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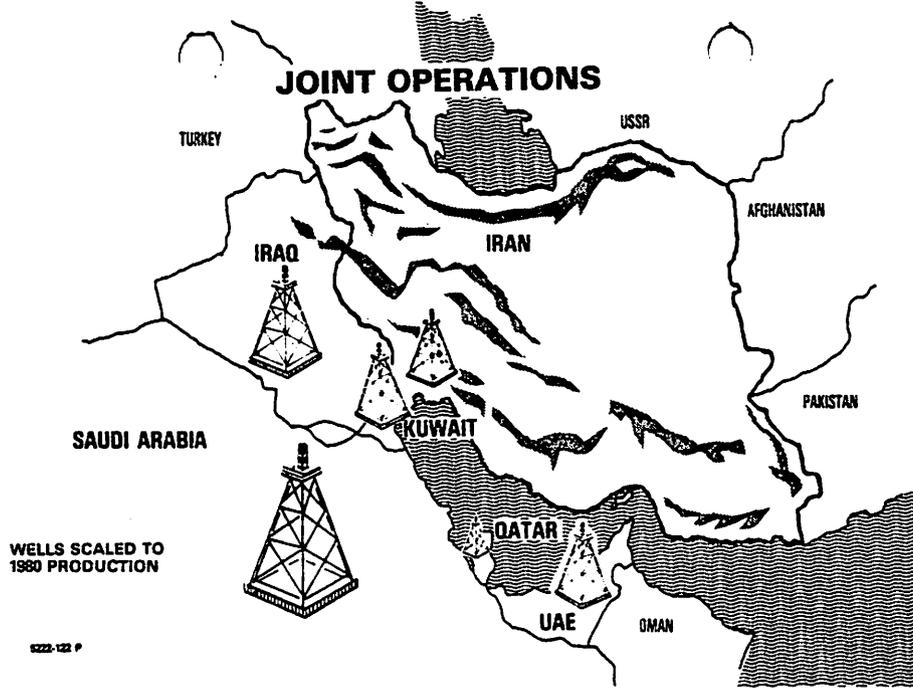
Speech given by LTG Gorman at WINCON 81
Conference, Los Angeles, 5 Feb 1981

FIGHTING AND WINNING THE BATTLE -- JOINT OPERATIONS

I am Lt General Paul Gorman, US Army, the Director for Plans and Policy, Organization of the Joint Chiefs of Staff, in Washington, D.C. I have been asked to chair this morning's session which, being the penultimate convocation of WINCON 81, is focused upon joint operations. Thus far in the conference you have been talking mostly to military officers who are representatives of the military Services. Only Major General Dick Larkin, the Deputy Director of DIA, and Admiral Milt Schultz, Deputy Director for Tactical Theater Command, Control and Communications Systems, OJCS, are in joint, that is multi-Service, billets. Now the simple fact of the matter is that were the United States again to be called to fight on a distant battlefield, we will in all likelihood fight not as the Army, nor as the Air Force, nor as the Marine Corps, nor even as the Navy, but as a joint force. My purpose here this morning is to discuss some of the conceptual and organizational implications of this fact, because our ability to win on such distant battlefields will hinge importantly upon the degree to which we are able to forge from the several Services an effective military instrument for joint operations.

With me here this morning for a triad of explorations of the challenges of planning and conducting such joint operations are two gentlemen in a unique position to comment thereon. The first is Vice Admiral Kent Carroll, who is the Director for Logistics on the Joint Staff. (Incidentally, my colleague Kent is known as the J-4, while I am known as the J-5.) The third discussant is Dr. Ernest Volgenau, President of Systems Research and Applications Corporation, a consulting firm based in Washington, D.C. Dr. Volgenau is a Naval Academy graduate, holds an Engineering Doctorate from UCLA, and served with the Nuclear Regulatory Commission as its Director of Inspection and Enforcement. Recently he has participated with the Joint Staff and the commanders of the joint commands in two major exercises which evaluated the cogency of joint plans and our ability to execute our plans operationally.

