint Force Development Process*. DAPAM 525-15/AFPAM 400-19, June 1987. -- [Chapter 1 (An Historical Perspective) & Chapter 2 (Organizing for Success)].
5. Shalikashvili, GEN John M. *National Military Strategy of the United States of America 1997*. Washington: U.S. Government Printing Office, 1997. -- [Review].

6. Suggested Additional Readings

1. Clinton, William J. *A National Security Strategy for a New Century*. Washington: The White House, December 1999.
2. Lebovic, James H. *Foregone Conclusions: U.S. Weapons Acquisition in the Post-Cold War Transition*. New York: Westview Press 1996.
3. Steblin, Mark E. *Targeting for Effect: Is There an Iceberg Ahead?* USAWC/AU Paper, U.S. Air War College, April 1997.
4. Haass, Richard N. *The Reluctant Sheriff: The United States After the Cold War*. New York: Council on Foreign Relations Press, 1997. -- [pp. 103-136 (Chapter 5)]
5. Chairman of the Joint Chiefs of Staff. *Joint Vision 2020*. June 2000

B. INSTRUCTIONAL PERIOD 02

1. What is Force Development?

Most military professionals assume that they understand the concept of "force development." But ask a group of them and the answers are likely to be inconsistent and divergent. Not surprising in one sense. After all, there is no definition of the term in Joint

Publication 1-02, *DOD Dictionary of Military and Associated Terms*. And many fail to understand the difference between “force planning” and “force development.” Force planning often has a resource management connotation. (Pub 1-02 states that force planning is “planning associated with the creation and maintenance of military capabilities.”) But the term is also commonly used to mean planning for force mix and size. Force development has a broader and more comprehensive definition, however. Force development is the process of—

- (1) identifying required future military capabilities through mission analysis;
- (2) designing forces that can provide those capabilities when employing specified operational concepts and doctrine;
- (3) elaborating requirements for technology, material, personnel, and training based on the force design; and,
- (4) determining whether the result fits within resource limits.

It follows, then, that “joint force development” encompasses the same four elements in a joint context. It involves identifying future required joint capabilities, designing a joint force to provide them, elaborating what such a joint force will require, and determining whether resources will be adequate.

Thinking in terms of force planning and not force development tends to produce a focus on the programmatic mid-term, i.e., points 3 and especially 4 above. Force planning tends to accept force design as given and that future requirements have been correctly understood. By contrast, force development in its truest sense requires a longer-term view and an equal focus on the changing security environment and evolving operational concepts and technologies (i.e., points 1 and 2 as well as 3 and 4).

Today’s readings are designed to get you used to thinking about the complete framework for force development (that is, to think in terms of all four points) before beginning our more detailed examination of how the Services each approach force development. Both Lloyd and the Bartlett, Holman, and Somes readings present conceptualizations of a framework for force development. Don’t be fooled by the differences in terminology: what the authors (who teach at the Naval War College) call “strategy and force planning” really is more akin to force development. Thus the articles are also good tune-ups for the confusion and differences in terminology that you will encounter once we begin to examine Service-specific practices next week.

The portions of Joint Publication 1 that you will read serve as an example of the operational concepts that the current joint force is expected to utilize. Most of the remaining readings implicitly or explicitly criticize those operational concepts, or argue more fundamentally that the United States is getting point 1 wrong. Owens, for example, presents the case that advances in technology must be embodied in new operational concepts that will

performance render most current force design obsolete. (Notice that skepticism of the Owens view may be growing. Toti is one example.) Steele and Record, on the other hand, are making more of a point 1 argument. They believe that we are doing a poor job of understanding where and how future military challenges are likely to develop and what operational concepts our future adversaries are likely to employ.

How can force developers cope with the widespread uncertainty over the nature of future security challenges and the direction of operational concepts and doctrine? One possibility is to emulate private industry, which faces similar planning problems. The excerpts from Schwartz's book present a brief introduction to how many corporate strategic planning offices meet that challenge.

2. Lesson Objective

To develop a definition of force development.

3. Desired Learning Outcomes

1. Understand the elements of force development.
2. Explain the roles that strategic planning and operational concept and doctrine development play in force development.
3. Identify the chief sources of uncertainty in force development.

4. Questions for Study and Discussion

1. Would you agree with the proposition that force development in the U.S. tends to overemphasize the programmatic (i.e., points 3 and 4, above) and underemphasize strategy and operational concept development (points 1 and 2)?
2. If the imperative for a new operational concept is as strong as Owens suggests, why isn't it already reflected in the results of current force development?
3. Are Steele and Record posing an either-or choice, or is there a way to reconcile their assessments with forces that can both respond to the challenges they perceive and still be capable of fighting the major theater wars envisioned in current U.S. strategy?
4. How could the Services or joint community make use of the techniques that Schwartz discusses? Do they require a degree of honest self-criticism that is unlikely in the current military planning climate?

5. Assigned Readings

1. Lloyd, Richmond M. "Strategy and Force Planning Framework." *Strategy and Force Planning*, 3rd Edition. Newport, RI: Naval War College Press, 2000.
2. Bartlett, Henry C., Holman, G. Paul Jr., and Timothy E. Somes. "The Art of Strategy and Force Planning." *Strategy and Force Planning*, 3rd Edition. Newport, RI: Naval War College Press, 2000.
3. Chairman of the Joint Chiefs of Staff. *Joint Warfare of the Armed Forces of the United States*, Joint Pub 1. November 2000. -- [pp. i; v-x (Preface & Executive Summary)].
4. Owens, William A. *Lifting the Fog of War*. New York: Farrar Straus Giroux, 2000. - - [Introduction].
5. Toti, CDR Bill. "Stop the Revolution; I Want to Get Off." *U. S. Naval Institute Proceedings*. Vol. 126, No. 7 (July 2000): 30-33.
6. Steele, Robert David. "The Asymmetric Threat: Listening to the Debate." *Joint Force Quarterly*, 20 (Autumn/Winter 1998-99): 78-84.
7. Record, Jeffrey. *The Creeping Irrelevance of U.S. Force Planning*. USAWC-SSI Paper, U.S. Army War College Strategic Studies Institute, 1998.
8. Schwartz, Peter. *The Art of the Long View: Planning for the Future in an Uncertain World*. New York: Doubleday, 1996. -- [pp. 191-209 (Rehearsing the Future)].

6. Suggested Additional Readings

1. Chairman of the Joint Chiefs of Staff. *Universal Joint Task List, Version 3.0*. CJCSM 3500.04A. 13 September 1996. -- [pp. 2-125 through 2-137 (SN 7)].
2. Hinkle, Wade P., and Michael Fischerkeller. *Improving Air Force Long-Range Planning*. IDA Document D-2589, Institute for Defense Analyses, March 2001.

C. INSTRUCTIONAL PERIOD 03

1. Force Development: Issues and Processes

"Jointness" has become increasingly a key word in the Armed Forces vocabulary, both in terms of how military operations are to be conducted and in how forces perhaps ought to be

developed. But there are a number of problems associated with joint force development. Some of these are institutional, others are a product of the current bureaucratic system. This lesson consists of two parts. Part A continues the discussion from the last lesson, adding several additional factors that affect the formal force development process. Part B provides our first look at some of the primary guidance documents that define and delineate the current formal force development processes found in DoD and the Services.

The first several readings discuss an issue that affects both Service-specific force development and joint force development: Service culture, a concept that Builder first borrowed from sociology and anthropology and applied to analysis of military decisionmaking 13 years ago. Smith suggests that the Air Force's organizational culture has become so stratified that the Service cannot develop an integrated vision to guide force development. He then offers ideas on how cohesion might be improved.

The third article discusses Service organizational culture in a broader context, and more directly its effect on force development. In the 1980s and 1990s, advances in technology made possible new categories of weapon systems, including unmanned aerial vehicles (UAVs) and arsenal ships. Ricks and Squeo analyze Air Force and Navy hesitance in adopting those systems and conclude that a combination of Service rivalry and cultural conservatism systematically result in overinvestment in existing "big-ticket weapons" and underinvestment in innovation.

Gehman makes a case that the current Service-centric force development process is antithetical to necessary innovation. He argues that "information age capabilities cannot be relegated to decentralized Service prerogatives." Kreis and Smith take this a step further in their assessment of the current state of joint force development. Recognizing that historically, "each Service acted according to its own needs and culture," the authors discuss the merits of independent [of the Services] operational evaluations of advanced warfighting experiments intended to develop joint capabilities that may perhaps better take into account the requirements of joint operations.

In Part B, we begin our formal introduction to the force development process. We begin with a short overview of the joint portion of the force development process. The remaining readings consist of extracts from three Chairman of the Joint Chiefs of Staff Instructions (CJCSI). The first, "Requirements Generation System," is intended to standardize the generation of future warfighting requirements throughout the DoD through a process consisting of four distinct phases: definition, documentation, validation, and approval. The second instruction, "Joint Strategic Planning System," discusses to a greater degree some of the policy documents and players that in reality drive force development decisions at the macro level. The third instruction delves deeper into one of those players: the Joint Requirements Oversight Council (JROC). [For those already familiar with the JROC, note that a new version of CJCSI 5123.01

was published in March 2001. According to the CJCSI, one of the primary goals of this revision is to “strengthen the JROC’s strategic focus by enhancing JROC *up-front* [emphasis added] influence of complex requirements integration, and development/validation of the operational view of integrated operational concepts/architectures and related products (e.g., Joint Operational Architecture).”]

