RESEARCH PROJECT

9 JUNE 1975

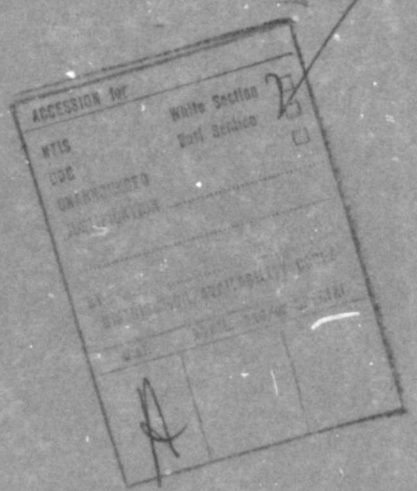
STRATEGIC LOGISTICS

BY

LIEUTENANT COLONEL WILLIAM F. DILLON, JR., QM
LIEUTENANT COLONEL ELIJAH F. MASON, TC
LIEUTENANT COLONEL WILLIAM R. PINKSTON, QM
LIEUTENANT COLONEL BERNARD J. ROTH, EN
LIEUTENANT COLONEL EDWARD TOLFA, JR., IN
GS-14 JESSE E. TUCKER, DSA
COLONEL CALVIN G. WEAVER, TC

COLONEL EDWARD P. LUKERT, JR., IN
RESEARCH ADVISER

US ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013


ACCESSION for
NTIS White Section
DDC Buff Section
UNANNOUNCED
JUSTIFICATION

USAWC MILITARY RESEARCH PROGRAM PAPER

STRATEGIC LOGISTICS

A GROUP RESEARCH PROJECT

by

Lieutenant Colonel William F. Dillon, Jr., QM
Lieutenant Colonel Elijah F. Mason, TC
Lieutenant Colonel William R. Pinkston, QM
Lieutenant Colonel Bernard J. Roth, EN
Lieutenant Colonel Edward Tolfa, Jr., IN
GS-14 Jesse E. Tucker, DSA
Colonel Calvin G. Weaver, TC

Colonel Edward P. Lukert, Jr., IN
Research Adviser

US Army War College
Carlisle Barracks, Pennsylvania
9 June 1975

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER

2. GOVT ACCESSION NO.

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)

STRATEGIC LOGISTICS.

5. TYPE OF REPORT & PERIOD COVERED

Group Research Project

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)

William F. Dillon, Jr., QMC, LTC
Elijah F. Mason, [redacted] William R. Pinkston, QMC;
LTC Bernard J. Rot[redacted] Edward Tolfa, Jr., IN;
Mr. Jessee E. Tucker, DSA; COL Calvin G. Weaver, TC

8. CONTRACT OR GRANT NUMBER(s)

9. PERFORMING ORGANIZATION NAME AND ADDRESS

US Army War College
Carlisle Barracks, PA 17013

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS

83 P.

11. CONTROLLING OFFICE NAME AND ADDRESS

Same as Item 9.

12. REPORT DATE

9 Jun[redacted]75

13. NUMBER OF PAGES

81

14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)

15. SECURITY CLASS. (of this report)

Unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The basic problem is to identify why United States military strategy is developed without regard to logistics considerations. Data was gathered by a literature search, attendance at the April 1975 JCS Worldwide Logistics Conference, and an interview with Rear Admiral Henry E. Eccles, USN (Ret.), a noted authority on logistics and strategy. Imprecise and misleading definitions, which contribute to the problem, required redefinition of the term 'logistics' and development of a definition of 'strategic

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

403 565

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

logistics. The decisionmaking and planning processes of the National Security Council, Department of Defense, and the Joint Chiefs of Staff were examined, and it is concluded that decisionmaking and planning at the highest levels of the Government do not provide the machinery for the integration of strategic logistics factors in the formulation of US strategic objectives. To provide this essential integration, the authors recommend a reorientation of the NSC, which could be accomplished most effectively by designating the Chairman of the President's Council of Economic Advisors as the Assistant for National Logistics Affairs, and by making him a permanent member of the NSC and Chairman of the NSC's Defense Program Review Committee.

ABSTRACT

AUTHOR(S): William F. Dillon, Jr., LTC, QM; Elijah F. Mason, LTC, TC; William R. Pinkston, LTC, QM; Bernard J. Roth, LTC, EN; Edward Tolfa, Jr., LTC, IN; GS-14 Jesse E. Tucker, DSA; Calvin G. Weaver, COL, TC; Edward P. Lukert, Jr., COL, IN, Research Adviser

TITLE: Strategic Logistics

FORMAT: Group Research Project

DATE: 9 June 1975 **PAGES:** 81 **CLASSIFICATION:** Unclassified

The basic problem is to identify why United States military strategy is developed without regard to logistics considerations. Data was gathered by a literature search, attendance at the April 1975 JCS Worldwide Logistics Conference, and an interview with Rear Admiral Henry E. Eccles, USN (Ret.), a noted authority on logistics and strategy. Imprecise and misleading definitions, which contribute to the problem, required redefinition of the term "logistics" and development of a definition of "strategic logistics." The decisionmaking and planning processes of the National Security Council, Department of Defense, and the Joint Chiefs of Staff were examined, and it is concluded that decisionmaking and planning at the highest levels of the Government do not provide the machinery for the integration of strategic logistics factors in the formulation of US strategic objectives. To provide this essential integration, the authors recommend a reorientation of the NSC, which could be accomplished most effectively by designating the Chairman of the President's Council of Economic Advisors as the Assistant for National Logistics Affairs, and by making him a permanent member of the NSC and Chairman of the NSC's Defense Program Review Committee.

FRONTISPIECE

"The country is now mobilized. All men and boys able to carry a spear will report immediately to Addis Ababa for active duty. Married men will bring their wives to do the cooking. Women with babies, the very old, and the very young, need not report for active service. Men that are not married will bring any woman they can find. Anyone else found at home after the issuance of this order will be hanged."

Emperor Haile Selassie, 1935
Order for National Mobilization

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

> To the question of whether there can be a strategic decision distinct from a logistical decision the answer must be no . . . .[1]
>
> James A. Huston

GENERAL

Addressing the April 1975 Worldwide Logistics Conference sponsored by the Office of the Joint Chiefs of Staff, J4, Dr. John Bennett, Acting Assistant Secretary of Defense (Installations and Logistics), noted that one of his primary concerns is that the logistics community is not adequately represented early enough in the decision making process.[2] Appearing before the same audience, General Henry A. Miley, USA (Ret), former commander of the Army Materiel Command, stated that the logistician is never consulted--committments are made and then the logistician is asked can they be supported.[3] Both speakers were addressing the same problem, namely the lack of logistical input in the formulation of strategy at the highest levels of government.

STRATEGY, TACTICS, AND LOGISTICS

In 1838 Antoine Henri Jomini erected a theory of the art of war upon the trinity: strategy, grand tactics, and logistics.[4] In the

March-April 1975 edition of the Army Logistician, Lieutenant General Walter J. Woolwine wrote:

> The provision of squadrons of planes, hundreds of tracked vehicles, thousands of vehicles, and tens of thousands of small arms to South Vietnam in the waning days of the Vietnam War, and of over a billion dollars' worth of war material to Israel in 1973 remind us once again that we are always faced with three fundamental and interacting elements- strategy, tactics and logistics. These are so inter-woven as to be inseperable in any form or level of intensity of war.[5]

We can, therefore, conclude that the trinity developed by Jomini is as valid in 1975 as it was in 1838, despite the enormous changes that have transpired in the nature of warfare as a result of the industrial revolution and the advent of nuclear weapons. Existence of a critical relationship between the two elements of Jomini's trinity with which this study is concerned, strategy and logistics, was recognized by the JCS during World War II when their Operations Division expressed the following philosophy:

> Sound planning requires that strategy and logistics be integrated in the preparation of plans. There exists an obvious weakness when the two essential factors of planning are considered seperately on a lower echelon and suddenly find themselves vis-a-vis on a higher level. Thus, it is essential that strategy and logistics be integrated as the plan progresses, and that when a plan reaches the JCS level, the factors should be completely married.[6]

THE CHANGING NATURE OF LOGISTICS

While the trinity of Jomini remains valid in today's world, the nature of the elements themselves: strategy, grand tactics and

logistics, has changed substantially. What the theorists had once called logistics has spread to embrace a considerable part of the economic life of a nation.[7] Commenting on this change in the nature of logistics, the noted Army historian, James Huston, observed:

> Not only are strategic and tactical plans limited by the feasibility of logistic support, but logistic plans themselves are subject to capabilities of the national economy.[8]

The importance of national economic resources to military strength is evident in the Report of the Secretary of Defense to the Congress on the FY 1976 and FY 197T Budgets,

> A viable industrial base is a major element of our national strength and deterrent posture, and maintaining the capacity of that industrial base to respond to potential wartime demands continues to be a major consideration in our defense planning.[9]

In the past, the capacity of our industrial base to support wartime demands has not always been a matter of concern. The vast wealth and resources of the United States have been an almost bottomless barrel in providing the finest logistic support in the history of warfare.[10] This is no longer ture. The United States military is no longer blessed with an abundance of resources. For example, the Secretary of the Army noted in his most recent posture statement to the Congress,

> Once we referred proudly to American industry as the "arsenal of democracy." However, recent changes mainly economic, have eroded the ability of our industrial base to respond in a timely fashion.[11]

At the same time, the Secretary of Defense was commenting in his annual report to the Congress:

> . . . our production base for the general purpose forces has now shrunk to an alarming degree. It may well prove less than adequate to our needs, especially if it is again put under the kind of pressure that resulted from the drawdown of stocks in the Arab-Israeli war. Remedial action clearly is in order.[12]

This concern with the constraints imposed by our economic-industrial capabilities is not new. Over 15 years ago, RAdm Henry E. Eccles, USN (Ret), noted that:

> In terms of general principles it can be said that economic capabilities limit the combat forces that can be created. At the same time logistic capabilities limit the forces which can be employed in combat operations. Thus, it is obvious that economic-logistic factors determine the limits of strategy.[13]

PURPOSE

The primary purpose of this study is to examine the planning processes at the highest levels of government to determine at what level, and to what extent economic-industrial planning in support of military strategy is or should be accomplished.

The authors believe that the following statement by the Secretary of Defense illustrates that such planning is not now the responsibility of any single agency of the government and is not being accomplished.

> The Arab-Israeli war was so short, and consumption rates of equipment and supplies so high, that for all practical purposes it was fought out of inventories. <u>But as we have subsequently discovered with some pain, inventories must be replenished from a production base</u>. And that base should have the skills, diversity, and responsiveness to supply these needs

> in a timely fashion; otherwise, the readiness that we require simply cannot be adequately maintained. It is not clear, however, that these attributes characterize our production base at the present time.[14] (Emphasis added)

The inability of our production base to respond to military requirements is one indication of the existence of serious gaps and voids in national decision-making and planning machinery.

The authors believe that the gaps and voids in the decision-making and planning processes stem, at least in part, from improper, imprecise and misleading terminology. Semantic confusion surrounds the term "logistics" itself. As one staff officer supposedly said in World War II, "Logistics is what logistics officers do."[15] Since that war, there has been confusion and uncertainty as to the meaning of the words "logistics" and "logistician."[16] A need for a clearer definition of logistics was cited as a concern of Dr. Bennett in his address at the JCS Conference referred to earlier in this chapter.[17] As part of this study, we will develop those precise definitions required to clarify the role of logistics in the development of national strategy.