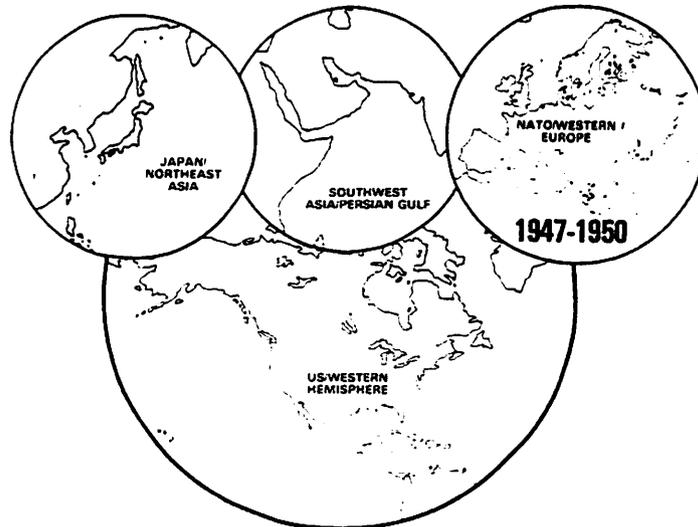
As your program suggests, our format will be three relatively short presentations, each followed by a period of questions and answers. I will lead off with a discussion of some of the general characteristics of the Joint System and the joint planning process. Then Admiral Carroll will address power projection, which is sine qua non for winning on distant battlefields, using prospective battle in Southwest Asia as a case in point. Finally, Dr. Volgenau, drawing on his aforementioned experience with exercises, will offer a critique of our present capabilities to mobilize and deploy forces.



Fighting on distant battlefields has been a general, resourced mission of the United States Armed Forces since at least 1898. But present circumstances present wholly unprecedented challenges for planner and operator alike: never before have the distances been so great, logistic constraints so formidable, operational uncertainty so perplexing. The part of the world depicted on this slide is newly prominent among the distant places where US national interests are deeply involved, where US military power is already deployed to protect those interests, and where battle on behalf of those interests could occur at any time.

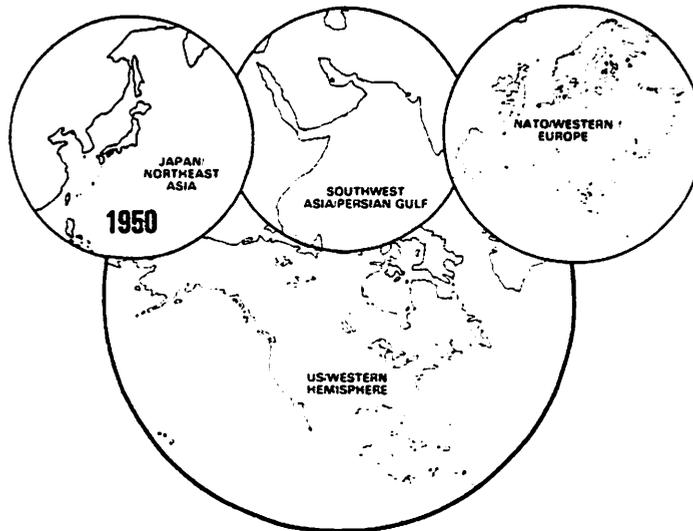
As a backdrop for all three of our presentations, I might usefully review the military strategy of the United States as it has developed over the past several decades. We emerged from World War II with a monopoly on nuclear weapons and delivery systems, and a national military strategy built essentially upon defense of the homeland via deterrence.

ZONES OF U.S. SECURITY INTEREST



By 1947, however, it had become apparent that we were going to have to extend our military power into Western Europe in order to provide for the security of those nations who had been our closest allies in World War II, and with whom we had close cultural and economic ties. In 1947, the United States moved to establish a defensive system for all of Europe west of the Iron Curtain and the North Atlantic. The political, fiscal and military difficulties in bringing the North Atlantic Treaty Organization into being were considerable. In 1948 and 1949, while NATO was in its formative stages, the United States was still dismantling its military forces. You'll remember that the defense budget for 1949 was a record postwar low. Nonetheless, the nation had a solid basis for proceeding; in effect we resurrected the coalition with which we had fought to victory in World War II, brought out of retirement Dwight David Eisenhower and his wartime shoulder patch, and augmented the occupation forces and military bases that we had been maintaining in Europe since 1944. General Eisenhower was able to turn over to President Eisenhower an effective military force afield in Europe; Western Europe has been ever since protected against Soviet expansionism.