Keep in mind as you read these instructions that the goal is not to make you an expert on particular staff processes but rather to illustrate the interrelationships of the major parts of the formal force development process.

2. Lesson Objective

To understand additional issues that affect the current joint force development process, as well as the basics of the formal joint force development process itself.

3. Desired Learning Outcomes

1. Understand how traditional Service culture affects current Service-centric force development, and what impact it may have as force development moves toward a more joint process.
2. Identify the component pieces and main attributes of the current process for joint requirements generation and force development.

4. Questions for Study and Discussion

1. Many of today’s readings assert that Service organizational culture is antithetical to innovation in force development and/or to a joint perspective. Do you agree?
2. Using the reading materials from Part B, identify who is responsible in the joint force development system for each of the four elements of force development identified in IP. Are there gaps?
3. It is often asserted that force development is about meeting the needs of the future joint force commander. In the current joint force development process, who speaks for CINCs 15 years from now? Will the current Unified Commands even exist then?

5. Assigned Readings

Part A

1. Builder, Carl H. *The Masks of War: American Military Styles in Strategy and Analysis*. Santa Monica: RAND, 1989. -- [pp. 3 through 43 (Personalities)].
2. Smith, James M. *USAF Culture and Cohesion: Building an Air and Space Force for the 21st Century*. INSS Occasional Paper, United States Air Force Academy, 1998.
3. Ricks, Thomas E., and Anne Marie Squeo. "Why the Pentagon is Often Slow To Pursue Promising Weapons." *The Wall Street Journal (Eastern Edition)*, 12 October 1999.
4. Gehman, ADM Harold W. Jr. *Transforming America's Armed Forces*. Address to John M. Olin Institute for Strategic Studies at Harvard University, 14 March 2000.
5. Kreis, John F., and Edward F. Smith, Jr. "Independent Evaluation of Emerging Joint Experimentation." *The ITEA Journal of Test and Evaluation* 20/4 (1999): 43-50.

Part B

1. Morton, Lawrence B. *An Overview of Defense Resource Allocation*. IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from United States War College, *An Executive Level Text in Resource Allocation, Volume 1, The Formal Process*, 4th edition. Newport RI: Naval War College Press, 2000).
2. Chairman of the Joint Chiefs of Staff. *Requirements Generation System*, CJCSI 3170.01B. 15 April 2001. -- [pp. A-1 through A-4 (Requirements Generation System); B-1 through B-8 (Requirements Generation Process) and Glossary].
3. Chairman of the Joint Chiefs of Staff. *Joint Strategic Planning System*, CJCSI 3100.01A. September 1999. -- [pp. A-1 through A-3 (Introduction)].
4. Chairman of the Joint Chiefs of Staff. *Charter of the Joint Requirements Oversight Council*, CJCSI 5123.01A. 8 March 2001. -- [Enclosure A, especially paragraph 1 (Introduction); 2 (The Joint Requirements Oversight Council); 3

(The Joint Requirements Board); 4 (The Enhanced Joint Requirements Board); & 8 (JROC Capabilities)].

6. Suggested Additional Readings

NOTE: Students interested in supplemental readings are not expected to read all of these for this lesson. However, many relate to other topics later in the course.

1. Libicki, Martin. "Rethinking War: The Mouse's New Roar?" *Foreign Policy*, 117 (Winter 1999/2000): 30-43.
2. Johnstone, Mark A., Stephen A. Ferrando, and Robert W. Critchlow. "Joint Experimentation: A Necessity for Future War." *Joint Force Quarterly*, 20 (Autumn/Winter, 1998/99): 15-24.
3. Coats, Dan. "Joint Experimentation: Unlocking the Promise of the Future." *Joint Force Quarterly*, 17 (Autumn/Winter 1997/98): 13-19.
4. Owens, William A. *Lifting the Fog of War*. New York: Farrar Straus Giroux, 2000. - [Chapter 4].
5. Chairman of the Joint Chiefs of Staff. *Requirements Generation System*, CJCSI 3170.01B. 15 April 2001. -- [Enclosures C - F].
6. Chairman of the Joint Chiefs of Staff. *Joint Strategic Planning System*, CJCSI 3100.01A. September 1999. -- [Enclosures B - F].
7. Chairman of the Joint Chiefs of Staff. *Chairman of the Joint Chiefs of Staff, Commander in Chiefs of the Combatant Commands, and Joint Staff Participation in the Planning, Programming, and Budgeting System*, CJCSI 8501.01. 1 April 1999.

D. INSTRUCTIONAL PERIOD 04

1. Case Study I: Army Force XXI

This instructional period begins a series of seven lessons that explore Service force development in practice and in theory. We will begin each of these lessons on Service force development with an instructional period that analyzes a contemporary issue in Service force development (here, the Army's work on Force XXI). Each case study will be followed by an IP that explores the subject Service's formal force development process. (Since the Department of

the Navy has two Services, case studies on the Marine Corps and the Navy (IPs 06 and 07) precede the IP (IP 08) on the DoN process.)

In 1995, and in response to the changes in the international security environment in the wake of the end of the Cold War, Army Chief of Staff GEN Gordon Sullivan and Army Secretary Togo West inaugurated a sweeping transformation of the U.S. Army. In their words, “Force XXI is the reconceptualization and redesign of the force at all echelons, from the foxhole to the industrial base, to meet the needs of a volatile and changing world.”

The assigned readings are designed to explore parts of this transformation and how institutionalized Army force development processes are affecting the outcome. The first reading was written by (then) LTC (P) Douglas Macgregor while he was a military fellow at the Center for Strategic and International Studies. Macgregor’s basic argument is that the new technologies that have been, or potentially will be, incorporated into the Army (and also the entire Armed Forces) are not sufficient in themselves to accomplish the transformation envisioned by the Army leadership. As pointed out in the book’s Foreword, although these technologies promise great advances in the ability of the US Army to apply combat power, they will not be adequate for the future security environment “if the new devices are merely grafted onto a military organization that is not designed specifically to use them to best effect.” In his mind, tinkering around the edges will get the Army nowhere; what is required is widespread and thorough organizational change. Chapter 3 describes his view of how this organizational change may look; Chapter 5 applies his new organizational structure to a future combat scenario.

The next three articles discuss the primary pillar of Force XXI—digitization. Mark Hanna and Robert Holcomb provide a detailed overview of what has been accomplished to date and what still needs to be done. Colonel Macgregor returns with a short discussion of the importance of digitization not only in the Force XXI context, but also in the broader context of “joint” command and control.

William Johnsen’s discussion of “Force Planning Considerations for Army XXI” ties in directly with the topics discussed in IP 02 & IP 03. Johnsen highlights and then discusses a wide range of factors that will (or at least, should) influence Army decisions regarding the capabilities acquired for Army XXI to successfully cope with the security environment of the early 21st century.

The final two readings are about money—major changes require major amounts of funding. First, Sean Naylor presents an “outsider’s” view of the ongoing Army transformation. Although his recap of the USMC Commandant’s critique of Army transformation may strike some as simple interservice rivalry and posturing, he brings up a valid point. The budget director is more direct; as it stands, the Army simply cannot afford to accomplish its

transformation at current spending levels. Since force development today cannot be done either *tabula rosa* or in a vacuum, perhaps the Army's current efforts are indeed misdirected.

2. Lesson Objective

To understand the intricacies and pitfalls of a wholesale attempt to transform legacy forces into a force which remains viable for the security needs of the 21st century.

3. Desired Learning Outcomes

1. Understand the motivations and rationales behind the Army's move toward "Force XXI."
2. Identify the specific factors that the Army should take into account as it develops this "new" force and be able to relate them to the general concepts of force development discussed in earlier lessons.
3. Understand the Force XXI transformation process so as to critique the impact/effect of formal Army force development processes in IP 05.

4. Questions for Study and Discussion

1. What should come first when developing a "future" force—new equipment or new organizational structures?
2. What is the real motivation behind the Army's move toward Force XXI—a better way of doing business or maintaining a reason for being?
3. Is the Army guilty, as Macgregor seems to imply, of putting the cart before the horse, by emphasizing technology over organization? Is GEN Shinseki aware of this potential "trap" and simultaneously working to avoid it?
4. How important is it for the Army leadership to take account of the impact its transformation will (or can) have on the other Services and the ability of the Armed Forces in general to accomplish their assigned mission of providing security to the United States?

5. Assigned Readings

1. MacGregor, Douglas A. *Breaking the Phalanx: A New Design for Landpower in the 21st Century*. Westport: Center for Strategic and International Studies, 1997. -- [pp. 31-57 (Chapter 3), 141-184 (Chapter 6) & 185-223 (Chapter 7)].