PROBLEM

The problem to be address in this study is to:

> Identify the gaps and voids that exist in the national level decision-making and planning processes which result in United States military strategy being developed without adequate regard to strategic logistics.

It will be shown that adequate machinery does not exist in the current decision-making and planning systems to insure logistics factors are considered in the formulation of national strategic military objectives. An integral part of the study is to recommend procedures to correct this critical defect in the decision-making and planning systems at the national level of government.

METHODOLOGY

Precise definitions of "logistics" and of "strategic logistics" are developed in Chapter II.

The impact of logistics upon strategy is examined in Chapter III. Historical examples from the Civil War through the Post-Vietnam period are used to illustrate the impact of logistics upon past strategies. Our current strategy is analyzed and logistical implications discussed. A brief look into the future concludes this chapter.

Chapter IV examines national level decision-making and planning. Logistical gaps and voids that exist in these processes are identified and discussed.

Alternatives for filling the gaps and voids identified in Chapter IV are discussed in Chapter V. Recommendations of the study group are contained in Chapter VI.

CHAPTER I

FOOTNOTES

1. James A. Huston, The Sinews of War: Army Logistics 1775-1953, p. 424.

2. John Bennett, Keynote Address, J-4, OJCS Worldwide Logistics Conference, 24 April 1975.

3. Henry A. Miley, American Defense Preparedness Association, J-4, OJCS Worldwide Logistics Conference, 24 April 1975.

4. Richard M. Leighton and Robert W. Coakley, Global Logistics and Strategy, p. 3.

5. Walter J. Woolwine, "A Logistics Perspective," Army Logistician, March-April 1975, p. 2.

6. Leighton and Coakley, p. 655.

7. Ibid., p. 8.

8. Huston, p. 663.

9. James R. Schlesinger, Annual Defense Department Report FY 1976 and FY 197T, p. VI-9.

10. Linwood B. Mather, "Logistics-A New Potential," Military Review, January 1975, p. 76.

11. Howard H. Callaway, Posture Statement, p. 24.

12. Schlesinger, p. III-36.

13. Henry E. Eccles, Logistics in the National Defense, p. 41.

14. Schlesinger, p. III-35.

15. Henry E. Eccles, Military Concepts and Philosophy, p. 318.

16. Henry E. Eccles, Notes on Logistics Education, p. 5.

17. Bennett, Keynote Address, 22 April 1975.

CHAPTER II

LOGISTICS DEFINED

> I don't know what the hell this "logistics" is that Marshall is always talking about, but I want some of it.[1]
>
> E.J. King: To a staff officer, 1942

CLASSICAL DEFINITIONS

Any serious study of logistics, and in particular one dealing with such an esoteric phrase as "strategic logistics," is encumbered, from the outset, by the almost insurmountable task of reaching agreement on the very meaning of the terms being used. Even the renowned Encyclopedia Britannica, in their excellent treatment of the subject, notes with despair, that:

> In its military sense, the word logistics has been used so loosely, and in such a variety of specific and general applications, as to defy precise definition.[2]

From the standpoint of the etymologist, it is important to differentiate between the military and the non-military uses of the word, since the latter is easily traced to the long archaic Greek '*logistikos*' (skilled in calculating), and hence to its accepted meaning as the Greek Science of Computation. In military usage, however, the term was not a significant one in military literature until late 18th and early 19th century writers seized on it for an encompassing definition of

the purely academic branches of military study such as "strategy" and "philosophy of war."

The first serious attempt at a military definition of logistics was not made until 1838, when Baron Antoine Henri Jomini, in his highly regarded "Précis de l'Art de la Guerre," divided the art of war into five separate and distinct parts--strategy, grand tactics, logistics, engineering and minor tactics. To Jomini, "logistics" encompassed all military activities except those of actual combat and the planning of that combat. In taking the term from the academicians and assigning to it an active, albeit, supporting role in war, Jomini noted that:

> Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to this point.[3]

In spite of Jomini's enormous influence on most post-Napoleanic thinking, the term "logistics" was little used, particularly in this country, until Captain Alfred T. Mahan introduced it into U.S. Naval usage near the end of the 19th century. Mahan's impact on military thought of the period is unquestioned and his writings revitalized and enlarged Jomini's concepts. In their historical treatment of the period, the Encyclopedia Britannica notes that:

> . . . the navy's concern with the economic foundations of its expansion began to broaden the connotation of the word (logistics) to include for the first time the processes of industrial mobilization and the functions of a wartime economy in supporting military operations, spheres of activity that in Jomini's day had seemed little related to the conduct of war.[4]

Although military planners continued to recognize the necessity for the broad based industrial and economic support envisioned by Mahan, official definitions of "logistics" remained sketchy until the term came into vogue in World War II. For example, "logistics" was not listed in Army dictionaries until 1944, and then only to describe the traditionally narrow functions of movement and supply which characterized its usage throughout that period.

This choice of a very restrictive definition for logistics is particularly difficult to understand, since the Second World War, more than any other, illustrated the complexity and pervasiveness of the logistics process in relation to tactics and strategy. An illustration of just how unfortunate that choice was, is offered by the noted historian James A. Huston.

> To the question of whether there can be a strategy decision distinct from a logistical decision the answer must be no, for virtually all considerations entering into the major decisions of war are logistical. Logic would suggest--and military planners would prefer to believe--that logistic plans stem from strategic plans; that first there must be strategic decisions and plans, with logistics plans drawn as a consequence of them to provide support at the right place and the right time. World War II turned out to be somewhat the reverse of this logical sequence of events. . . high level strategic decisions generally were based on logistical limitations more than any other consideration.[5]

Since World War II, the trend in official definitions has been toward a gradual widening of the functions included in the generic field of military logistics. But, the economic and mobilization aspects of logistics, envisioned by Mahan, have yet to gain official sanction or

to be included in any official definitions of the term. For example, as recently as September 1974, the newly published official dictionary of the Defense Department, as promulgated by the Joint Chiefs of Staff, still reads:

> LOGISTICS: The science of planning and carrying out the movement and maintenance of forces, In its most comprehensive sense, those aspects of military operations which deal with: a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; b. movement, evacuation and hospitalization of personnel; c. acquisition of construction, maintenance, operation and disposition of facilities; and d. acquisition or furnishing of services.[6]

CURRENT DEFINITIONAL TRENDS

Fortunately, official definitions, no matter how current, do not necessarily reflect the current thinking of military planners and thinkers. And, there is some evidence that the term "logistics" is again being utilized to encompass many of the national and international aspects envisioned by Jomini and Mahan. Perhaps even of more importance is the continuing recognition of the interdependence of strategy and logistics. Both these trends can be traced to the excellent treatment of The Meaning of Logistics, written after World War II, by Duncan Ballantine. For it is in his discussions that we see the first emphasis on defining logistics as including all those processes critical to the development of a nation's strategy. Ballantine provides the first acceptable and broad-based definition of the term, when he

notes that:

> . . . logistics signifies the total process by which the resources of a nation--material and human--are mobilized and directed toward the accomplishment of military ends. . . .broadly conceived, the logistics process is thus the means whereby the raw warmaking capacity of the nation is transformed into instruments of force ready to be employed in pursuit of strategic or tactical objectives.[7]

Duncan Ballantine's work is of additional interest to this discussion since he was the first to highlight the major differences between consumer and producer logistics (to be discussed later) and because of the theory he developed which credited logistics as "the bridge" between the two elements necessary for a nation to successfully wage war--its military forces and its economic capabilities. His succinct and epigrammatic description of the logistics process as simultaneously being "The Military element in the nation's economy and the economic element in its military operations"[8] did much to foster future academic discussion and to aid in further refining current military conceptions of the logistic process.

During the last two decades, perhaps the most notable contributions to military thinking about logistics, as an extension of Ballentine's theories, have come from Admiral Henry E. Eccles of the U.S. Navy. In countless articles, books, lectures, and as a consultant on strategy to the U.S. Naval War College, Admiral Eccles has constantly fought for the acceptance and legitimization of "logistics" as the keystone of a bridge between the nation's war potential and the forces it fields

for battle. He has been a constant advocate of the principle of interdependence of strategy, tactics and logistics, and has developed and refined the following definitions of those critical terms:

> Strategy may be described as the comprehensive direction of power toward the attainment of broad objectives.
>
> Tactics may be considered as the immediate direction of power toward the attainment of the specific objectives of strategy. This entails the employment of specific forces, weapons, and techniques.
>
> Logistics is the provision of the physical means by which power is exercised by organized forces. In military terms it is the creation and sustained support of combat forces.[9]

In extending Ballantine's theory of producer and consumer logistics, Admiral Eccles has suggested that, at least for the purposes of analysis, the process can be divided into two general phases:

> Producer logistics deals with the beginnings of logistics in the national economy. It starts with the material and human resources of the nation in their economic environment and, . . . it creates the weapons, equipment, supplies, services. . .
>
> Consumer logistics is, first, the process of converting the weapons and equipment produces by the economic, business, and industrial actions of producer logistics into complex organized military installations and combat supporting units, and second, employing logistics resources and organizing logistics units in the actual operating support of the combat units.[10]

This duality of the logistics process has been noted by several authors who have expressed concern over the civilian domination of the producer phase and the military domination of the consumer phase.

A cleavage which as Eccles pointed out leads to the Economic-industrial capacity of a nation limiting the creation of combat forces, while the employment of those forces is only limited by the military commander's logistics restraints.[11] The obvious differences created by two sectors of the nation being involved in the logistics process may explain some of the reluctance for "official" military authors to attempt to redefine logistics to include those aspects normally in the purview of the private sector.

Not surprisingly, then, the term "strategic logistics," used by Eccles as early as 1954, has been slow to appear in current military writings. Its only "dictionary" treatment is rather shallow, but its inclusion in the highly regarded unofficial Dictionary of Modern War, produced in 1971, does lend some hope for the future. That work notes:

> . . . It is convenient to divide the logistics problem into strategic and tactical: the first covering the acquisition, stockage and transport of supplies to the combat theatre, and the second their distribution within it.[12]

The term "strategic-logistics" has, of course, been accepted by the military academic community, which is struggling with the task of adopting the principles espoused by Ballantine and Eccles to the post-Vietnam era of "Detente." An example of this serious concern, which while not agreed with by the authors, does illustrate the complexity of the task, may be found in the works of two Air Force Officers who suggest that logistics might be stratified into three general categories--strategic, support, and operational.

> First, strategic logistics is a function of national level requirements determination and chiefly concerns the integration of logistics with strategy on one hand, and strategy with the national economy on the other. Second, support logistics is primarily concerned with the acquisition of material in the broad sense of design, development, procurement, and production. Third, operational logistics is involved with the sustained support of military operations in the field.[13]

It remains, however, for the Encyclopedia Britannica, more concerned with usage than "official definition: to provide a general description of logistics which while recognizing the limited requirements of the "battle-field" gives credence to the infinitely more difficult "strategic-logistics" required in the second half of the 20th century.

> In its narrowest application, logistics may mean simply military supply and transportation. At the other extreme, it may comprehend the provision in the broadest sense of men and materiel for military operations, including all the planning, administration and services therein involved and reaching far back into the mobilization of the nation's economic resources for war.[14]

THE NEED FOR REALISM

The preceding brief definitional review of "Logistics," from both the standpoint of official definitions and current usage and perceptions, unquestionably illustrates that the two are far from being synonymous. While the military community certainly recognizes the impact of the nation's economy and industrial capacity on its military capabilities, and while they continue to consider these "national factors" as integral and critical functions of the "military logistics process," official

definitions remain restrictive and "operational" in character.