ZONES OF U.S. SECURITY INTEREST

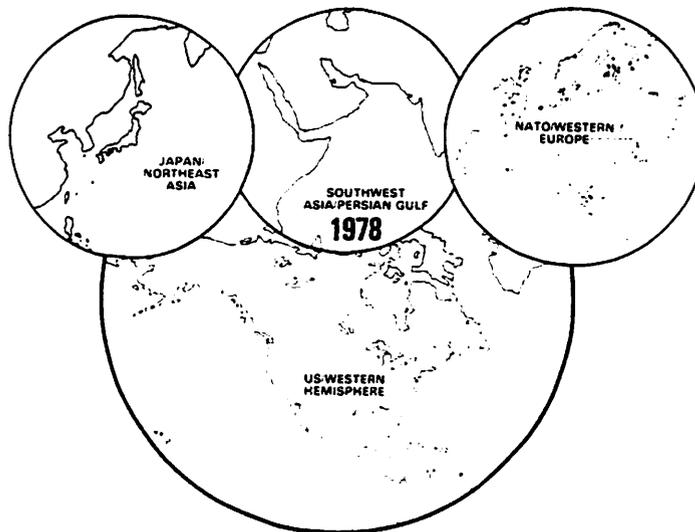


Our strategy in Northeast Asia followed a similar pattern. Although the Joint Chiefs of Staff, the Secretary of State, and our Commander in Chief in the Far East, General MacArthur, had concluded after World War II that US forces should not be committed to the defense of South Korea, when that Republic was invaded in June of 1950, President Truman sent American forces to the rescue. Although our forces were ill prepared for the task, once more a combination that had won repeatedly in World War II was evoked, and General MacArthur, with an amphibious landing at Inchon, smashed the invaders and drove them back across the 38th Parallel. Ever since, building upon the

bases and the command structure that we had maintained in Northeast Asia since World War II, US land, sea and air forces have maintained a military presence in the region which has underwritten the security of the Republic of Korea and Japan. Too few Americans appreciate the strategic stakes in this zone. Japan is now, after Canada, the United States' largest trading partner. Plainly its independence and economic well-being are indispensable for our own. Moreover, beside Japan and Korea, there is the People's Republic of China, whose human and materiel resources could also heavily influence our future, for good or for bad. And too few Americans appreciate that over the years the Soviet Union has systematically expanded and modernized its military forces in the Far East -- quadrupling the number of divisions deployed there over the past twenty years, and stationing a large, modern Air Force, and an impressive fleet, including some of the latest and most capable ships of the Soviet Navy. During the same period, the United States has reduced its military presence in the region, so that today there are fewer American forces in the Western Pacific that at any time since 1945.

Now it has become commonplace to speak of current American strategy as providing for a capability to fight one and one half wars, referring to a major war such as we might envisage in Europe, the first strategic zone or prospective theater of operations, and a so-called half war, such as we might envisage in Korea, the second.

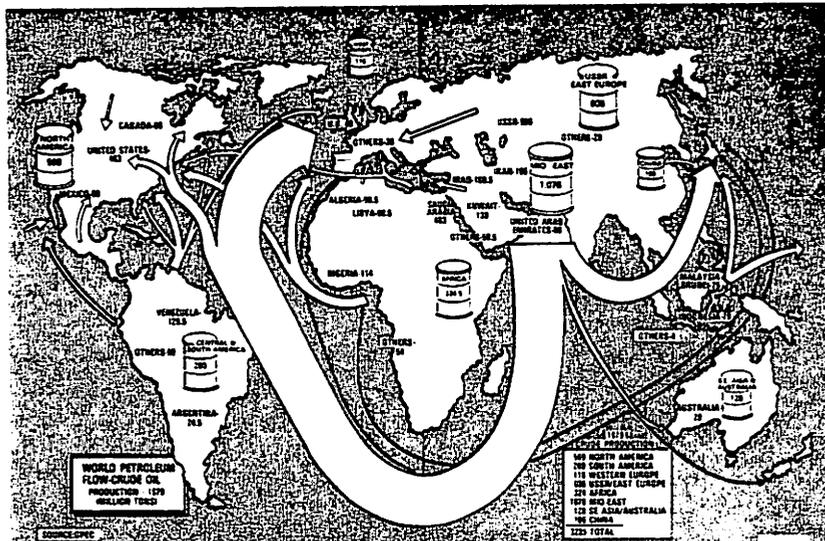
INTERCONNECTING STRATEGIC ZONES



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This shorthand for national strategy is no longer adequate or appropriate, for since the 1978 revolution in Iran, the United States has had a third prospective theater strategic zone in Southwest Asia. One year ago President

Carter declared that the United States will use any means including military force to foreclose a Soviet intervention in the Persian Gulf region.



MAP I-1

The reasons for this commitment are evident from this on this map, drawn proportionate to international oil flows. The Persian Gulf provides most of the oil consumed in Europe and in Northeast Asia. In short, the survival of the nations we are committed to defend in the first and second prospective theaters just discussed depend upon the oil from the third, Southwest Asia. To help defend in the first two, the US has to assure access for its allies to the oil producing nations along the littoral of the Persian Gulf.