2. Holcomb, Robert C. *Some Lessons Learned While Digitizing the Battlefield*, IDA working paper, Institute for Defense Analyses, June 1998.
3. MacGregor, Douglas A. "Command and Control for Joint Strategic Actions," *Joint Force Quarterly*, 20 (Autumn/Winter 1998-99): 25-33.
4. Hanna, Mark. "Task Force XXI: The Army's Digital Experiment." *NDU/INSS Strategic Forum*, 119 (July 1997).
5. Johnsen, William T. *Force Planning Considerations for Army XXI*, USAWC-SSI Paper, U.S. Army War College Strategic Studies Institute, February 1998. -- [pp. v-ix; 12-21; (skim remainder)].
6. Naylor, Sean D. "Jones Doubts Transformation is Affordable," *Army Times*, 10 July 2000.
7. Winograd, Erin Q. "Budget Director: \$82 Billion Needed In FY-02 Unless Strategy Changes," *Inside the Army*, 14 May 2001.

6. Suggested Additional Readings

1. MacGregor, Douglas A. *Breaking the Phalanx: A New Design for Landpower in the 21st Century*. Westport: Center for Strategic and International Studies, 1997. -- [Chapters 1,2,5 & 8].
2. Steele, Dennis. "The Army XXI Heavy Division – First Blueprint of the Future Army," *Army Magazine*, Vol. 48, No. 7 (July 1998): 33-35.
3. Shinseki, GEN Erik K. Chief of Staff of the Army address to the 45th Annual Meeting of the Association of the United States Army, 12 October 1999.
4. Gordon, John, IV, and Peter A. Wilson. "The Case for Medium-Weight Army Forces," *Army Magazine*, Vol. 49, No. 12 (December 1999): 33-38.
5. Gourley, Scott R. "New Brigade Structure Begins to Emerge," *Army Magazine*, Vol. 50, No. 2 (February 2000): 33-34.
6. Steele, Dennis. "The Army Stages a Kentucky Demo to Define The Art of the Possible," *Army Magazine*, Vol. 50, No. 3 (March 2000): 20-26.
7. Steele, Dennis. *The Army Magazine Hooah Guide to Army Transformation*, Association of the United States Army, February 2001.

E. INSTRUCTIONAL PERIOD 05

1. Case Study I: USA Force Development Process

This is the first of a series of IPs on the formal processes and policies that guide force development in each of the Services. We do not expect you to become an expert Service-specific “force developer.” Our objective is to illustrate the existing force development practices used by each Service in all their intricacies and complexities. However, acronyms and fine detail are unimportant. Instead, concentrate on each Service’s overall process. Does the result meet its stated purpose? More importantly, are the Services’ current systems adequate for meeting the force development challenges of the 21st century?

The first four assigned readings introduce the five-phased process of Army force development. It starts with the determination of requirements within the categories of doctrine, training, leader development, organization, material and soldiers (DTLOMS). The Army ostensibly uses a holistic approach based on desired Joint and Army warfighting capabilities versus known deficiencies and incorporating guidance from senior leadership and/or new material capabilities. Organizations to provide the capabilities to meet these validated requirements are designed and developed in the next two phases.

The final two phases comprise the resource aspects of force development, where fiscal realities make their voices heard. Essentially, the five phases answer three basic questions – What is my mission? What must I have? What can I have?

Record and Ricks suggest that force development in the Defense Department is either focused on the wrong set of future joint missions or unable to recognize or take advantage of advances and improvements in new systems. Do those criticisms apply to the Army?

2. Lesson Objective

To understand the Army force development process.

3. Desired Learning Outcomes

1. Understand the five phases of the Army force development process, both individually and in concert with each other.
2. Understand the various guidance documents and issues that drive Army requirements determination.
3. Be able to relate the transformation program outlined by Force XXI to the Army force development process.

4. Questions for Study and Discussion

1. How do the five phases of force development interact to result in a trained and ready Army?
2. Is Army force development a “self-running” process or is it one in which senior leaders play a major role?
3. Does the process allow (or require) all component parts of the Army to participate equitably?
4. Recalling the readings from IP 04, was the impetus toward implementing Force XXI driven by the formal process, or did it occur outside the formal process?
5. Is the current Army process amenable to the changes occurring in the international security environment and the increasingly strident calls for “jointness?”

5. Assigned Readings

1. Morton, Lawrence B. *Overview of Army Force Development*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from *An Executive Level Text in Resource Allocation, Volume 1, The Formal Process*, 4th edition. Newport RI: Naval War College Press, 2000.)
2. U.S. Army War College. *How the Army Runs: A Senior Leader Reference Handbook (1999-2000)*. Carlisle Barracks: US Army War College, 1999. -- [Chapter 5, Army Force Development: pp. 1-15; 18-22; 29; 35-36; 41-42].
3. Winograd, Erin Q. “Army Establishes Its Own Requirements Oversight Council,” *Inside the Army*, 11 December 2000.
4. Winograd, Erin Q. “Chief Of Staff Assumes Approval Authority For All Requirements,” *Inside the Army*, 9 April 2001.
5. Record, Jeffrey. *The Creeping Irrelevance of U.S. Force Planning*. USAWC-SSI Paper, U.S. Army War College Strategic Studies Institute, 1998. -- [Review from IP 02]
6. Ricks, Thomas E., and Anne Marie Squeo. “Why the Pentagon is Often Slow To Pursue Promising Weapons.” *The Wall Street Journal (Eastern Edition)*, 12 October 1999. -- [Review from IP 03].

6. Suggested Additional Reading

Owens, William A. *Lifting the Fog of War*. New York: Farrar Straus Giroux, 2000.
-- [Chapter 5].

F. INSTRUCTIONAL PERIOD 06

1. Case Study II: Marine Corps Urban Combat

Although perhaps a gross generalization, one could state that, historically, military forces have tried their utmost to avoid conducting operations in the midst of cities. From the earliest days of siege warfare to the battles of Desert Storm, ground forces generally avoided the ambush sites and pockets of violence generally found in built-up areas. As a former Commandant of the Marine Corps, Gen Krulak, once said: “It is a very difficult and dangerous place to fight...one we want to avoid.” For a variety of reasons, several of which are outlined in our second reading, the US military has begun to change this outlook, recognizing and accepting (albeit grudgingly at times) that the battlefields of the future may more likely than not take place in an urban environment.

One may argue that the United States Marine Corps was formed and maintained primarily to provide the nation with a responsive amphibious assault capability. However, the Corps was the first Service to wholeheartedly embrace the new “reality” of urban warfare. Seeing the necessity, the USMC began an early process to “develop” a force that would be capable of operating and succeeding in the urban environment.

Was the Corps’ move toward the new environment an attempt to adjust to the changed challenges of the 21st century, or was it simply an effort to redefine its essence in order to maintain organizational viability in a prospective era where the old warfighting paradigms and the traditional roles and missions of the Services may have lost meaning? Our purpose is not to debate this question, but rather to look at some of the external and internal factors that drove this change in emphasis. In this way, we will set the stage for IP 08, where we will look at how well the USMC bureaucratic structure was (or is) able to develop a viable urban operations force.

Although the Defense Science Board set the “requirement” for a transition to urban operations in 1994, Gen Krulak, while Commandant of the Marine Corps, essentially set the ball rolling for the USMC transformation with his 1997 speech to the National Press Club. Characterizing the 21st century battlefield as a “Three Block War,” Gen Krulak discusses how the Marine Corps must transform in order to incorporate the changes necessary for success in the urban environment. The second reading details the 1994 Defense Science Board’s (DSB) Summer Study on Military Operations in Built-up Areas (MOBA; also known as MOUT—

military operations in urban terrain). Undertaken in response to a growing belief that operations in such an environment would become increasingly common in US military life, the study recommended improvements that the US military should undertake in order to successfully cope with such an environment.

The Commanding General of the Marine Corps Combat Development Command transforms the messages of the first two readings into a guide outlining the research and experimentation plan that ideally will discern for the USMC the operational capabilities and potential solutions necessary to succeed in urban areas. A careful reading of this document highlights myriad issues affecting USMC force development.

The next reading, the Marine's concept document—*Operational Maneuver from the Sea* (OMFTS)—illustrates a common phenomenon. The previous readings give the impression that urban operations are becoming an integral, perhaps major, component of the United States Marine Corps. Note, however, the phrases “urban warfare” or “urban operating environment” do not appear anywhere in OMFTS. Instead, OMFTS appears to rededicate the USMC to amphibious-based warfare in the littoral regions of the world. This raises doubts about whether the USMC indeed intends to redefine its historical operating environment. A very pertinent question for the joint community is represented by the final reading, the *Handbook for Joint Urban Operations*.

If the marines are indeed hesitating to opt for the role of the nation's urban streetfighters, it may be because of the assumption that urban combat produces heavy casualties. It is conventional wisdom that high-casualty operations are politically problematic for the United States. The lesson's final reading provides a different perspective on that issue.

2. Lesson Objective

To understand the effects a radical change in anticipated operating environment has on Service force development processes.

3. Desired Learning Outcomes

1. Be able to describe the genesis of the USMC's emphasis on urban warfare.
2. Understand the implications for the Marine Corps force development process (and by extension, the implications for the entire military) of the increasing emphasis both internal by the USMC and external by the larger joint community of the increasing emphasis on urban warfare.
3. Understand the basis for and the implications of the current attention to “casualties” in US military operations.