Although there may be general agreement that "official" definitions do not reflect the realities of current logistics thinking, the question remains as to whether the exercise of providing a "precise" labeling for the term is of real value. This question is particularly valid if, in fact, there is a universal perception that the logistics process does include the dual considerations of economic-industrial capability to create military power and the complimentary operational capability to utilize the forces thus created.

Even if this "univeral perception" did exist (which is doubtful, at best), the authors believe that a clear, precise, and realistic functional definition of the "logistics process" would still be a necessary and critical first step in assuring the development and achievement of coherent national strategic objectives.

This belief is based on two important considerations, both of which are explored in detail elsewhere in this report. First, historically, our ability to pursue national strategy objectives has increasingly been constrained by our capability to provide logistics support necessary to accomplish those objectives. And second, our review of the national planning process indicates that strategic decisions are generally made without considering the impact of logistics constraints, resulting in the development of strategies which may not be capable of national achievement.

Since both these problems result from the definite lack of an

interface between the logistician and strategic planner during the development of strategic objectives, we believe it is not unreasonable to claim that the provision of realistic definitions will contribute significantly to their eventual solution.

To begin with, we have already noted that one of the major contributors to the problem is the popular military mis-conception that economic-industrial considerations are solely within the sphere of concern of the civilian sector of government. A perception which, we believe, is reinforced by the current misleading official definitions. On the other side of the "dual" logistics issue, the civilian sector has generally failed to concern itself with "operational" support issues on the mistaken belief that they are solely the functional responsibility of the military "logistician" and are not impacted by actions taken within the economic-industrial sector.

It is a "bureaucratic fact of life" that official definitions, unfortunately, spawn official descriptions of duties and acceptance of those duties as responsibilities. And, as long as the bureaucratic environment encourages the jealous guarding of prerogatives and the careful avoidance of involvment in "another agency's" area of functional responsibility, a lack of realistic definitions will continue to contribute significantly to the failure to provide coherent strategic-logistic interfaces.

What is needed, then, as a first step in the solution of this problem, is the development of definitions which recognize the

interdependence of civilian and military logistics functions and which foster the interface of strategist and logistician during the formulation of national strategy. Definitions which will specify and legitimize the defense planners role in synthesizing both aspects of the dual logistics process into future strategic decisions.

THE LOGISTICS PROCESS DEFINED

It is, perhaps, tempting to return to either Ballantine or Eccles to find acceptable definitions for the logistics process. And, there certainly is much to be said for their use of economic analogies (such as producer and consumer logistics) to define the military process. But, neither their definitions nor the many others quoted earlier accomplish one of the principle purposes of this study--the legitimization of the strategist-logistician interface.

We believe that the quickest way to get strategists concerned with economic-industrial constraints is to define logistics as part of the strategy development process. In other words, we propose to provide a definitional interface as a logical precursor to the functional interface between strategist and logistician. We have, therefore, chosen the term "strategic-logistics" to describe the first part of the dual logistics process.

The choice of strategic-logistics appears to be particularly valid since similar terms are already legitimized and accepted as part of the official military lexicon, to describe such functions as strategic-communications and strategic-intelligence. The use of strategic-logistics

has the added advantage of connoting a function to be accomplished at the national level--the province of the strategist--as opposed to supportive logistics functions which, we believe, should firmly remain in the hands of traditional logistics agencies, be they Service Departments or Theater Headquarters.

The precise lable chosen by the authors to describe this second part of the logistics process is --"operational logistics." While we recognize the inherent definitional advantages in utilizing strategy and tactics to separate a military function, the use of the phrase "tactical-logistics" would, we believe, be perceived as being more restrictive than the current definition of "logistics" as promulgated by the Joint Chiefs of Staff. That definition, we suggest does, with little modification, accurately describe the military aspects of the dual logistics process.

The inherent advantage in the choice of the "operational" label lies in the perception by both civilian and military agencies of government that "operations" are within their functional areas of responsibility. The choice of that term is reinforced by the current official definition which clearly specifies logistics to be a function of military operations.

The choice of the terms--strategic and operational--to describe the dual aspects of logistics does, in the opinion of the authors, much to alleviate the present definitional problems which contribute to a lack of strategist-logistician interface. These terms clearly and

realistically define the broad functional civilian and military aspects of logistics.

The definitions developed below are, we believe, ones which recognize the civilian requirement to influence the creation of strategic capabilities and the military necessity to understand the economic-industrial impact on achieving the nation's strategic objectives.

Acceptance of these definitions will significantly contribute to the needed synthesis of military requirements with national economic and political reality.

PROPOSED DEFINITIONS

The authors propose that the following definitions be accepted by the Department of Defense and promulgated as "official" definitions by inclusion in the Dictionary of Military and Associated Terms, published by the Joint Chiefs of Staff (JCS Pub. 1).

> LOGISTICS. The science of planning and accomplishing the raising, equiping, maintaining, deploying and sustaining of all military forces required to meet national strategic objectives. It includes two distinct but inter-related disciplines--Strategic Logistics and Operational Logistics.
>
> STRATEGIC LOGISTICS. The process of planning and accomplishing the transformation of national economic-industrial capabilities into military power by creating military forces, and the means to project and sustain those forces, required to meet national strategic objectives.
>
> OPERATIONAL LOGISTICS. The process of planning and accomplishing those aspects of military operations which deal with a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation

and disposition of materiel; b. movement, evacuation, and hospitalization of personnel; c. acquisition or construction, maintenance, operation, and disposition of facilities; and d. acquisition or furnishing of services.

SUMMARY

In this chapter, we have noted the existence of many divergent definitions of the logistics process. These differing perceptions of both meaning and responsibility have contributed significantly to the often injudicious formulation of national strategic objectives.

The furnishing of realistic definitions does not, in itself, provide for the necessary interface between strategist and logistician, but it does insure that both partners understand their responsibilities in the creation of military forces to support strategic objectives, and in the formulation of objectives which can be logistically achieved.

Acceptance of the definitions proposed will significantly contribute toward the required synthesis of national capabilities and requirements necessary for the establishment of coherent and obtainable strategic objectives.

Earlier in this chapter, we credited Duncan Ballantine with formulation of some of the earliest concepts of the requirements for the military understanding of economic-industrial and political factors in the formulation of strategy. We can, perhaps, most succinctly summarize the necessity for clear and precise definitions by returning to his conclusions, reached more than twenty-five years ago.

It is, therefore, the function of logistics to bridge the gap between two normally alien spheres of activity, to make intelligible to the producer, for example, the needs of the military commander and conversely to infuse into the calculations of the strategist an appreciation of the limits of the materially possible. As the link between the war front and the home front the logistics process is at once the military element in the nation's economy and the economic element in its military operations. And upon the coherence that exists within the process itself depends the successful articulation of the productive and military efforts of a nation at war.[15]

CHAPTER II

FOOTNOTES

1. Robert D. Heinl, Jr., Dictionary of Military and Naval Quotations, (Annapolis: US Naval Institute, 1966), p. 175.

2. "Logistics," Encyclopedia Britannica, XIV, p. 239.

3. Heinl, p. 175.

4. Encyclopedia Britannica, XIV, p. 239.

5. James A. Huston, The Sinews of War: Army Logistics 1775-1953, Army Historical Series, Vol II, Office of the Chief of Military History, U.S. Army (Washington: Government Printing Office, 1966), p. 424.

6. U.S. Joint Chiefs of Staff, Washington, Dictionary of Military and Associated Terms, Department of Defense, JCS Pub. 1, (Washginton: Government Printing Office, 1974), p. 197.

7. Duncan S. Ballantine, U.S. Naval Logistics in the Second World War, (Princeton: Princeton University Press, 1949), p. 1.

8. Ibid., p. 3.

9. RAdm Henry E. Eccles (Ret), Logistics in the National Defense, (Harrisburg Pa: The Stackpole Co., 1959), pp. 21-22.

10. RAdm Henry E. Eccles (Ret), Military Concepts and Philosophy, (New Brunswick, N.J.: Rutgers University Press, 1965), pp. 72-73.

11. RAdm Henry E. Eccles (Ret), The Military and Civilian Aspects of Logistics, (paper presented at the Convention of the Society of Logistics Engineers, Los Angeles, Sept. 1968).

13. Capt. L.L. Ostrom and LTC G.W. Rider, A Military Logistics Concept Applied, (prepared for the Air War College Associate Program, Air University, Alabama, 1972).

14. Encyclopedia Britannica, XIV, p. 239.

15. Ballantine, p. 1.

CHAPTER III

THE IMPACT OF LOGISTICS UPON STRATEGY

> You will not find it difficult to prove that battles, campaigns and even wars have been won or lost primarily because of logistics.[1]
>
> Dwight D. Eisenhower

GENERAL

In the preceeding chapter we redefined "logistics," developed a definition of "strategic logistics," and examined the logistics process in some detail. Now we turn to an examination of the impact of logistics upon strategy.

Historical examples, from the American Civil War through the present, illustrate the impact of logistics upon past strategies. An analysis of the impact of logistics upon current US strategy is provided as is a brief forecast of the implications of logistics on future national strategy.

PAST IMPACTS

The American Civil War

History has illustrated that superior generalship and brilliant strategy and tactics are vital for successful combat, yet ultimate victory generally has gone to the side having the greater economic

strength, and thus the greater logistical potential. This was particularly evident in the American Civil War. In that war, those areas of logistics that were so vital to the general strategy of the time--a developed transportation network of railroads and waterways and an extensive industrial base that could be rapidly mobilized for the manufacture of war materials--made the North far superior to the South. The North had an added advantage as its vessels dominated the inland waterways and its fleet on the high seas far overshadowed that of the South. In manufacturing, mechanical improvements, finance, and even food production, the North's capabilities exceeded the South. These factors were important in the formulation of Union strategy. With a larger population and a more extensive industrial capacity, the North could generate more men and war materials. Through control of the peripheral seas and its dominant inland transportation network, the North was able to transfer troops and supplies more effectively.[2]

Industrial mobilization in the North was more extensive and superior than in the South. The Confederacy, with an agricultural economy--primarily cotton--faced a continually difficult, uphill battle in obtaining war materials. Conversely, the North mobilized its industrial base so extensively that before the war was over, the United States had freed itself of dependence on foreign sources for military clothing and weapons.[3]

In addition to having less than one-third the railway mileage of the North, most of the Southern rail system linked port cities with

cotton producing areas. It provided no connections in the east between Virginia and the heartland of the deep South. By comparison, the Northern rail network was so developed, it could accommodate traffic in almost every direction. The value of the railroad in accomplishing strategic objectives is well illustrated by the following remarks of General Sherman in reference to support of his 1864 Atlanta campaign by rail from Nashville, Tennessee:

> That single stem of railroad, 430 miles long, supplied an Army of 100,000 men and 35,000 animals for a period of 196 days. To have delivered that amount of food and forage by ordinary wagons would have required 36,000 wagons of six mules each, allowing each wagon to have hauled two tons twenty miles each day, a simple impossibility in roads such as then existed in that region of the country. Therefore, I reiterate that the Atlanta Campaign was an impossibility without these railroads.[4]

The Confederate strategy was to successfully defend against a Northern invasion. The Union strategy was to crush the South with its overwhelming manpower and resources. Superior mobility and industrial mobilization were vital in supporting this strategy. Although the South demonstrated innovative and brilliant tactical maneuvers in battle, it did not have the North's logistical capability to sustain an army. The Confederacy was destined to defeat by virtue of a logistically unsupportable strategy.