4. Questions for Study and Discussion

1. Is the Marine Corps' "new-found" attention to the urban operating environment an example of the force development process leading change, or change leading the force development process?
2. Has the emphasis on "urban operations" had any noticeable effect on how the Marine Corps plans to do business? Why or why not?
3. What can or should a change in perceived expected operational environments have on force development?
4. Should the issue of casualties be included among the factors to be considered during the force development process?

5. Assigned Readings

1. Krulak, GEN Charles C. *The Three Block War: Fighting in Urban Areas*. Address to National Press Club, 15 December 1997.
2. Defense Science Board Summer Study Group. *1994 Defense Science Board Summer Study on Military Operations in Built-up Areas (MOBA)*, Defense Science Board, 1994. -- [Chap 1,2 & 3.6; skim chap 4 & 6].
3. Department of the Navy, Marine Corps Combat Development Command. *A Concept for Future Military Operations on Urbanized Terrain*, July 1997.
4. Department of the Navy. *Operational Maneuver From the Sea: A Concept for the Projection of Naval Power Ashore*, 1999.
5. Department of the Navy. *Military Operations in Urban Terrain*. MCWP 3-35.3, April 1998. -- [pp. 1-1,2; 1-20,21].
6. Chairman of the Joint Chiefs of Staff. *Handbook for Joint Urban Operations*. May 2000.
7. Morton, Lawrence B. *Casualty Tolerance in America: Implications for Decision-Makers*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from a Joint Staff Strategy Issue Paper originally prepared for the Chairman, Joint Chiefs of Staff, on 17 December 1996).

6. Suggested Additional Readings

1. Feaver, Peter D., and Christopher Gelpi. "Casualty Aversion: How Many Deaths are Acceptable? A Surprising Answer," *The Washington Post*, 7 November 1999).
2. Gold, Philip. "Counting The Cost." *Washington Times*, 21 September 2000.
3. Center for Defense Information. Casualty Phobia (Video Transcript), Center for Defense Information, 1 August 1999.
4. Office of the Secretary of Defense Urban Working Group. *Everything You Wanted to Know About Urban Operations (But Were Afraid to Ask)*, OSD Briefing, 25 July 2000.

G. INSTRUCTIONAL PERIOD 07

1. Case Study III: Maritime Mine Warfare

Put simply, mine warfare is critical to the success of the post-Cold War maritime strategy. Without a robust capability in this warfare discipline, the United States will be unable to project expeditionary power into littoral areas. In particular, America's ability to project amphibious force ashore would be questionable.

As the first of today's readings suggests, the potential vulnerability of U.S. maritime forces to mines has not escaped the notice of potential enemies. Indeed, Iraq's use during the Gulf War of mines with pre-World-War-I-design "successfully delayed and could have prevented an amphibious assault on Kuwait's...flank." The Department of the Navy's Mine Warfare Master Plan notes that 50 countries possess mines and mining capability. And even technologically sophisticated mines are relatively cheap and available on world arms markets, making them an asymmetric weapon of choice for denying U.S. and coalition forces access to littorals.

Yet despite the real and growing threat to maritime expeditionary forces and a forecast \$4 billion in spending over the period FY 2001-5, by the end of this decade the Defense Department will still lack systems and forces able to detect, counter, and/or avoid mines in the littorals. The threat will be most acute from shallow- and very-shallow-water mines.

Given that the severity of this problem has been evident since at least the late 1980s, it may seem surprising that no programmatic solution has yet emerged. Access to and through littoral areas is an important component of the Dominant Maneuver concept articulated in Joint Vision 2020:

The capability to rapidly mass force or forces and the effects of dispersed forces allows the joint force commander to establish control of the battlespace at the proper time and place....

Beyond the actual physical presence of the force, Dominant Maneuver creates an impact in the minds of opponents and others in the operational area.

Many of the articles from outside defense commentators suggest that the persistence of this operational deficiency is in large degree due to lack of adequate funding and programmatic priority. (To some extent, even problems for which there is at present no apparent technological solution are resource-based.) But the Navy Department recently reduced funding for its mine warfare program.

Given the priority that mine warfare capability has for joint force commanders and for the Navy and Marine Corps, why is there a funding problem? The readings suggest several possibilities with important implications for other similar “niche” warfare disciplines. Culturally, Erwin suggests, mine warfare is not a core warfare community in the Navy itself. Since it is not regarded as a core competency, mine warfare program managers have trouble competing for funding and emphasis. Furthermore, many in the Navy’s programmatic community view this as essentially a “Marine” issue, and the Navy has traditionally been reluctant to spend “Blue” dollars on “Green” programs.

2. Lesson Objective

To understand how specialized joint warfare capabilities are treated in Service program development.

3. Desired Learning Outcomes

1. Analyze mine warfare as an example of obstacles in resourcing joint capabilities from a single Service’s budget resources.
2. Understand the range of approaches possible for force development in areas of technological uncertainty.
3. Master the information in the Naval Mine Warfare Plan so that it can serve as a case example in reviewing the Department of the Navy’s force development process in IP 08.

4. Questions for Study and Discussion

1. Is the lack of mine warfare capability fundamentally due to a lack of funds or technology?

2. Is it true that the Navy is reluctant to provide funding for this program because the benefit would accrue primarily to the Marines? Or is it because mine warfare is seen as a backwater in the Navy?
3. Are there other examples of programs neglected by one Service because they are seen as primarily of benefit to another? Are there counterexamples? How about for programs within a Service that are seen as “outside the mainstream?”

5. Assigned Readings

1. Jane’s Navy International. “Hunting Goliath in the Age of Asymmetric Warfare.” *Jane’s Navy International*, 1 December 1999.
2. Jones, Gen James L., Commandant of the Marine Corps. “Mine Warfare: A Marine Perspective.” In *Demining Newsletter* [electronic journal].
<<http://www.usmc.mil/cmc/32cmc.nsf/alldocs/CA8463AA2126609F852568FD005F8EDD?opendocument>>.
3. Erwin, Sandra I. “Navy Faulted for Slow-Going in Fielding Anti-Mine Systems.” *National Defense*, Vol. LXXXIII, No. 544 (January 1999): 14-17.
4. Abel, David. “Navy Reportedly Does Little to Counter Threat of Mines.” *Boston Globe*, 21 July 1999: A20.
5. Department of the Navy. *U.S. Naval Mine Warfare Plan: Programs for the New Millennium*, 4th edition, January 2000. -- [pp. 2-14 & skim Appendix H, (Mine Warfare Depth Requirements)].
6. Skibitsk, P. J. “Navy Budgets More Than \$4 Billion for Mine Countermeasures Systems.” *Inside the Pentagon*, 25 May 2000.
7. Office of Naval Research. *What is the JCM ACTD?*
http://www.onr.navy.mil/sci_tech/ocean/jcm/jcm2.htm
8. Singleton, Colonel T.J. “Eval/Demo Planning for the Joint Countermine ACTD.” *Program Manager*, Vol. 27, No. 1 (January/February 1998): 72.

H. INSTRUCTIONAL PERIOD 08

1. Department of the Navy (USN and USMC) Force Development Process

The Navy Department is unique within the Department of Defense in being composed of two separate armed services: the U.S. Navy and U.S. Marine Corps. This characteristic makes the two Services' force development processes complex because they are integrated in some respects but separate in others.

As you will see from the readings, the two Services partly share visions and operational concepts in *Forward...From the Sea*. But the Marines have supplemented the shared vision with their own specific concept development (*Operational Maneuver from the Sea*).

From those bases, Navy and Marine force development occurs sometimes in parallel and sometimes independently. Navy force development becomes Navy-specific in the Chief of Naval Operations' Strategic Planning Guidance and Long Range Planning Objectives (LRPOs). These in turn are used to develop the Integrated Warfare Architecture, the foundation for Navy programming. Marine force development becomes marine-specific with the Commandant's Planning Guidance and Marine Corps Master Plan.

Yet the portion of the Chief of Naval Operation's staff that is in charge of Navy programming (N8) has a Marine component (N87), and the Marines rely on parts of the Navy program and budget to provide systems (primarily amphibious shipping) that are integral to Marine operations.

So Navy and Marine Corps force development is at once the most "jointly integrated" (in the sense that the two Services partly collaborate in programming) and sometimes the most contentious (with the Marines believing that the Navy is often unwilling to "spend Blue dollars on Green programs.")

2. Lesson Objective

To understand how force development occurs in the Department of the Navy.

3. Desired Learning Outcomes

1. Understand the force development process in the U.S. Navy.
2. Understand the force development process in the U.S. Marine Corps.
3. Identify the portions of force development where the Navy and Marines share a common system and where they do not.

4. Understand how the design of the Department of the Navy's force development process affects its ability to respond to issues such as those presented in the Urban Warfare (IP 06) and Maritime Mine Warfare (IP 07) cases.

4. Questions for Study and Discussion

1. Is the Navy/Marine Corps force development process a model the rest of the Defense Department should follow or one to avoid? Why??
2. Did the Marine Corps' force development process in and of itself cause the Marines to focus on urban combat as a warfare specialty?
3. Are there other examples of programs neglected by one Service because they are seen as primarily of benefit to another? Are there counterexamples? How about for programs within a Service that are seen as "outside the mainstream?"

5. Assigned Readings

1. Morton, Lawrence B. *Overview of Navy Force Development*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from *An Executive Level Text in Resource Allocation, Volume 1, The Formal Process*, 4th edition. Newport RI: Naval War College Press, 2000.)
2. Morton, Lawrence B. *Overview of Marine Corps Force Development*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from *An Executive Level Text in Resource Allocation, Volume 1, The Formal Process*, 4th edition. Newport RI: Naval War College Press, 2000.)
3. Holzer, Robert. "U.S. Marine Corps Creates High-Level Council." *Defense News*, 18 September 2000.
4. Chief of Naval Operations, Assessment Division (N81). *A Users' Guide to Requirements Generation*, April 2000. -- [pp. 3-5].
5. Ricks, Thomas E. and Anne Marie Squeo. "Why the Pentagon is Often Slow To Pursue Promising Weapons," *The Wall Street Journal (Eastern Edition)*, 12 October 1999). --[Review from IP 03].

6. Suggested Additional Readings

Chief of Naval Operations, Assessment Division (N81). *The Requirements and Acquisition Process*, CNO Briefing, 16 May 2001.

I. INSTRUCTIONAL PERIOD 09

1. Case Study IV: Air Force Composite Wing

The Air Force's experience with composite wings is a good example of how the force development process attempts to adapt new operational concepts. A common misperception assumes that force development is simply the linkage of strategic and long-range planning to programming. Force development stands on three legs, not two, the third being concept development, which melds technological and operational innovation together.

As today's readings make clear, the genesis of the composite wing concept grew out of the experience of the Gulf War and the Air Force's expectations about the likely nature of future

contingencies. As explained by Gen Merrill McPeak at the time he was Commander-in-Chief of Pacific Air Forces:

In brief, on the eve of actual operations, we plan to move our combat units into a new basing configuration, one that distributes the capabilities needed to accomplish our most difficult missions among several bases. We then intend to rely on sophisticated C2 mechanisms to order up packages that integrate the needed capabilities. There are lots of reasons to doubt that we can in fact provide effective, detailed, central direction under stressful conditions.

There is an alternative operating concept. In outline form, it calls for us to create composite wings that include, at one base, under one commander, all the resources needed to form composite force packages. Such wings would not be needed everywhere, but should be based at the locations from which we are most likely to launch such operations.

But the Air Force's experience in implementing this concept was mixed at best. Critics claimed that the complexities of base operations supporting mixtures of aircraft types were not fully understood. And perhaps worse from a resource point of view, the concept as implemented proved a more expensive way of basing, training, and employing units.

The Air Force's composite wing experience is nevertheless interesting both as an example of the "lifecycle" of an innovative force development concept and as a basis for experience as all the Services grapple with the issue of force development for expeditionary warfare.

2. Lesson Objective

To understand how the composite wing operational concept was implemented in the Air Force as a case example of force development.

3. Desired Learning Outcomes

1. Understand the life cycle of operational concept implementation.
2. Analyze the elements of analysis needed to decide whether and how innovative operational concepts should be implemented through the force development process.
3. Prepare to relate the facts of the composite wing's implementation to the Air Force force development process that will be presented in IP 10.

4. Questions for Study and Discussion

1. Is the composite wing experience an example of a good idea poorly implemented or an incomplete idea rushed into force development?
2. Based on this example, what can be said of the process within the Air Force for identifying and including promising new operational concepts in force development?
3. Are there other instances in which innovative operational concepts were quickly and smoothly moved through force development?

5. Assigned Readings

1. McPeak, Gen. Merrill A. "For the Composite Wing." *Airpower Journal*, Vol. IV, No. 3 (Fall 1990): 4-12.
2. Canan, James W. "One Base, One Wing, One Boss." *Air Force Magazine*, Vol. 74, No. 8 (August 1991): 17-19.
3. Downer, Brig Gen Lee A. "The Composite Wing in Combat." *Airpower Journal*, Vol. V, No. 4 (Winter 1991): 4-16.
4. General Accounting Office, *Air Force Organization: More Assessment Needed Before Implementing Force Projection Composite Wings*, GAO/NSIAD 93-44, General Accounting Office, May 1993. -- [pp. 2-9 (Executive Summary)].
5. Watkins, Steven. "Did Aircraft Mix Overburden Pope?" *Air Force Times*, 11 April 1994.
6. Dorr, Robert F. "It's Time to End Composite Wings." *Air Force Times*, 16 January 1995.
7. Bird, Julie. "The Need for Composite Wings to be Debated." *Air Force Times*, 10 February 1997.

6. Suggested Additional Readings

1. Boatman, John. "USAF Shake-up Puts Emphasis on Composite Wings." *Jane's Defence Weekly*, 17 (11 January 1992): 48.
2. Boatman, John. "US Air Force's New Multi-Role Wings Take Shape." *Jane's Defence Weekly*, 17 (28 March 1992): 517.

3. General Accounting Office, *Air Force Organization: More Assessment Needed Before Implementing Force Projection Composite Wings*, GAO/NSIAD 93-44, General Accounting Office, May 1993. -- [pp. 12-73].
4. General Accounting Office, *Cost of Composite Wing*, GAO/NSIAD-93-183R, General Accounting Office, May 1993.
5. Trapp, Brig Gen Lansford E. Jr. "First to Go, First to Fight: Integrated Airpower, Day One." *The Combat Edge*, Vol. 3, No. 5 (October 1994): 4-7.
6. Bird, Julie. "Pope Composite Wing to Disband." *Air Force Times*, 3 February 1997.

J. INSTRUCTIONAL PERIOD 10

1. USAF Force Development Process

Though documentation prepared by the Navy War College speaks of a "force development" process within the Air Force, there is no formal process by that name in the Air Force's management system. Instead, force development occurs partly with two linked Air force management systems (the Resource Allocation Process and Modernization Planning process) and partly through interaction between Air Force Major Commands, Battle Labs, the Doctrine Center, and Air Staff.

The bulk of the conceptual underpinnings of Air force force development come from the Modernization Planning process. That process has itself been revised over the past few years to reflect the Air Force's new approach to strategic and long-range planning. Central to the new concept are the Integrated Product Development Teams who produce Mission Area Plans. The teams are intended to bring together at one point MAJCOM planning resources and Air Staff guidance to prepare modernization roadmaps for their mission areas.

The revised system has been criticized for overemphasizing modernization and technology at the expense of innovative operational concept development. It has also been criticized for employing overly prescriptive top-level direction at its front end.

The intent of the Air Force system is to partially decentralize force development to take advantage of the expertise and creativity available at the Major Command level. Two questions remain on the table: whether the current approach facilitates integrating the work of the Battle Labs and Doctrine Center, and whether the formal system actually represents the way that new force concepts are evaluated and included in the Air Force resource process.

2. Lesson Objective

To understand the force development process in the Air Force.

3. Desired Learning Outcomes

1. Understand how the Air Force links resource allocation and modernization planning to produce force development.
2. Understand the Air Force's concept of decentralizing force development to the major Commands.
3. Relate the facts of the composite wing's implementation to the Air Force force development process.

4. Questions for Study and Discussion

1. Does the Air Force need a formal "force development" process, or does the combination of its resource allocation and modernization planning processes already serve that purpose?
2. Where should the center of gravity for force development lie, with the major Commands or in the Air Staff?
3. Does a decentralized force development process help or hinder consideration of what the joint force needs?

5. Assigned Readings

1. Morton, Lawrence B. *Overview of Air Force Force Development*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from *An Executive Level Text in Resource Allocation: Volume 1, The Formal Process*, 4th edition. Newport RI: Naval War College, 2000).
2. Headquarters USAF. *Modernization Planning*, Air Force Policy Directive (AFPD) 10-14 March 1995. -- [pp. 1-3, plus skim Attachment 2 (p. 5, "Modernization Planning Cycle") and Attachment 4 (p. 7, "MAP & FAP Integration with Resource Allocation Teams")].
3. Headquarters USAF. *Modernization Planning Documentation*, Air Force Instruction (AFI) 10-1401, May 1995. -- [pp. 1-2 (Sections A, B, C - "Goal/Responsibilities/Products") and Attachment (pp. 10-12, "List of Terms")].
4. Headquarters USAF. *Mission Needs and Operational Requirements Guidance and Procedures*, Air Force Instruction (AFI) 10-601, August 1999. -- [Paragraph 1 (pp. 3-6, "Requirements origination"); Paragraph 8 (pp. 33-34, "Air Force

Requirements Oversight Council (AFROC”); Paragraph 10 (pp. 36-37, “Joint requirements and service harmonization”); plus skim Attachment 2 (pp. 57-63, “HQ USAF responsibilities” and Attachment 3 (pages 64-70, “MAJCOM responsibilities”)].

5. Ricks, Thomas E., and Anne Marie Squeo. “Why the Pentagon is Often Slow to Pursue Promising Weapons.” *The Wall Street Journal (Eastern Edition)*, 12 October 1999. -- [Review from IP 03].