World War I

To understand the logistical implications of World War I, an understanding of the change in the role of the United States in the

world, and of the changes in the Army from 1898 to 1916 is necessary. The Civil War had been a war of a new dimension, being described as the "first modern war." This war started the United States on its climb toward "world power" status by gaining for the country international recognition of its industrial might and technological abilities.

The use of military forces in Cuba, Puerto Rico, the Philippines, China and Mexico gave the US military and the nation needed experience in organizing and sustaining forces beyond its own frontiers. Greater reliance on railroads, sea transport, and sea power, and an expanding industrial base were evident in these expeditions. Expeditionary forces provided invaluable training for the events of 1916. The implications of world power status, of the change from an agricultural to industrial economy, and the growth of technology were not quickly recognized by the nation. The Congress proved ineffective in understanding the nature of modern warfare and the need to fund for research in new weapons and equipment. The planners failed to see how these changes would effect future conflicts. The military continued to rely on great masses of men and cavalry. The failure to perceive changes brought on by the industrial revolution resulted in what William Manchester described in The Arms of Krupp as the nightmare of strategy and tactics when,

> The epauletted marshals placed their main reliance in great masses of cavalry--as late as 1918 General John J. Pershing, U.S.A. would be cluttering up his supply lines with mountains of fodder for useless horses--and their staffs rarely visited the front, where a very different kind of war was being fought.[5]

Historians have described World War I as a war of military anachronisms. Cavalry against tanks, rifle against machine gun, the use of siege cannons with a range of 25 miles, mules and horses against trucks and railroads, the airplane, armored cars, and the use of gasoline and oil.

> American military though had always concentrated on the manpower problems but in World War I the neglected subject of economic mobilization caused difficulties so severe that for atime induction of draftees had to wait upon materials to supply them. In the end the American Army had to fight with large quantities of European weapons and equipment. As the European powers had earlier discovered the war imposed economic demands so severe that only an unprecedented mobilization of industry as well as of armies could begin to meet them. The materiel requirement of the Army became so large that Army supply officers alone could not cope with them, and the Army had to share with business leaders the management of the economic aspect of war. The larger the Army grew and the more enormous and complex its materiel needs became, the less the Army alone could direct the war effort, and the more the civilian planners had to be given influence and power rivaling that of the professional military chieftains.[6]

World War I was costly to the United States in new weapons procurement, in extraordinary movement of men and supplies overseas, and in terms of the large loss of life. These costs were magnified by the nation's failure to recognize changes caused by the industrial revolution and the concomitant failure to dev op new strategies and tactics.

World War II

World War II merits special attention, not only because it was the last major conflict that ended with a decisive military victory, but

also because of the magnitude of its logistics. Throughout this war, logistic planners had to operate without an articulated strategy necessary to provide a firm basis for production programs. Economic mobilization was based not on strategic plans, but on creating an arsenal of material to equip divisions and squadrons to implement future strategic plans. The United States recognized that this war would require an all-out effort to defeat Germany, Italy, and Japan. American war potential, however, could not be expected to overwhelm all three enemies simultaneously. This logistical limitation provided the basis for the first and fundamental strategic decision for waging global war--that the main effort should be aimed first at defeating the Axis Powers in Europe while fighting a holding campaign against Japan.[7] Limited resources dictated concentration against one enemy at a time. Other logistical factors, mainly the shorter distance across the Atlantic, which would make assistance to the Allies more immediate, and the danger to Atlantic communications posed by German submarines and raiders, marked Germany and Italy as the first targets. This decision was reinforced in late 1941 when it appeared that Great Britain and the Soviet Union were in danger of succumbing if major assistance were not forthcoming.

Basic differences in British and American views on strategy to be adopted in the war against Germany arose repeatedly. The British favored a peripheral strategy, closing a ring around Germany. For major operations they preferred the Mediterranean, the "soft under belly" of Europe as Prime Minister Churchill termed it. The United

States insisted on a great offensive to be mounted from Great Britian, across the channel. The British were influenced by recollections of the frightfully costly warfare in northern France during World War I, and by doubts about the logistical feasibility of mounting a massive invasion. The U.S. view also reflected log9stical considerations--the longer and more difficult supply lines necessary for supporting large-scale operations in the Mediterranean and a conviction that the quickest way to complete victory lay in destruction of the industrial capability of Germany.[8]

The initial adoption of the plan for buildup of forces in Great Britain (Bolero) envisioned an invasion of the Continent in April of 1943 (Roundup). Even though some 170,000 American troops had arrived in Great Britain by the end of August 1942, it was soon evident that the planned cross-chanel attack could not be launched in 1943. Again it was a matter of logistics. There was no strategic reason why North Africa and western Europe should not be invaded simultaneously, but the resources were not available to implement such a strategy.

A number of uncertainties contributed to difficulties in logistic planning throughout World War II. The fact that the enemy held the initiative for several months in the beginning made any long-range plans difficult; the changing fortunes of war frequently made it necessary to modify plans, which nearly always entailed delay. The continuing debate over priorities between the war in Europe and the war in the Pacific, the peripheral strategy and the direct attack

strategy for Europe, and the Southwest and Central Pacific forces against Japan all made it virtually impossible to arrive at a firm, long-range logistical plans.

The major strategic decisions of the war were mostly based on logistical considerations, and were essentially logistical decisions. As far as high level policy was concerned, strategic decision did not govern industrial mobilization and procurement, but only modified details of those programs.

After the war, General Eisenhower made the statement which began this chapter. About the same time, Field Marshal Sir Archibaid Percival Wavell wrote: "I have soldiered for more than 42 years, and the more I have seen of war, the more I realize how much it all depends on administration and transportation, which our American friends call logistics."[9]

The Korean War

It was evident that logistic capabilities would determine the amount of force the United States could bring to bear in Korea after the attack by North Korean forces in June 1950. Warfare conducted 5,000 miles from the shores of the continental United States caused critical logistic problems.

Neither the United States Far East Command nor the Department of the Army appeared to have any prepared plan for support of military operations in Korea prior to June 1950, and the strategic decision to deploy ground forces into Korea was supported by the Far East

Command without reference to logistical plans and analyses. Even at a national level, the logistical feasibility of a campaign in Korea was not a major consideration.

Admiral Arleigh Burke, in an address at the Naval War College in 1951, stated that when he arrived in Korea as a trouble shooter, he found that an urgent need existed for competent staff officers to assist the commander in the direction of Naval forces. There was no logistic division on the staff of Commander Naval Forces Far East at the outbreak of the war, nor were there any logistic plans for the conduct of war in that part of the world.[10]

On 15 September 1950, less than three months after the invasion of South Korea, the United States X Corps conducted an amphibious assault at Inchon which changed the complexion of the war. A rapid logistical buildup made this amphibious envelopment possible.[11]

The Korean War alerted America to the general danger of Communist agression at a time when it was looking toward a reduction in defense expenditures. The Korean conflict set in motion a long-term rearmament program through which the United States would be better prepared to meet future limited emergencies, and to accept total mobilization should that become necessary.

The Vietnam War

Significant U.S. military involvement in Vietnam can be measured from a starting point of February 13, 1965 when the decision was made to mount a sustained bombing attack against North Vietnam. Although

that course of action had been chosen to minimize the necessity of committing U.S. ground forces, military planners should have been aware that the significant escalation of a bombing campaign might lead to the requirement for substantial ground forces. Indeed, more than 10 years earlier, the warning to strategic planners had been sounded.

> In 1954, Army Chief of Staff Matthew Ridgway had made one thing abundantly clear to his superiors as the pressure mounted for air strikes to relieve the French garrison at Dienbienphu: that air power and ground power could not be separated. Indeed, he emphasized. . . that if air power was used and failed, as he felt it most certainly would, then the stakes would be greater, and ground power would be necessitated.[12]

Unfortunately, there is little evidence that significant planning, at the national level, by either strategists or logisticians took place until well after major troop committments had been made on a piecemeal and often political basis. This is particularly surprising since comprehensive operational and logistics planning for such a contingency had been accomplished both in-country and at Theater level by the Commander in Chief, Pacific.[13] For example, as early as August of 1964, General William C. Westmoreland had requested the establishment of a logistics command in anticipation of support requirements for a future buildup if necessary.

> Westmoreland was even then trying to get them (An Army Engineer Group) into the country to prepare the inner logistic base for combat troops eventually coming ashore. Since the engineers weren't provided, in mid-1965, when the combat troops did start arriving, the logistical component was not ready. . .[14]

In spite of the operational level contingency planning and the openly expressed concern over our ability to support substantial ground forces, at a national planning level events appear to have gotten ahead of both the strategists and logisticians.

It was not until May of 1965, when it had become apparent that our strategy could not be confined solely to the bombing campaign and the number of troops in Vietnam had risen to 35,000 that the very basic step of requesting additional funds to support ground forces was taken. On the 4th of May, President Johnson sent a message to Congress requesting additional funds to meet the mounting military requirements in Vietnam. In his message, the President acknowledged the previous lack of logistics planning when he requested an additional $700 million for fiscal year 1965 (of which there was less than two months remaining), noting that:

> The additional funds I am requesting are needed to continue to provide our forces with the best and most modern supplies and equipment. They are needed to keep an abundant inventory of ammunition and other expendables. They are needed to build facilities to house and protect our men and supplies. [15]

Three months later, in July 1965, when the decision was made to commit 125,000 U.S. ground troops in Vietnam, the "operational logisticians" were vaced with the overwhelming task of catching-up with support of troops already in the field. A process which, to their credit, was accomplished in spite of the continuing lack of national logistics planning and direction. Although discussion of their outstanding

achievements in meeting the needs of Vietnam field commanders is, unfortunately, outside the scope of this paper, those accomplishments are well documented elsewhere and are certainly acknowledged by the authors.

What is of concern is the apparent failure on the part of senior decision makers to recognize the impact of Vietnam logistics requirements on the nation's strategy both in Vietnam and throughout the world.

That the logistics difficulties encountered in Vietnam did, in fact, impact on our ground capabilities was acknowledged by General Westmoreland who had to wait until July 1967, fully two years after the committment of ground combat units, to state that:

> . . . we have built up in South Vietnam a large logistical base which is well organized and is flexible. It is one of our real strengths. . . We will get greater return in combat power for the forces that are henceforth deployed. [16] (emphasis added)

That there was a later concern, among the senior leadership in the Department of Defense, as to the impact of logistics on Vietnam and world-wide capabilities is evidenced by the creation in February 1969 of the Joint Logistics Review Board (JLRB) composed of senior military officers from all services and supported by a 105-man staff of military officers and Department of Defense Civilians. In the charter for the JLRB, Deputy Secretary of Defense David Packard directed they "review world-wide logistic support to U.S. combat forces during the Vietnam era so as to identify strengths and weaknesses . . ."[17]

The JLRB, headed by General Frank S. Besson, Jr., USA, conducted an exhaustive study of logistics support in Vietnam, producing some 18 monographs and 3 summary volumes. While not specifically addressing the question critical to this paper, the impact of logistics on national strategy, many of the Board's findings deal directly with that subject. While the JLRB takes justifiable pride in the logistics support rendered in Vietnam, there is no question that their observations and conclusions support the contention that a lack of adequate logistic planning and direction, during the Vietnam era, severely narrowed our strategic options both in fighting that war and in meeting other concurrent worldwide commitments.

That logistics limited our options in Vietnam is, perhaps, best illustrated by the JLRB's observation that as late as 31 December 1965 support capabilities were so lacking and chaotic that it was then . . .