6. Suggested Additional Readings

1. Headquarters USAF. *Modernization Planning Documentation*, Air Force Instruction (AFI) 10-1401, May 1995.” -- [pp. 2-7 (Section D - MAP contents and how to format)].
2. Headquarters USAF. *Mission Needs and Operational Requirements Guidance and Procedures*, Air Force Instruction (AFI) 10-601, August 1999. -- [pp. 6-11 (Paragraph 2 - “Phases of Acquisition Process”)].
3. Headquarters USAF. *United States Air Force Strategic Plan, Volume I, The Future Security Environment*, June 2000.
4. Secretary of the Air Force and Chief of Staff, United States Air Force. *Global Vigilance, Reach and Power: Air Force Vision 2020*, 19 June 2000.

K. INSTRUCTIONAL PERIOD 11

1. Case Study V: Mobility + The Current Joint Process

The preceding several lessons discussed in broad strokes how each of the four Services makes force development decisions, using Service-specific case studies to illustrate and critique the formal processes. We now turn to a joint context, specifically the issue of force mobility. Mobility may be the quintessential “joint” capability. It is largely viewed by the Services as an enabling capability rather than a core responsibility, and as a result it often has difficulty in competing for funding.

The perceived shortfall in mobility has received tremendous emphasis over the past 20 years, perhaps even more so since the end of the Gulf War. Yet lift is still inadequate to meet the requirements of today’s planning scenarios. Recall from the readings in IP 04, for example, that some argue that the Army’s approach toward Force XXI was driven in part by the Army’s

perception that the Air Force and Navy would never provide sufficient lift for today's heavy forces.

The readings for this lesson were selected to illustrate the issue of mobility and several of the factors that influence and determine development of the joint force mobility. The first reading is a case study of the 1981 *Congressionally Mandated Mobility Study*. Written by the Kennedy School of Government, the reading illustrates why mobility is of interest and perhaps more importantly, several factors that militate against developing coherent and permanent solutions to the perceived shortfalls in lift capability.

The second reading is excerpted from a 1997 Congressional Budget Office study. It highlights and explains the current and future necessity for the US to maintain a sizable capability for strategic mobility, and some of the issues that influence mobility development. As pointed out in the CBO study, the mobility issues that surfaced during Desert Shield/Desert Storm led to creation of a new unified command. Reading three presents a succinct history of U.S. Transportation Command's birth; the implementing SecDef documents follow this reading.

Nearly a decade after its creation, USTRANSCOM was significantly involved in Allied Force, the Allied Air Operation in Kosovo in 1999. CINCTRANSCOM's testimony to Congress highlights both how far the Command has come since its inception and how far (and to a degree, why) it still has to go. GEN Meigs adds to Gen Robertson's "Lessons Learned" piece with a succinct, but telling, warfighter's perspective.

Our final two readings look at the follow-on to the 1995 mobility study. "Mobility Requirements Study 2005" has since been completed, but as you skim the Joint Staff study plan, try to determine whether or not the study's structure was appropriate to add to the body of knowledge garnered from past studies. Increasingly, modern warfare is joint warfare, and the demands for integrated joint force capability (in areas such as C4ISR, battle management, and logistics) is growing. The attempts to generate adequate joint mobility may be a cautionary tale in that regard. Is it possible to develop joint force capability using today's processes and procedures? Or is something new needed for tomorrow's joint forces? What effect, if any, has moving mobility under the auspices of a joint command had in dealing with mobility force development issues?

2. Lesson Objective

To understand how the structure and application of the current, Service-centric force development process affects the development of a formal "joint" capability such as strategic mobility.

3. Desired Learning Outcomes

1. Understand the historical background and context that led to the creation of the US Transportation Command.
2. Be able to critique the individual Service force development processes in the context of how well they are structured and practiced to solve issues in a joint context.
3. Understand the peculiar demands on force development placed by the need for joint operational capabilities, such as those required by USTRANSCOM.

4. Questions for Study and Discussion

1. What events (and observations/realizations) led the SECDEF to create a unified command for mobility, and subsequently give it a more far-reaching charter? What was the intent underlying this action?
2. How, if there is so much emphasis and agreement throughout the DoD and the Government on the overriding importance of strategic mobility to national security, can General Robertson and General Ryan (among others) make the claims they have?
3. What role does Service culture, as discussed in IP 03, play in the decisions the Air Force and the Navy make regarding mobility forces?
4. Are the current Service-centric force development processes a help or a hindrance to CINCTRANSCOM in accomplishing his assigned mission?
5. Would US transportation requirements be better met if CINCTRANSCOM had more direct control over the force development process for mobility forces?

5. Assigned Readings

1. Schuyler Houser. *The Congressionally Mandated Mobility Study*, Kennedy School Case C16-87-789.0, Kennedy School of Government, Harvard University, 1987. -- [Chap 1 & 5].
2. Congressional Budget Office, *Moving U.S. Forces: Options For Strategic Mobility*, Congress of the United States, February 1997. -- [Chap 1, 2 (“Missions That Determine DoD’s Requirements for Strategic Airlift”) & 5].
3. Matthews, Dr. James K. *United States Transportation Command: A Short History*. United States Transportation Command Research Center, 2000.

4. Cheney, Richard B. *Memorandum on Strengthening Department of Defense Transportation Functions*, SECDEF Memo, 14 February 1992.
5. Department of Defense Directive 5138.4, 8 January 1993.
6. Robertson, Gen Charles T., Jr. Statement Before the House Armed Services Readiness Subcommittee, 26 October 1999.
7. Meigs, GEN Montgomery C. "Task Force Hawk and Its 'Bum Rap'." *Air Force Magazine* Vol. 83, No. 7 (July 2000): 20.
8. Hamre, John J. *Memorandum on Mobility Requirements Study 2005*, DEPSECDEF MEMO, 1 October 1998.
9. Joint Staff Force Structure, Resources and Assessment Directorate (J-8). *Joint Staff Study Plan for MRS-05, Final Version*, August 1998. -- [Skim].

6. Suggested Additional Readings

1. Hunter, Danita L. *United States Transportation Command: 10 Years of Excellence 1987-1997*, United States Transportation Command, 1997.
2. Secretary of Defense, *Annual Report to the President and the Congress, 2000*. -- ["Conventional Forces" Part II, Chapter 5 -- pp. 49-52; 67-68 (Mobility Forces)].

L. INSTRUCTIONAL PERIOD 12

1. Defining Future Missions I—*Technology Push: Has technology created the possibility of a "new" kind of joint force?*

The preceding lessons presented the current processes employed within DoD to develop forces. As we have seen, the legacy force development processes were perhaps not perfect but were arguably adequate for their time. In this lesson and the next, we will take a look at several aspects of the future security environment and ask whether those traditional force development processes are adequate to meet the coming challenges.

We begin by looking at the so-called Revolution in Military Affairs (RMA) and exploring whether and how it ought to affect force development. After an overview of the RMA from the Center for Strategic and Budgetary Assessments, we will look closer at two specific Service-oriented views toward future warfighting concepts. While both VADM Cebrowski's "Network-Centric Warfare" and Brig Gen Deptula's "Parallel Warfare" are both grounded in, and heavily dependent upon, developments in information technology, the two approaches differ

in their application of this technology. Each article has gained a tremendous following in its author's respective Service, and both have significant implications for those Services' approaches toward joint operations and future force development.

The second set of readings are designed to illustrate what is currently being done within DoD to take advantage of and integrate the lessons and results of ongoing technological advances.

The question that needs to be considered at the end of this lesson is basic – can, and/or should, extensive technological changes drive force development, or should the results of the force development process drive technological change? Additionally, one must ask, are we developing requirements for a future force based on technological changes that the current force development processes are ill-equipped to handle?

2. Lesson Objective

To understand the impact of technological development and change on the Armed Forces of the United States.

3. Desired Learning Outcomes

1. Understand the effects of the RMA on the type of forces that will be necessary for US security in the 21st century operating environment.
2. Understand the attendant ramifications of technological advances as envisioned by proponents of the RMA on the conduct of joint operations and for joint force development.

4. Questions for Study and Discussion

1. Are the current, Service-centric force development infrastructures and processes capable of providing a product viable for the type of capabilities envisioned by various aspects of the RMA?
2. Can DoD “afford” to continue force development in the future through a collection of disparate entities and processes?
3. What other possible force development constellations could be constructed to cope with the technological changes envisioned over the next quarter century?

5. Assigned Readings

1. Center for Strategic and Budgetary Assessments. *The Emerging RMA*. Available <www.csbaonline.org> 2000.
2. Cebrowski, VADM Arthur K., and John J. Garstka. (1998). Network Centric Warfare: Its Origin and Its Future. In *U. S. Naval Institute Proceedings* [electronic journal]. Available <<http://www.usni.org/Proceedings/Articles98/PROcebrowski.htm>>.
3. Deptula, Brig Gen David A. “Firing for Effects.” *Air Force Magazine* Vol. 84, No. 4 (April 2001): 46-53.
4. Garamone, Jim. “Millennium Challenge Experiment to Restore Joint Concept.” *American Forces Press Service*, 30 May 2000.
5. Force XXI Joint Venture. *The Joint Contingency Force Advanced Warfighting Experiment*. Available <<http://jointventure.monroe.army.mil/JVLightAxisPublic/JCF%20AWE%20Article.htm>>
6. Fischerkeller, Michael, Wade P. Hinkle, and Stephen Biddle. *Why Skill Matters in Combat Outcomes: and How to Include it in Combat Modeling*, IDA Document D-2372, Institute for Defense Analyses, September 1999.

6. Suggested Additional Readings

1. Sterner, Eric R. “You Say You Want a Revolution (in Military Affairs)?” *Comparative Strategy* Vol. 18, No. 4 (1999): 297-308.
2. Joint Staff, Directorate for C4 Systems (J-6). *Observations on the Emergence of the Network-Centric Warfare*, Available <<http://www.dtic.mil/jcs/j6/education/warfare.html>>

M. INSTRUCTIONAL PERIOD 13

1. Defining Future Missions II—*Mission Pull: Will the joint forces of the future be capable of performing the likely missions?*

In the last lesson we looked at “technology push” as a driver in force development. This lesson will explore what may perhaps be its opposite – forecasting future missions as a means of deriving future joint force requirements.

Reading for this lesson therefore focuses on several different views of the nature and mixture of future missions and operating environments. We begin with former USCINCCENT General Zinni's reflections on his 39 years of service in the Marine Corps. Much of what Gen Zinni discusses is his view of how the future will unfold. In it are many implications for the kinds of force DoD will develop in the coming years.

Two of the readings harken back to a portion of IP 03, where we explored the changing international security environment and how that may or should affect force development. Both Brigadier General Nair and MAJGEN Scales believe that potential opponents of the United States would be foolish to attempt to stand toe-to-toe with the US military. Instead, such opponents will seek to find and exploit weaknesses in the US force structure and methods of operation. Their observations and conclusions are important in helping the US military define what its own future mission-set may be, which in turn perhaps should be a major factor in developing forces for the future.

The remaining readings debate the degree to which potential opponents will be able to use different operational concepts to limit the impact of precision weapons and information technologies. We begin with Grant, who argues that those technologies are, in technology-push fashion, reshaping the nature of future conflict and airpower's role in it. Thomas, Pape, and Biddle and Hinkle then in turn discuss how even relatively unsophisticated shifts in tactics and concepts by opponents may negate much of the transformative power of the advances in technology. Collectively, they imply that an important ingredient in mission-pull analysis must be an appreciation of our enemies' likely operational concepts.

2. Lesson Objective

To understand the impact of future potential missions and varying operating environments as a factor in force development.

3. Desired Learning Outcomes

1. Understand the effect that opponents, pursuing asymmetric approaches to warfare, will have on the type of forces that will be necessary for US security in the 21st century operating environment.
2. Be able to critique how adequately current force development processes provide the force structure necessary for the types of missions envisioned in the coming decades.

4. Questions for Study and Discussion

1. How does the potential future military operating environment differ from that of today and the recent past?
2. Can Service-centric force development processes result in a US military capable of resolving the myriad issues raised by Gen Zinni and Gen Nair and successfully contribute to the security of the US in an international arena foreseen and described by them?
3. Is airpower the panacea the United States has been searching for, and if so, what are the implications for how the Services and DoD conduct force development?

5. Assigned Readings

1. Zinni, Gen Anthony C. "A Commander's Reflections." *U. S. Naval Institute Proceedings* Vol. 126, No. 7 (July 2000): 34-36.
2. Nair, V.K. *War in the Gulf: Lessons for the Third World*, Lancer Paper – Sequel to Indian Defence Review, ISBN 81-7062-142-9. -- [Chap. 9 & 10].
3. Grant, Rebecca. "Airpower Made it Work." *Air Force Magazine* Vol. 82, No. 11 (November 1999): 30-37.
4. Thomas, Timothy L. "Kosovo and the Current Myth of Information Superiority." *Parameters* 30 (2000): 13-29.
5. Pape, Robert A. "The Limits of Precision Guided Airpower." *Security Studies* 7, no. 2 (Winter 1997/98): 93-114.
6. Hinkle, Wade P., and Stephen Biddle. *Effects of Military Coercion in Bosnia*. 67th Military Operations Research Society Symposium, Quantico Marine Corps Base, Virginia, 1997. Reprinted in conference proceedings. CLASSIFIED SECRET will provide separately.
7. Scales, Robert H., Jr. "Adaptive Enemies: Achieving Victory by Avoiding Defeat." *Joint Force Quarterly*, 23 (2000): 7-14.

6. Suggested Additional Readings

1. Tirpak, John A. "Short's View of the Air Campaign." *Air Force Magazine* Vol. 82, No. 9 (September 1999): 43-47.

2. Clark, GEN Wesley, ADM James O. Ellis, and LTG Michael Short. *Testimony before the U.S. Senate Armed Services Committee on Lessons Learned from the Air Campaign in Kosovo*, 21 October 1999.
3. Clark, GEN Wesley, ADM James O. Ellis, and LTG Michael Short. Combined Prepared Statement before the Senate Armed Services Committee, 21 October 1999.
4. Byman, Daniel L., and Matthew C. Waxman. “Kosovo and the Great Air Power Debate.” *International Security* Vol. 24, No. 4 (Spring 2000): 5-38.
5. Grant, Rebecca. “Nine Myths About Kosovo.” *Air Force Magazine* Vol. 83, No. 6 (June 2000): 50-55).
6. Libicki, Martin, “Rethinking War: The Mouse’s New Roar?” *Foreign Policy*, 117 (Winter 1999/2000): 30-43. -- [Review from IP 3, Supplemental Readings].
7. Center for Defense Information. *Lessons of Kosovo: The Limits of Air Power (Video Transcript)*, Center for Defense Information, 6 August 1999.

N. INSTRUCTIONAL PERIOD 14

1. Defining the Future Process

[NOTE: Term Papers Due]

In Instructional Periods 4–11, we took a rather detailed look at current force development practices. Traditionally, each of the four Services has developed its force in relative isolation. Although there is a plethora of guidance from the Office of the Secretary of Defense detailing the mechanics of force development, each of the Services tends to view the process differently. Differences in definitions, emphasis, and internal processes abound—perhaps a natural result of the distinct lines of demarcation between one another that the Services maintain.

Arguably that situation may be changing. As joint entities and processes arise, such as the Joint Requirements Oversight Council, there is increasing attention to the problem of joint force development. The creation of a unified command in 1992 with overarching transportation responsibilities and a clear mandate to coordinate the realm of strategic mobility was one such attempt to circumvent the pitfalls inherent when trying to apply a Service-centric force development process to the joint arena. However, as we saw in IP 11, this has met with mixed success, generally because such alterations to the traditional process seem to be done relatively haphazardly and without a great deal of conscious thought.

Do we need to improve our capacity for joint force development? If so, what are the options? We will look at three in this lesson:

- a) Better integrating Service force development with a better set of policies,
- b) Creating a new Major Force Program for joint force development such as was done in the mid-1980s for special operations forces, and
- c) The more radical idea of creating a so-called “purple Title 10 provider” to plan, develop, and budget for selected joint force capabilities.

Part A—Coordination by policy?

The past decade saw the creation or reengineering of several joint institutions in an effort to produce a more “joint” result from Service force development activities. We were introduced to several of these changes in IP 03. The first four readings for this lesson present a critique, rebuttal, and counterrebuttal of one of these revamped institutions: the JROC. The JROC process was revised yet again in March. Will those changes succeed? Many will be skeptical; recall General Zinni’s observation in the reading from IP 13:

We’ve had to be pushed into cooperating with each other by legislation. And those of us who have seen the light and actually put on joint “purple” uniforms—we’ve never been welcomed back to our parent services...Virulent inter-service rivalry still exists—and its going to kill us if we don’t find a better way to do business.

But if coordination of Service-centric force development processes through policy pronouncements and legislation is not sufficient to meet the demands of the coming years, what other possibilities are there?

Part B—Do we need an MFP 12?

For many years, special operations and special operations forces (SOF) endured a fate similar to that of strategic mobility – an “ugly stepchild.” Recognizing this, and realizing that the Services were individually incapable of providing an acceptable and viable solution, Congress stepped in and created a new Major Force Program (MFP) specifically for SOF in 1990. The readings for Part B track this development. In his article, specifically written for this course, Dr. David Tucker of the Naval Postgraduate School critiques the history of MFP 11 and provides his viewpoint on whether or not other, obviously joint, force categories would also benefit from a similar solution—their own MFP.

Part C—Do we need a true “purple” (Title 10) force developer and integrator?

The question remains, however, whether merely creating MFP 11 was sufficient, since the individual Services were still deeply involved in the actual force development process for

SOF. Would this also be the case if additional major force programs were instituted? Perhaps, as our final set of readings intimates, force development for the future, a future heavily defined by the word “joint,” can only be done by a joint entity. If this is indeed the case, would this require an additional “service” or perhaps a separate and distinct Force Development Command (CINCFORDEV).

2. Lesson Objective

To understand alternative options for structuring a force development process viable for the future.