> clear that additional introduction of troops must be delayed in order to give logistics forces an opportunity to restore some measure of control.[18] (emphasis added)

Even more significant to an understanding of the impact of logistics on national strategy is an examination of the Board's conclusions concerning our ability to meet military requirements elsewhere in the world during the Vietnam era. They summarized these conclusions by noting that:

> Support of the Vietnam conflict during the 1 January 1965 to 31 December 1969 time frame resulted in withdrawals of personnel, equipment, and supplies from unified and specified commands in areas outside SE Asia which reduced their mission capability and

> operational readiness by varying amounts . . . . The risks incurred in permitting the above drawdowns were considered at the highest national level and accepted on the premise that the United States would not become engaged in another major contingency during the Vietnam conflict.[19]

LTG Joseph M. Heiser, Jr., USA, in his excellent monograph on logistics support in Vietnam, specifically addresses three capabilities in which logistics decisions critically impacted on our worldwide military readiness and thus narrowly limited the strategic options available to meet other contingencies.

General Heiser first notes that the need to meet unprogrammed Vietnam requirements resulted in the diversion and withdrawal of so much equipment from other major Army commands that, by June 1966, "the majority of our major combat units outside of Vietnam were C-3, marginally ready; or C-4, not ready." Secondly, our Reserves, he believes, also "suffered a major setback," again by being used as an emergency equipment "pool" for Vietnam. And, finally, he points out that it was necessary to draw significantly on Pre-Positioned War Reserves, Operational Project Stocks, and POMCUS Stocks (Pre-positioned Materiel Configured to Unit Sets).[20]

Each of the military capabilities explored by General Heiser is critical to the implementation of any coherent national strategy. Their disruption, by virtue of the War in Vietnam, becomes even more significant when viewed from the perspective of the more than six years it took to restore worldwide readiness postures to their pre-Vietnam levels.

In our opinion, the period 1965-1971 saw a national strategy severely limited by Vietnam logistics decisions made either too late or without regard to their implications on that strategy.

Perhaps the best summary of this aspect of the Vietnam era is provided by John Collins, who, in his excellent book, Grand Strategy, notes that:

> U.S. leaders decided not to declare war; not to mobilize the reserve, the National Guard, or industry; not to impose any special controls, such as censorship or commodity rationing; to continue other U.S. defense commitments on a shoestring budget; and to sanction mass draft deferments. The upshot was that all efforts to enlist public support were enervated, the combat burden was borne by the "unlucky" few, irresponsible reporting by some members of the mass media ensued, we suffered from deficit spending and an unfavorable international balance of payments, and our security posture everywhere, other than in Vietnam, was undermined.[21]

The Post-Vietnam Period

The period since the end of active US combat involvement in Vietnam has been marked by attempts at detente with the Soviet Union, rapprochement with the People's Republic of China, the fourth Arab-Israeli War, the energy crisis, and worldwide economic dislocation. These events have highlighted the critical influence of logistics upon national strategy.

The October 1973 Middle East War is an outstanding example of the role of logistics in modern warfare.[22] This War demonstrated, perhaps more than any other conflict in history, the decisive impact of logistics not only upon strategy, but upon

the survival of a nation. The statement of Israel's Premier Golda Meir, "For generations to come, all will be told of the miracle of the immense planes from the United States that meant life for our people,"[23] is strong testimony to the critical importance of logistics. Israel had well-equipped, well-trained, well-led active forces, and well-developed manpower mobilization plans to rapidly reinforce its active forces in an emergency, yet its very survival as a nation was in dire jeopardy until the arrival of arms, ammunition, and equipment via a massive US airlift permitted a counter-offensive that stopped the Arab armies.[24] It is clear that the nation of Israel would not now exist if it had not received this massive resupply from the United States. Israel, however, was not the only belligerent dependent upon outside support. Both sides were almost entirely dependent on outside sources for their logistical support.[25]

The greater speed with which the United States was able to resupply Israel, vis-a-vis the speed with which the Soviet Union was able to resupply the Arabs, brought Israel to a position of real logistics strength, and, from that base, Israel was able to maintain a military balance, eventually leading to a cease-fire.[26] This dependence of both sides upon outside logistical support obviously affects the formulation and attainment of their national strategic objectives.

Recent events in South Vietnam offer another example of the impact of logistics on strategy. It appears that the cutback in

US military aid, which the Secretary of Defense has characterized as putting an ally on the equivalent of starvation rations,[27] prompted the Government of South Vietnam to adopt a strategy of abandoning its northern provinces to reduce its lines of communications and thus eliminate the problems of supporting forces in those areas. Establishing a defense line closer to Saigon would have placed the troops near base depots and facilitated resupply operations. This also would have allowed the South Vietnamese to concentrate available resources rather than attempt to spread them thinly throughout the country. This strategy, prompted by logistical considerations, appears to have failed due to poor planning, poor communications, and even poorer leadership.

As this report is being written, the War in South Vietnam has ended. A final observation on the outcome of that War is appropriate. The South Vietnamese Forces were equipped and trained in the image of American Forces, under a doctrine that places heavy reliance on materiel superiority. Such a doctrine appears inappropriate for an underdeveloped nation, such as Vietnam, where manpower, and not materiel, is the most available resource.

CURRENT IMPACT

Thus far in this chapter, we have used historical examples to illustrate the impact of logistics upon US strategy. In this section, we will focus on our current strategy and on the strategic logistics implications of that strategy.

Current Strategy

With the end of active US participation in Vietnam, US foreign policy was revised to accommodate the Nixon Doctrine. To implement this policy, the Department of Defense developed the strategy of Realistic Deterrence. This strategy was based on these criteria:

> Preservation by the United States of an adequate strategic nuclear capability as the cornerstone of the Free World's nuclear deterrent.
>
> Development and/or continued maintenance of Free World forces that are effective, and minimize the likelihood of requiring the employment of strategic nuclear forces should deterrence fail.
>
> An International Security Assistance Program that will enhance self-defense capabilities throughout the Free World, and, when coupled with diplomatic and other actions, will encourage regional cooperation or security agreements among our friends and allies.[28]

The strategy of Realistic Deterrence shifts primary responsibility for deterring or fighting subtheater or localized conflict to allies. Assistance from the United States, under this strategy, would be primarily in the form of other than ground force elements, but could include force deployments under special circumstances.[29] In effect, this strategy shortens the spectrum of potential conflict that US military forces would be directly involved in. Ground forces, in particular, would no longer be employed to fight subtheater conventional warfare, guerrilla warfare, or in counter-insurgency roles.

In The Report of the Secretary of Defense to the Congress on the FY 1976 and FY 197T Budgets, Mr. Schlesinger notes, "It is now

evident that deterrence does not simply derive from a pile of nuclear weapons--a pile which one anticipates, at least, will frighten one's opponents as much as the people it is designed to protect."[30] He speaks of "the novelty of nuclear explosives"[31] and the "illusions"[32] that have emerged about detente. In regards to nuclear weapons, "only detente exercises an even more powerful magic since it is believed somehow to obviate the need for both deterrence and defense."[33] He relates deterrence, detente, and defense to the maintenance of an equilibrium of power.

> We should make no mistake about it: there is no conflict among detente, deterrence, and defense. They are inextricably bound up with one in the maintenance of an equilibrium of power.[34]

Today, emphasis is on defense with the ability to "deal simultaneously with one major contingency (wherever it might occur) and one minor contingency, with the capability to 'swing' with some speed from one major theater to the other."[35] At issue is the length of war that the United States should be prepared to fight with non-nuclear capabilities. The view of the Department of Defense is that there are two fundamental needs: "the capacity for a successful strong initial forward defense based primarily on our active forces; and a long-war hedge that depends primarily on our guard and reserve forces and our productive base."[36]

Logistics Implications

Our analysis of the current US strategy indicates four specific and vital logistic areas which may impact on our ability to accomplish

that strategy. These are our industrial base, the requirement for forward deployment, International Security Assistance, and the energy crisis.

The significance of our industrial base hinges on the need to be able to project conventional forces in a broad array of possible contingencies. This requires that they be maintained in the highest state of readiness, backed up by a fully functioning and flexible industrial base capable of rapid expansion.

Our industrial base is eroding, as shown by the statements of the Secretary of the Army and the Secretary of Defense cited in Chapter I. As one speaker at the JCS Worldwide Logistics Conference stated, "The United States must decide whether or not it is going to maintain strong defense forces. If it is, then it must be prepared to take the actions necessary to maintain the industrial mobilization base required to support those forces."[37]

To be capable of executing our current strategy, we must halt the erosion of our industrial mobilization base.

Our second point, the strategy of a strong forward defense, implies the military requirement for forward deployment and forward basing.

The fourth Arab-Israeli conflict cast serious doubts on the United States' forward-basing and forward-deployment capabilities. In 1958, it had been relatively simple to deploy US Forces to the Middle East. The forces and logistical resources needed were readily available in Germany and France. Since then, the extensive

logistical base that existed in France has been dismantled and the number of logistical bases and troops in Europe steadily reduced. In addition, the freedom of action of the United States to utilize what forward logistical resources it did have in Europe to resupply Israel was restricted by the political reaction of its NATO allies and the denial of overflight rights.[38]

Constraints on our use of forward bases are not restricted to Europe and the Middle East. In the logistical buildup of South Vietnam, prior to the withdrawal of US Forces, attempts to ship tanks from Sagami, Japan, were delayed by demonstrations.[39] These examples bring into question the viability of the forward basing/deployment strategy. Troops and logistical resources positioned overseas in forward bases contribute little to the attainment of US strategic objectives if their use in the pursuit of US vital interests is prevented by the host nation in which they are located.

This strategy places an added burden upon the United States by possibly rendering the forward positioned resources unavailable. This would require use of reserve resources in the United States and the movement of these resources over much greater distances. The recent change in the Government of Portugal and statements concerning the use of US facilities in the Azores, which were of major importance to the air resupply of Israel,[40] lend added emphasis to the problems of the forward-basing strategy.

As we noted earlier, another aspect of logistics support for our current strategy is the International Security Assistance program. This is a logistics program centered on Foreign Military Sales, which have increased steadily in recent years. This increase is advantageous to the United States in balance of payments and in maintenance of a warm production base. It has serious disadvantages. The most critical is the need to continue to support nations once they have been sold equipment. This may place additional demands upon our production base, complicating our ability to meet our own requirements, especially during the early stages of a conflict.

Finally, the recent past has seen the use of a vital economic resource to blackmail the industrialized nations of the world. The Arab oil embargo severely tested and strained the NATO Alliance and clearly demonstrated the heavy reliance of developed nations on this vital commodity. As noted by Eccles,

> Of course, the primary national problem today is the energy crisis. This is, in fact, a logistic crisis in which the entire driving force of our economy has been reduced by the interaction of sociological/political perceptions and concepts on the operation of major logistics systems.[41]

Development of current strategic objectives must now give full and urgent consideration to the availability, or scarcity, of this essential ingredient which impacts on the fundamental capability of a nation to create, project, and sustain military power.

FUTURE IMPACTS

The impact of logistics on our ability to meet future national strategic objectives and the necessity for interfacing industrial-economic considerations with the development of those objectives were examined in conjunction with the US Army War College's "FUTURES 90" study.

While any projection of the United States' military position in the world of the 1990's must be marked by uncertainty, we can be fairly confident of two future trends of particular significance to consideration of strategic logistics.

First, we can expect continuing advances in technology to lead to increased sophistication of weapons systems and the forces created to use them. And, second, the national and international economic competition for natural resources can be expected to intensify and to further narrow the availability of those resources for use in support of the military sector.

In regard to the first trend, rapid technological change, we believe that strategic logistics considerations will become critical in both the creation of new forces and the modernization of forces in-being. This will be accompanied by a corresponding decrease in operational logistics requirements. This conclusion is generally shared by futurists, such as the Rand Corporation's Robert Paulson and Thomas Tierney, who, in their 1971 report entitled, Logistics and Technology: Some Thoughts about Future Military Implications,

noted that . . .

> New technology will permit almost unlimited development of applications in logistics command and control. Such advances permit even higher goals of system reliability to be set, perhaps to the point where systems are virtually failure proof. Elimination of most operational logistics and the aggregation of items at retailed level would result from such development and, ideally, weapons system logistics would stop when the system was delivered to the user.[42]

The second trend, the increased competition for economic resources and the corollary decrease in their availability for military use, will obviously result in increasing logistics constraints on the creation of military forces and a marked narrowing of the strategic options which can, therefore, be supported. This narrowing of available strategic options can be expected to result in the development of strategies which require limited new resource commitment as opposed to those, such as general non-nuclear war, which require massive resource allocation.

In forecasting the "downstream" effects of strategic logistics, it becomes obvious that our future strategies will ever increasingly be constrained by logistics. The intergration of logistics considerations into the selection of national strategic objectives will become imperative, if future strategies are to be both coherent and economically obtainable.

SUMMARY

We have shown the impact of logistics upon past strategies, have explored some of the strategic logistics implications of our present strategy, and have outlined some implications for the future. In the next chapter, we will investigate national decision-making and planning processes to determine the extent of logistical input in these procedures.

CHAPTER III

FOOTNOTES

1. Daniel Hawthorne, For Want of a Nail: The Influence of Logistics on War, p. xii.

2. James A. Houston, The Sinews of War: Army Logistics 1775-1953, p. 159.

3. Ibid., p. 187.

4. William T. Sherman, Memoirs of William T. Sherman, p. 399.

5. William Manchester, The Arms of Krupp, p. 283.

6. Russell F. Weigley, History of the United States Army, p. 360.

7. Huston, p. 427.

8. Ibid., p. 429.

9. Hawthorne, p. xii.

10. Henry E. Eccles, Notes on the Logistical History of the Korean War, p. 2.

11. Huston, p. 649.

12. David Halberstam, The Best and the Brightest, p. 651.

13. Joint Logistics Review Board (JLRB), Logistics Support in the Vietnam Era, Vol. I, p. 5.

14. Halberstam, p. 654.

15. US Congress, Senate, Committee on Foreign Relations, Background Information Relating to Southeast Asia and Vietnam, Report, p. 160.

16. Ibid., p. 200.

17. Joint Logistics Review Board, p. v.

18. Ibid., p. 10.

19. Joint Logistics Review Board, Vol. II, p. 289.

20. Joseph M. Heiser, Jr., Vietnam Studies: Logistics Support, pp. 251-253.

21. John M. Collins, Grand Strategy: Principles and Practices, p. 245.

22. Thomas R. Weschler, "A Look at the Decade of Logistics," Army Logistician, January-February 1975, p. 3.

23. Linwood B. Mather, "Logistics--A New Potential," Military Review, January 1975, p. 76.

24. Ibid.

25. Henry E. Eccles, A Brief Note on Logistics Study and Research, p. 2.

26. Weschler, p. 4.

27. James R. Schlesinger, Annual Defense Department Report FY 1976 and FY 197T, p. III-37.

28. Melvin Laird, Annual Defense Department Report, FY 73, p. 23.

29. Melvin Laird, Statement of the Secretary of Defense Melvin R. Laird Before the Senate Armed Services Committee on the FY 1972-1976 Defense Program and the 1972 Defense Budget, p. 51.

30. Schlesinger, Annual Defense Department Report, FY 1976 and FY 197T, p. I-11.

31. Ibid.

32. Ibid., p. I-12.

33. Ibid.

34. Ibid.

35. Ibid., p. III-10.

36. Ibid., p. III-12.

37. A. J. Fiorelli, "Our Mobilization Base: How Firm a Foundation?", Address to OJCS J-4 Worldwide Logistics Conference, April 24, 1975.

38. Walter J. Woolwine, "A Logistics Perspective," Army Logistician, March-April 1975, p. 5.

39. Ibid.

40. Eccles, A Brief Note on Logistics Study and Research, p. 3.

41. Ibid., p. 1.

42. Robert M. Paulson and Thomas T. Tierney, Logistics and Technology, Some Thoughts about Future Military Implications, p. 12.

CHAPTER IV

NATIONAL DECISIONMAKING AND PLANNING SYSTEMS

"The process of fully integrated strategic-logistic planning relates means to specific strategic objectives."[1]

GENERAL

The President is designated the head of Government and Commander in Chief of the Armed Forces by the Constitution. While the Congress and the public share in formulating the objectives of national security, defining the role of the military establishment, and determining the share of the nation's resources to be allocated for defense of the nation, the responsibility for the security of the country rests ultimately with the President.

To assist him in discharging his responsibilities, the President has at his disposal all of the extensive resources of the Executive Branch of the Government. These include activities within the Executive Office of the President itself, such as the Office of Management and Budget (OMB), the Council of Economic Advisors (CEA), and the National Security Council (NSC), as well as the Cabinet level departments and separate agencies of the Government.

THE CONGRESS

The Congress exercises its constitutional control over the Armed Forces by the enactment of legislation, including that

involving appropriations, and by other actions which are incident to the enactment of legislation, such as the conduct of investigations.

Each legislative proposal introduced in either House of the Congress is referred to an appropriate committee for consideration. At least 11 of the 16 standing committees of the Senate, 13 of the 20 standing committees of the House of Representatives, and 4 joint committees are directly concerned with some aspect of logistics policies.[2] Those committees primarily concerned with military affairs in both the Senate and House of Representatives are the respective Appropriations, Armed Services, and Foreign Relations/ Foreign Affairs Committees. The two Appropriations Committees are concerned with funding the Armed Forces. The House and Senate Armed Services Committees deal principally in authorizations of personnel, items of equipment, and construction for the armed services. The House Foreign Affairs Committee and the Senate Foreign Relations Committee are concerned with United States military commitments overseas and their implications for United States foreign relations. Other congressional committees may on occasion deal with a specific issue affecting the armed services, such as a subcommittee of the Joint Committee on Defense Production investigating an aspect of Industrial Mobilization.[3]

THE NATIONAL SECURITY COUNCIL

When the Congress created the National Military Establishment in 1947, it also provided for a National Security Council (NSC) which was to perform the following functions:

a. Advise the President with respect to the integration of domestic, foreign, and military policies relating to the national security so as to enable the military Services and the other departments and agencies of the Government to cooperate more effectively in matters involving the national security.

b. Assess and appraise the objectives, commitments, and risks of the United States in relation to our actual and potential military power, in the interest of national security, for the purpose of making recommendations to the President in connection therewith.

c. Consider policies on matters of common interest to the departments and agencies of the Government concerned with the national security, and to make recommendations to the President in connection therewith.[4]

The National Security Act of 1947 did not change the constitutional authority of the President with the establishment of the National Security Council. The President remained the Commander in Chief of the Armed Forces. Neither did the Act change the authority of the Congress, the holder of the purse strings. It provided a set of organizations within the Executive Branch of the

Government which were designed to improve coordination among and control over the military departments. The President was provided with the National Security Council to assist in coordinating the activities of the Defense Department, State Department, and defense-related activities of other agencies of the Government.

The President, Vice President, Secretary of Defense, and the Secretary of State are statutory members of the NSC. The Director, Office of Emergency Preparedness, was a statutory member until that agency disbanded in June 1973 and its functions transferred to a division within the General Services Administration (GSA).[5] At the President's request, other persons may be invited to regularly participate in NSC deliberations. Former President Nixon regularly included the Director, Central Intelligence Agency, the Chairman of the Joint Chiefs of Staff, and the Assistant for National Security Affairs in NSC meetings. Other senior officials, with experience or knowledge relevant to a matter under consideration, are often invited to NSC meetings.

Six senior interdepartmental study groups at the Under Secretary level assist the NSC. Two of these groups play an important role in providing an analysis of strategic military issues presented to the President for decision. They are the Senior Review Group (SRG) and the Defense Program Review Committee (DPRC). The SRG reviews studies prepared by inter-departmental groups, which are chaired by Assistant Secretaries of State, to insure that the issues, options, and agency views

are fully presented. The DPRC was established in 1969 and is charged with reviewing the diplomatic, military, political, and economic consequences of issues requiring Presidential determination that result from:

a. Proposals to change defense strategy, programs, and budgets.

b. Proposals to change US overseas force deployments and committed forces based in the United States.

c. Major defense policy and program issues raised by studies prepared in response to National Security Study Memorandums (NSSMs). Studies of defense policy and program issues undertaken in response to NSSMs are submitted to the DPRC. The DPRC meets as necessary and supervises the preparation of "Issue Papers" for consideration by the NSC.[6]

Members of the DPRC are: The Assistant for National Security Affairs (Chairman), the Under Secretary of State, the Deputy Secretary of Defense, the Director of Central Intelligence, the Chairman, Joint Chiefs of Staff, the Chairman, Council of Economic Advisers, and the Director, Office of Management and Budget.[7] Other agencies are represented at the discretion of the Chairman.

THE COUNCIL OF ECONOMIC ADVISORS

Another key advisory group available to the President is the Council of Economic Advisors (CEA). The Council consists of three members appointed by the President, by and with the advice and

consent of the Senate. One of the members is designated by the President as Chairman.

As part of the Executive Office of the President, the CEA analyzes the national economy and its various segments; advises the President on economic developments; appraises the economic programs and policies of the Federal Government; recommends to the President policies for economic growth and stability; and assists in the preparation of the economic reports of the President to the Congress.[8]

OSD AND JCS PLANNING SYSTEMS

We reviewed the planning systems of the Office of the Secretary of Defense (OSD) and the Joint Chiefs of Staff (JCS). Those systems involve detailed planning actions accomplished during highly structured planning cycles. The principal elements of those systems are the Five Year Defense Program (FYDP) and the Planning, Programming and Budgeting System (PPBS) of the OSD, and the Joint Operational Planning System (JOPS) of the JCS.

Our review of the OSD and JCS planning systems indicates these organizations are basically concerned with operational logistics, and their input to strategic logistics decisions are minor.

GAPS AND VOIDS

Our research has uncovered one major strategic logistic void in the National Security Council. It was created in June 1973 when the Office of Emergency Preparedness (OEP) was dissolved and the Director removed from membership in the NSC. Prior to its disestablishment, the OEP assisted and advised the President in the coordination and determination of policy for all emergency preparedness activities. The OEP was concerned with the use of resources, such as manpower, materials, industrial capacity, transportation, and communications, the organization of Government, stabilization of the civilian economy, and rehabilitation after enemy attack. The OEP also determined the kinds and quantities of strategic and critical materials to be acquired and stockpiled against a war emergency under the Strategic and Critical Materials Stock Piling Act of 1946.[9]

The Director, OEP, was not replaced on the NSC, nor were the responsibilities of his office in economic industrial planning assumed by another NSC member. While the Secretary of Defense still assists in determining the strategic concepts and the military strength necessary to support foreign commitments recommended by the Secretary of State, there is no NSC principal who can contribute views on the economic ability of the nation to support these commitments.

The Office of Preparedness in the GSA is now performing the same basic functions as those formerly assigned to the OEP. However, as a division-level activity within GSA, these functions have been downgraded in importance.