3. Desired Learning Outcomes

1. Understand the pros and cons of continuing to coordinate force development by policy.
2. Understand the pros and cons of creating new Major Force Programs to arrive at joint force development.
3. Understand the pros and cons of legislating the creation of an institution outside the realm of the Services to conduct joint force development.

4. Questions for Study and Discussion

1. Are the current force development processes in use by the Services incapable of resulting in a force that will be able to meet US security needs in the 21st century?
2. Can the peculiarities of disparate Service force development processes be overcome? What is required?

5. Assigned Readings

Part A

1. Morton, Lawrence B. *An Overview of Defense Resource Allocation*, IDA Paper – Unpublished, Institute for Defense Analyses, 2000. (Paper adapted from *An Executive Level Text in Resource Allocation, Volume 1, The Formal Process*, 4th ed. Newport RI: Naval War College Press, 2000.) -- [Review from IP 3].
2. Chairman of the Joint Chiefs of Staff. *Charter of the Joint Requirements Oversight Council*, CJCSI 5123.01A. 8 March 2001 -- [Review from IP 3].

3. Davis, M. Thomas. "The JROC: Doing What? Going Where?" *National Security Studies Quarterly* Vol. IV, No. 3 (Summer 1998): 21-42.
4. Neal, GEN Richard. "The JROC: A Return to the Basics." *National Security Studies Quarterly* Vol. V, No. 1 (Winter, 1999): 93-98.
5. Scales, Robert H., Jr. *From Korea to Kosovo: How America's Army Has Learned to Fight Limited Wars in the Precision Age*, Strategic Studies Institute Issue Paper, U.S. Army War College, Fall 1999.
6. Correll, John T. "Aerospace Power Meets the QDR." *Air Force Magazine* Vol. 83, No. 7 (July 2000): 2.

Part B

1. U.S. Special Operations Command. *United States Special Operations Command: History*, November 1999. -- [pp. 3-6 (Formation); pp. 9-10 (Mission and Organization); pp. 13-15 (Budget & POM development and acquisition)].
2. U.S. Public Law 99-661. 99th Cong., 2nd sess., 14 November 1986. *National Defense Authorization Act for Fiscal Year 1987*. -- [Part B (Special Operations Matters)].
3. U.S. Public Law 100-180. 100th Cong., 1st sess., 4 December 1987. *National Defense Authorization Act for Fiscal Years 1988 and 1989*. -- [Resources for CINCSOF].
4. Carlucci, Frank. *Memorandum on The Commander in Chief, United States Special Operations Command as Head of Agency*, SECDEF Memo, 4 May 1988.
5. U.S. Public Law 100-456. 100th Cong., 2nd sess., 29 September 1988. *National Defense Authorization Act, Fiscal Year 1989*. -- [Responsibility and Authority of Commander of Special Operations Command].
6. Taft, William H., IV. *Memorandum on CINCSOC Program/Budget*, SECDEF Memo, 24 January 1989.
7. U.S. Special Operations Command. *Strategic Planning Process*, USSOCOM Directive 1-9, 22 May 1997 -- [pp. 3-5 (Overview Process); pp.13-14 (Force Sizing); & skim pp. 6-7 (Roles and Responsibilities)].

8. Tucker, David A. *Major Force Program-11 and the Implications for a New Major Force Program*. IDA Paper – Unpublished, Institute for Defense Analyses, 2000.

Part C

1. Alberts, David S. “Mission Capability Packages.” *NDU/INSS Strategic Forum* 14 (January 1995).
2. Morton, Lawrence B. *Airpower Alone is Not the Answer*, IDA Paper – Unpublished E-mail Discussions Among Defense Policy Experts, Institute For Defense Analyses, May-July 2000.
3. Morton, Lawrence B. *Joint Command and Control*, IDA Paper – Unpublished E-mail Discussions Among Defense Policy Experts, Institute For Defense Analyses, May-July 2000.
4. MacGregor, Douglas A. “Command and Control for Joint Strategic Actions,” *Joint Force Quarterly*, 20 (Autumn/Winter 1998-99): 25-33. -- [Review from IP 4].

6. Suggested Additional Readings

1. Boykin, COL William G. *The Origins of the United States Special Operations Command*, (Undated SOCOM internal publication). Originally written as a US Army War College Military Studies Program paper.
2. Marquis, Susan L. *Unconventional Warfare: Rebuilding U.S. Special Operations Forces*. Washington, DC: Brookings Institution Press, 1997.

O. INSTRUCTIONAL PERIOD 15

1. Proposals for Change and a Reality Check

Our final lesson again consists of two parts. In Part A, we will look a little closer at several proposals for military institutional reform. Each has implications for how force development will be conducted in the future.

If you have not already gained an appreciation of how difficult it will be to change a bureaucratic process, such as the force development process, that profoundly affects resource allocations, Part B may convince you. Its readings are designed to get you thinking about the politics of bureaucratic change.

Part A—Proposals for Change

We begin with a reprise from IP 12: the Center for Strategic and Budgetary Assessments' analysis of the imperative for military transformation in order to realize the Revolution in Military Affairs. In the 1997 QDR Report, then-Secretary of Defense Cohen discussed that need. He also wrote at length about the need for increased jointness and interoperability among the forces developed and provided by the four Services. As part of the legislation mandating the 1997 QDR, Congress chartered a body called the National Defense Panel (NDP). Consisting of a number of senior defense experts, both civilian and retired flag officers, this Panel conducted both a critique of the QDR process and results, and made its own assessment of the future security environment and what the United States would require in order to remain the preeminent actor in the international arena. The NDP report's section on transformation offers a slightly different, and some might argue more radical, approach to the transformation issue.

The last four readings in Part A highlight three current initiatives that were intended to move force development more into the joint arena. All of them touch on at least some of the problems with Service-centric force development that we have discussed earlier.

In 1998, Congressman Thornberry introduced into the House a bill requiring the establishment of a new unified command. It is interesting to note that the author intended the commander of this new "Joint Forces Command" to have "planning, programming, budgeting, and execution authority" over joint experimentation activities through a separate major force program (MFP 12?).

In the readings for the last IP, M. Thomas Davis presented a rather scathing critique of the Joint Requirements Oversight Council. Last year, the Joint Staff took a look themselves at the operations of the JROC and the "requirements" portion of the force development process. Besides charting where the JROC has been and what changes have been instituted in recent years, the study evaluated how well the JROC, and the existing but largely separate force development processes, currently were suited to contend with the increasingly complex demands of joint warfighting. Their answers are presented in Reading 6. Perhaps the biggest change of note is that the JROC will no longer be merely an integrator of Service force development "outputs," but will have a much more expanded and integral role on the "input" side of force development. Alongside this institutional change, the Joint Staff is also in the process of constructing a "Joint Operational Architecture" consisting of a number of "Joint Mission Areas," all designed to enhance US joint warfighting capabilities.

Part B—Political Realities of Change

In the world of public policy, occlusions that seem matters of objective fact to specialist insiders often appear to outsiders to be matters of subjective opinion. Senior decision-makers

must weigh many factors in deciding when and how aggressively to push for changes. Often, they must weigh tradeoffs between issues to achieve political consensus. And of course, senior decision-makers may come to office with their own ideas on where and what changes are needed. The readings in Part B raise those issues for you in the context of defense transformation and management reform.

2. Lesson Objective

To understand that although changes in the existing force development process may be warranted, political realities have a major impact on how change can or should be instituted.

3. Desired Learning Outcomes

1. Understand the proposed and ongoing efforts to modify the existing force development process.
2. Be able to recognize the impact that political realities have on whether changes in the force development process can or should be instituted.

4. Questions for Study and Discussion

1. Do the Armed Forces need to be transformed in order to remain preeminent in the coming decades? If so, are the current force development processes adequate to deal with this need?
2. Will creating another actor on the “input” side of the force development process enhance the “output,” or will it merely serve to create another opportunity for bureaucratic infighting, and thereby simply extend the time it takes to develop appropriate forces?
3. Can the Department of Defense, regardless of its “good intentions,” actually accomplish its goals for developing a true, joint warfighting force, given the realities of political life in the United States?

5. Assigned Readings

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Appendix B
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<p>This report contains the teaching syllabus and lesson plans for a course on joint force development developed by the Institute for Defense Analyses at the request of the Dean of the Air War College. This elective course fills a void in the College's course offerings and increases emphasis in its curriculum on joint matters. It is designed to give the student both an overview of Service force development processes and the opportunity to discuss trends that may portend changes to these processes in the future.</p> <p>The course consists of 3 parts, presented in 15 instructional periods (IPS). Part I defines and delineates "force development." Part II contains a series of case studies (Army – Force XXI; Marine Corps – Urban warfare; Navy – Mine warfare; Air Force – Composite wings; TRANSCOM – Strategic airlift). Each case study lesson is followed by a lesson dedicated to the "official" policies and regulations that guide each respective player's actions and decisions in the force development process. Part III allows the student to take an in-depth look at a number of current and prospective issues that may or may not impact the manner in which the Department of Defense develops forces in the future.</p>			
14. SUBJECT TERMS		15. NUMBER OF PAGES	
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