SUMMARY

In this chapter, we have examined the role of the President and the Congress in the development of national security policy and objectives.

In our analysis of the planning systems of OSD and JCS, we conclude that these organizations are basically involved in operational logistics and their input to strategic logistics decisions are minor.

Within the National Security Council, there is no provision for the integration of logistics in the formulation of national strategic objectives. This void in the decisionmaking process was caused by the elimination of the Office of Emergency Preparedness from the Executive Office of the President and the removal of its Director from membership in the NSC.

We believe that this void allows recommendations to be made to the President without the benefit of strategic logistics considerations. In the following chapter, we will review possible alternatives for eliminating this deficiency.

CHAPTER IV

FOOTNOTES

1. Henry E. Eccles, Logistics, the Bridge, p. 3.

2. US Department of the Army, Field Manual 38-1, p. 3-1.

3. US Department of the Army, Army Pamphlet 700-1, p. 2-3.

4. US Army War College, Defense Decisionmaking and Management, Discussion Topic, p. 101.

5. Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Manual 1974-75, p. 494.

6. US Army War College, Defense Decisionmaking and Management, Discussion Topic, p. 12.

7. Ibid.

8. United States Government Manual 1974-75, p. 84.

9. Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Organization Manual 1972/73, p. 80.

10. US Department of the Army, Army Pamphlet 700-1, p. 2-2.

CHAPTER V

INTEGRATING STRATEGY AND LOGISTICS

> "Ultimately, of course, any national-security system comes to a focus in the White House because of the President's over-all respon sibility. The question is how closely he wants to hold active control and day-to-day responsibility in his own hands and those of his staff."[1]

THE NEED

Since economic-industrial considerations are primary factors in meeting national strategic objectives, it follows that strategic logistics must be considered when those objectives are developed. This need is even more urgent in an era of shrinking economic-industrial resources, combined with the increasing cost and complexity of military forces. When these forces must be structured to provide the widest possible array of military capabilities to meet strategic objectives, this consideration becomes critical.

The previous chapter identified strategic logistics gaps and voids in current decisionmaking and planning systems. Since strategic decisions are made at the highest level of our Government, strategic logistics must be considered at the same level. These considerations must be fully integrated at all other levels of Government engaged in planning and implementation of strategic decisions.

We have concentrated our analysis at the national decisionmaking level. Although we have not addressed the entire spectrum of both military and economic-industrial management, we recognize that this melding of both disciplines must take place at all levels. Hopefully, "bureaucratic momentum" will tend to provide "across the board" integration. If a reorientation of the decisionmaking apparatus takes place at the Presidential level, the organizations at successively lower levels will automatically readjust to parallel that reorientation.

WHERE

Logistics and strategic decisions involve virtually every department and agency of the Government. Within the Executive Branch, the National Security Council, the Departments of Defense, State, Commerce, and Transportation, the Office of Management and Budget, and the General Services Administration are all part of the process. Within the Legislative Branch, Congressional responsibilities are mandated by the Constitution and are within the purview of a number of separate and competing Senate and House Committees. This fragmentation of responsibility is one of the major failings of the decisionmaking process.

From a management standpoint, it is desirable to assign the responsibility for integrating strategy and logistics to a single office or agency of the Government. However, in view of parochial interdepartmental biases, and intra-agency competition for resources,

such an assignment to an existing department or agency would yield less than optimal results. The current pressures to reduce the size of the Federal Government would inhibit the creation of a new agency to accomplish this function.

Therefore, the task can be adequately performed only in the Executive Office of the President and, specifically, by the National Security Council (NSC) and/or the Council of Economic Advisors (CEA). The NSC's charter assigns it the function of considering "policies on matters of common interest to the departments and agencies of government concerned with the national security and (making) recommendations to the President."[2] The CEA's charter requires it to "analyze the national economy and its various segments, advise the President on economic developments, appraise the economic programs and policies of the Federal Government and recommend to the President policies for economic growth and stability."[3] The CEA is appointed by the President and approved by the Congress and, therefore, both Executive and Legislative responsibilities for coherent use of economic-industrial capacity in the development of strategy could be accomplished by a single agency.

The melding of the NSC and CEA appears to offer the best alternative for the integration of strategy and logistics into decisions on strategic options made by the President.

INTEGRATING THE NSC AND CEA

The integration of NSC and CEA functions can be accomplished through several existing mechanisms. The most promising is the one which most directly influences the President in the decision-making process, the National Security Council. If the Chairman of the Council of Economic Advisors were included as a permanent member of the NSC (with an expanded strategic logistics charter), the formulation of strategy recommendations to the President would gain significantly in logistics input.

A less desirable alternative is to include the Chairman of the Council of Economic Advisors in the membership of the Senior Review Group (SRG) of the NSC. Theoretically, they "see to it that these studies present the facts, the issues, the arguments, and the range of choice before the studies are considered by the President and the National Security Council."[4] The danger to this alternative is twofold. First, the NSC may act on decisions of the greatest strategic import without recourse to the Senior Review Group, thereby negating logistics input from that agency. And, second, "non-controversial" recommendations from lower-level NSC working groups are often channeled directly to the NSC, bypassing the Senior Review Group. While these may be "non-controversial" to the NSC, the impact of logistics could be of major significance.

It is within the working groups of the NSC that the integration of strategy and logistics must take place. And, of paramount

importance at this level is the Defense Program Review Committee (DPRC), which is charged with "integrating our consideration of the strategic, international political, and economic implications of defense programs. And it relates our defense programs and resource requirements to overall national priorities and the Federal budget."[5] Although the Chairman of the CEA is now a member of the DPRC, he cannot function as an integrating force without an expanded strategic logistics charter. Even then, he would only be capable of influencing recommendations at the Under Secretary level.

The role of the Chairman of the CEA in the DPRC could be substantially reinforced by appointing him Chairman of the Committee. There is nothing sacrosanct about standing committees of the NSC being chaired by Under Secretaries of State. The increased responsibility and visibility of the CEA in the formulation of national strategy would be greatly enhanced and reinforced through such an organizational shift, and would represent a major NSC commitment to do more than provide lip service to the integration of national economic-industrial factors in their decisions.

The Chairman of the CEA can, then, be integrated into strategy formulation decisions of the NSC at any of several levels. Whichever choice or combination is made, his present charter would have to be expanded to include monitorship of all economic and industrial impacts on the creation of military forces. To that end, much can be done to gain recognition for his added responsibility by designating him as the Presidential Assistant for National Logistics Affairs, in

addition to his current title. In his new and additional role, he would act as a direct economic-industrial counter to the Assistant for National Security Affairs. This would assure that the limitations of national productivity are integrated in the strategic policy recommendations made to the President, in effect, providing a system of "checks and balances" within the Executive Department.

SUMMARY

To provide the necessary integration of economic-industrial considerations in the formulation of strategy requires management and functional reorientations in a multitude of Government departments and agencies. Of paramount importance is the introduction of strategic logistics at the Presidential decisionmaking level, since successively lower echelons of Government should automatically adjust in parallel with such a reorientation.

Critical to the interface of both the economic and military sectors is a change in orientation and responsibilities of the Chairman of the President's Council of Economic Advisors. Such a reorientation might include his membership on the National Security Council or its Senior Review Group, and might possibly result in his status on the Defense Program Review Committee being changed from that of a member to Chairman of that key NSC standing group. Regardless of how the organizational integration of the CEA is accomplished, its charter must be expanded to include monitorship of strategic logistics at the Presidential level.

With a dual responsibility, the Chairman, CEA, could be designated the Presidential Assistant for National Logistics Affairs. In such a capacity, he would function as a counter to the Assistant for National Security Affairs to insure that limitations of national productivity receive full consideration in Presidential decision-making.

CHAPTER V

FOOTNOTES

1. Keith C. Clark and Laurence J. Legere, The President and the Management of National Security, p. 17.

2. Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Manual 1974-1975, p. 85.

3. Ibid., p. 84.

4. Richard M. Nixon, United States Foreign Policy for the 1970's: Building for Peace, p. 229.

5. Ibid., p. 230.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

"Strategic plans are mere dreams until there is assurance that they can and will be logistically supported."

RADM Henry E. Eccles, US Navy (Ret.)

STATEMENT OF CONCLUSIONS

The thoughts developed in this study should leave no doubt that logistical considerations are critical in the formulation of national strategic objectives. Such objectives will only be coherent and obtainable when a definite interface between strategy and logistics exists at all echelons of the decisionmaking process.

Our analysis indicates that serious gaps exist at the highest levels of Government involved in strategic planning. This lack of integration of logistics in the development of strategy is of critical importance not only to the creation of military forces, but also to the efficient use of limited economic-industrial resources in support of the other sectors of the nation.

We conclude that:

1. Precise definitions of the logistics processes are required to ensure equally precise assignment and acceptance of logistics responsibilities by the appropriate agencies of Government.

2. The creation of an integrated strategic and logistic planning and decisionmaking process requires an interface be

established between these two disciplines at the highest echelon of Government.

3. It is necessary to integrate strategy and logistics at successively lower levels of Government to ensure effective implementation of strategic decisions. Such integration can be expected to develop in parallel with higher level expansion of functions, if these are given sufficient visibility and impetus by the Office of the President.

RECOMMENDATIONS

We recommend that:

1. The following definitions be accepted by the Department of Defense and promulgated as "official" definitions by inclusion in the Dictionary of Military and Associated Terms, published by the Joint Chiefs of Staff (JCS Pub. 1).

> LOGISTICS. The science of planning and accomplishing the raising, equipping, maintaining, deploying, and sustaining of all military forces required to meet national strategic objectives. It includes two distinct but interrelated disciplines--Strategic Logistics and Operational Logistics.
>
> > STRATEGIC LOGISTICS. The process of planning and accomplishing the transformation of national economic-industrial capabilities into military power by creating military forces, and the means to project and sustain those forces required to meet national strategic objectives.
> >
> > OPERATIONAL LOGISTICS. The process of planning and accomplishing those aspects of military operations which deal with (a) design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition

of materiel; (b) movement, evacuation, and hospitalization of personnel; (c) acquisition or construction, maintenance, operation, and disposition of facilities; and (d) acquisition or furnishing of services.

2. The Chairman of the Council of Economic Advisors be appointed a permanent member of the National Security Council, and that his charter be expanded to include responsibility for apprising the President of all economic-industrial impacts that may result from Presidential decisions.

3. The Chairman of the Council of Economic Advisors be given the additional title of Assistant to the President for National Logistics Affairs. In that capacity, he be appointed Chairman of the Defense Program Review Committee of the NSC and charged with the responsibility of ensuring the integration of logistics in strategic planning, decisionmaking, and implementation at all levels of Government.

EPILOGUE

The lack of strategic logistics considerations at the national decisionmaking level places the security of the nation in jeopardy. We hope this study will contribute to the elimination of this critical defect in national security planning.

BIBLIOGRAPHY

BOOKS

Austin, Anthony. The Presidents War. New York: T. B. Lippincott Company, 1971.

Ballantine, Duncan S. US Naval Logistics in the Second World War. Princeton, NJ: Princeton University Press, 1949.

Beach, E. L., and Noel, J. V. Naval Terms Dictionary, 3rd Edition. US Naval Institute, Annapolis, 1971.

Beaufre, Andre'. An Introduction to Strategy. New York: Frederick A. Praeger, 1965. (U162 B38)

Boulding, Kenneth E., et al. National Priorities: Military, Economic, and Social. Washington: Public Affairs Press, 1969. (UA23 N29)

Collins, John M. Grand Strategy: Practices and Principles. Annapolis: Naval Institute Press, 1973.

Clark, Keith C., and Legere, Laurence J. The President and the Management of National Security. New York: Frederick A. Praeger, Inc., 1969. (JK518I5)

Eccles, Henry E., RAdm US Navy (Ret). A Brief Note on Logistics Study and Research. Newport: US Naval War College, 1973.

Eccles, Henry E., RAdm US Navy (Ret). Command and Control: The Logistics Basis. Washington: George Washington University, Logistics Research Project, 1962.

Eccles, Henry E., RAdm US Navy (Ret). European Logistics 1956. Washington: George Washington University, Logistics Research Project, 1957. (U168 U5E35)

Eccles, Henry E., RAdm US Navy (Ret). Introduction to Bibliography of Logistics Theory. Unpublished work, undated. (U168 U5E 351)

Eccles, Henry E., RAdm US Navy (Ret). Logistics in the National Defense. Harrisburg, PA: The Stackpole Company, 1959. (U168 U5E 354)

Eccles, Henry E., RAdm US Navy (Ret). Logistics Planning Elements. Washington: George Washington University, Logistics Research Project, 1965. (U168 U5E358)

Eccles, Henry E., RAdm US Navy (Ret). Logistic Research Notes. Washington: George Washington University, Logistics Research Project, 1961. (U168 U5E 357)

Eccles, Henry E., RAdm US Navy (Ret). Military Concepts and Philosophy. Washington: George Washington University, Logistics Research Project, undated. (U21.2 E25)

Eccles, Henry E., RAdm US Navy (Ret). Military Concepts and Philosophy. New Brunswick, NJ: Rutgers University Press, 1965.

Eccles, Henry E., RAdm US Navy (Ret). Notes on Logistic Action in Crisis. Washington: George Washington University, Logistics Research Project, 1961. (U168 U5E 356)

Eccles, Henry E., RAdm US Navy (Ret). Notes on Logistic Consolidation in the United States Armed Forces. Washington: George Washington University, Logistics Research Project, undated. (U168 U5E 355)

Eccles, Henry E., RAdm US Navy (Ret). Notes on Logistics Education. Dallas, 1970.

Eccles, Henry E., RAdm US Navy (Ret). Research Seminar in Military Theory. Newport: US Naval War College, 1974.

Eccles, Henry E., RAdm US Navy (Ret). "The Military and Civilian Aspects of Logistics." Paper presented at the Convention of Society of Logistics Engineers, Los Angeles, California, September 1968.

Greenfield, Kent Roberts. Command Decisions. Office of the Chief of Military History, Dept of the Army, 1960. (D769 A533 V13)

Greenfield, Kent Roberts., et al. United States Army in World War II. Office of the Chief of Military History, Department of the Army, 1959.

Hagood, Johnson, MGen. The Services of Supply. Houghton Mifflin Company, 1927. (D570 75 H253)

Halberstam, David. The Best and the Brightest. Greenwich: Fawcett, 1969.

Heflin, W. A. The US Air Force Dictionary. Air University Press, Washington, DC, 1956.

Heinl, R. D., Jr. Dictionary of Military and Naval Quotations. US Naval Inst., Annapolis, 1966.

Hitch, Charles J. Decision-Making for Defense. Los Angeles: University of California Press, 1965. (UA 23 H51)

Huntington, Samuel P. The Common Defense, Strategic Programs in National Politics. New York: Columbia University Press, 1961.

Huston, James A. The Sinews of War: Army Logistics 1775-1953. Army Historical Series. Vol. II. Office of the Chief of Military History, US Army (Washington: Government Printing Office, 1966). (U168 U5H83)

Luttwak, Edward. A Dictionary of Modern Warfare. New York: Harper & Row Publ. Co., 1971.

Schnapper, H. C., ed. National Priorities. 1st ed. Washington, DC: Public Affairs Press, 1969.

Shoemaker, Robert M. Principles of Logistics (A Provisional Definition). Auburn University, February 1960. (U168 U5545)

Taylor, Maxwell D. The Uncertain Trumpet. New York: Harper and Brothers, 1959.

Webster's New World Dictionary of the American Language. College Edition. New York: The World Publishing Company, 1964.

Weigley, Russell F. History of the United States Army. The Macmillan Company, New York, 1967. (UA25 W41)

PERIODICALS

Eccles, Henry E., RAdm US Navy (Ret). "The Vietnam Hurricane." Shipmate. Journal of the US Naval Academy Alumni Association, (July-Aug 73), pp. 23-26.

Hogan, Jerry H. "Translating National Objectives Into Specific Defense Programs." Military Review, Vol. LV, January 1975, pp. 35-39.

Huntington, Samuel P. "After Containment: The Functions of the Military Establishment." The Annals of the American Academy of Political and Social Service, March 1973, pp. 1-16.

Mather, Linwood B., COL. "Logistics--A New Potential." Military Review, January 1975, pp. 75-78.

Weschler, Thomas R., Vice Admiral. "A Look at the Decade of Logistics." Army Logistician, Vol. 7, Number 1, January-February 1975, pp. 2-5.

Woolwine, Walter J., LTG. "A Logistics Perspective." Army Logistician, Vol. 7, Number 2, March-April 1975, pp. 2-7.

GOVERNMENT PUBLICATIONS

Air War College, Volume IV, Military Strategy and Aerospace Power, Chapter 18, Logistics and Strategy. Air University, Maxwell AFB, Alabama, 1968-69. (AF-AU AWC AP V. 4 1969 Ch. 18)

Booth, Donald P., BG. The Joint Logistics Plans Committee of the Joint Chiefs of Staff and the Logistics Work of the Joint Staff, 15 September 1949. (U168 B6)

Brown, Fred R., ed. Management: Concepts and Practice. Washington: Industrial College of the Armed Forces, 1972.

Callaway, Howard H. FY 76 Posture Statement.

Department of the Army. Vietnam Studies: Logistics Support. [by LTG Joseph M. Heiser, Jr.] [Washington: Government Printing Office, 1974] (DS557 V5U545 H4)

Joint Logistics Review Board, Washington. Logistics Support in the Vietnam Era. 3 Vols. and 18 monographs, Department of Defense. Washington: Government Printing Office, 1970. (JLRBLSVE)

Koenig, W. C. Genesis of Army Transportation During the World War and the Coordination Thereof by the Secretary of War Employing the War Department General Staff. Washington, US Army War College, 1936. (UB 223 K81)

Laird, Melvin R. Annual Defense Department Report FY 73. Washington: Government Printing Office, February 15, 1972.

Laird, Melvin R. Statement of Secretary of Defense Melvin R. Laird Before the Senate Armed Services Committee on the FY 1972-76 Defense Program and the 1972 Defense Budget. Washington: Government Printing Office, March 15, 1971.

Leighton, Richard M., and Cockley, Robert W. Global Logistics and Strategy 1940-1943. Washington: Government Printing Office, 1959. (D769 A533 V. 4 PT. 5)

Nixon, Richard M. United States Foreign Policy for the 1970's: Building for Peace. Washington: Government Printing Office, 1971.

Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Organization Manual 1972/73. Washington Government Printing Office, 1972. (JK421 A3)

Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Manual 1974/75. Washington: Government Printing Office, 1974. (JK421 A3)

Schlesinger, James R. Annual Defense Department Report, FY 1975. Washington: Government Printing Office, March 4, 1974.

Schlesinger, James R. Annual Defense Department Report FY 1976 and FY 1977. Washington: Government Printing Office, February 5, 1975.

Smith, R. Ellerton. The Army and Economic Mobilization. Washington: Government Printing Office, 1959. (D769 A555 V. 4 PT. 5)

US Congress, Senate, Committee on Foreign Relations. Background Information Relating to Southeast Asia and Vietnam. Report, 90th Congress, 2d Session, March 1968. (DS557 V5U4 1968C)

US Department of the Army, US Army War College. Defense Decision-Making and Management. Discussion Topic. Carlisle Barracks: 26 September 1974.

US Department of the Army. Manual: The Department of the Army. Washington: October 1973.

US Department of the Army. Field Manual 38-1: Logistics Management. Washington: 15 March 1973.

US Department of the Army. Pamphlet 700-1: Department of Defense Supply Management Reference Book. Washington: 31 August 1971.

US Joint Chiefs of Staff, Washington. Dictionary of Military & Associated Terms. Department of Defense, JCS Pub. 1 (Washington: Government Printing Office, 1974).

US Joint Chiefs of Staff, Washington. SM-182-74, Joint Operations Planning System, Volume I, 1974, with 5 March 1975 Addendum and Volume II, 1974 (Washington: Government Printing Office, 1974).

Weyand, Frederick C., Gen. FY 76 Posture Statement.

UNPUBLISHED WORKS

Elton, Robert M., LTC. Will Modification Make the Joint Strategic Objectives Plan A More Effective Document in the Planning-Programming-Budgeting System? Student Essay. Carlisle Barracks: US Army War College: 9 February 1971. (AWC 71059)

Riendeau, Arthur C., CDR, USN. Making the Joint Staff Work. Individual Research Report. Carlisle Barracks: US Army War College, 22 February 1972. (AWC 72179)

Schollin, Allan R., Colonel, USAFR. "Responsibilities and Relationships Among J-4 (OJCS), Military Services, and Unified Commanders in Logistics Planning." (Article prepared for the Air War College Associate Program.) Maxwell AFB, AL: Air University: March 1972.

OTHER SOURCES

Bennett, John. Keynote Address. Speech. Washington: J-4-OJCS Worldwide Logistics Conference, 22 April 1975.

Fiorelli, A. J. Our Mobilization Base: How Firm a Foundation? Speech. Washington: J-4-OJCS Worldwide Logistics Conference, 24 April 1975.

Geisler, Murray A. The Impact of Changing Defense on Logistics Requirements. Rand Corporation, December 1963. (RAND P-2845)

Henderson, John K. Strategic Mobility: A Bridge or a Gap in our Military Strategy. Student Essay, US Army War College, Carlisle Barracks, PA, 1970. (AWC 71082)

Miley, Henry A., Gen (Ret). American Defense Preparedness Association (ADPE). Speech. Washington: J-4-OJCS Worldwide Logistics Conference, 24 April 1975.

Paulson, Robert M., and Tierney, Thomas T. Logistics and Technology: Some Thoughts About Future Military Implications. Rand Corporation, March 1971. (RAND P-U597)

Zwick, Charles J. The Challenges and Opportunities of Defense Strategy and Logistics. Rand Corporation. October 1963. (RAND P-2804)

DISTRIBUTION

Normal USAWC distribution plus special distribution to addressees listed below:

Rear Admiral Henry E. Eccles, USN, Ret.
US Naval War College
Newport, Rhode Island 02840

Colonel Alden Cox
Chief, RAMP Study Group
Office of the Deputy Chief of Staff,
Research, Development, and Acquisition
The Pentagon
Washington, D. C. 20310

Colonel Linwood Mather
Chief, Logistics Plans Branch
Strategic Plans and Policy Division, J-4
The Joint Staff
Office of the Joint Chiefs of Staff
The Pentagon
Washington, D. C. 20301

Colonel John Pappageorge
Strategic Studies Institute
"FUTURES 90" Study Group
US Army War College
Carlisle Barracks, Pennsylvania 17013

United States Army Logistics Management Center
Defense Logistics Studies Information Exchange
ATTN: Mr. Leon T. Scarbrough
Department of the Army
Fort Lee, Virginia 23801