PROBLEM DEFINITION

"PROBLEM IS _____ ERGO, EMPLOY _____"

- | | |
|------------------|-----------------|
| ECONOMIC | WEALTH |
| POLITICAL | DIPLOMACY |
| ANTICIPATION | INTELLIGENCE |
| INTRA-REGIONAL | FOREIGN AID |
| MARITIME | NAVAL SERVICES |
| POWER PROJECTION | AIRLIFT/SEALIFT |
| INTERDICTION | AIRPOWER |
| DEFILES | LAND FORCES |

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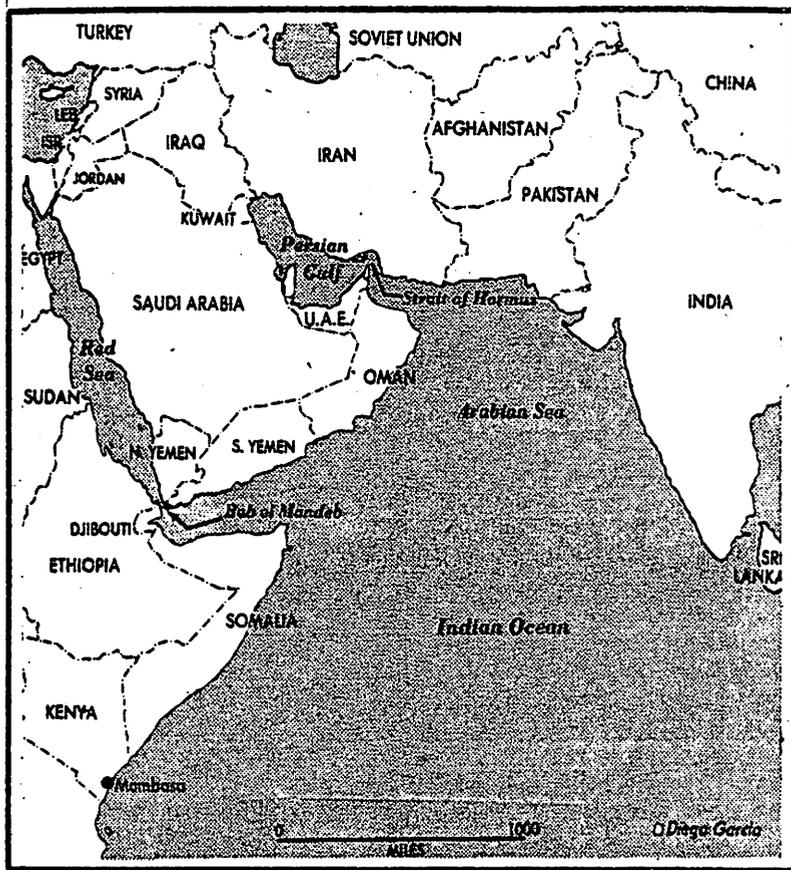
Let me hasten to say that it is by no means agreed that the use of US military forces can assure such access. You have heard or read many opinions to the contrary, and in the months ahead you will hear more of same. Some of the contentions are listed here. President Carter is reputed to have compared exercise of his office with taking a multiple choice test every day. From my perspective as a military planner, I assert that the proper response as to which of the listed responses is correct is "all of the above."

In particular, let me comment specifically on the thesis that we can solve our military problems in the area by turning the region over one of the military departments, such as the Navy Department, or to one of the Services, such as the Marine Corps, calling upon the chosen executive agent to provide for all of the military muscle that we might require. While such a solution has attraction of simplicity and perhaps unity of command, it could be adopted only by reversing three decades of thrust of US military policy, and altering US law and executive order. You will recall that the National Security Act of 1947 established the Air Force as a separate Service in the Department of the Air Force, and brought into being the Office of the Secretary of Defense. In 1949 the Department of Defense was created, the roles and missions of the Armed Services clarified, and the position of Chairman, Joint chiefs of Staff was established. But, by and large, the Services still planned and operated largely independent of one another.

“Strategic and tactical planning must be completely unified, combat forces organized into unified commands, each equipped with the most efficient weapon systems that science can develop, singly led and prepared to fight as one, regardless of Service....”

President D. D. Eisenhower, 1958

In 1958, the Congress legislated a further significant reorganization of defense, which established the chain of command for military forces of the United States as linking the President, as Commander in Chief, through the Secretary of Defense, direct to the Commanders in Chief of the Joint Commands such as EUCOM and PACOM, and thence to their assigned forces. Thus, it is important for you to understand that the Chairman, JCS, and the Joint Chiefs in their corporate identity, and we of the Organization of the Joint Chiefs of Staff, are not links in the chain of military command from the President of the Armed Forces -- we are, to be sure, agents of the President and the Secretary in preparing plans for them, and in transmitting their orders to the forces. Note that in implementing the 1958 reorganization, President Eisenhower underscored the fact that thereafter all military plans and operations would be joint undertakings, as opposed to that of a single Service or department.



Now what does this mean vis-a-vis Southwest Asia. Well in the first place, as-a-number of newspaper columnists have noted, Southwest Asia lies on the boundary between two joint commands, the United States European Command, headquartered in Stuttgart, Germany, and the United States Pacific Command, headquartered in Honolulu, Hawaii.

General Roger's European Command includes peacetime US military missions in countries like Saudi Arabia and Egypt, and his purview extends over naval forces operating in the Mediterranean Sea, the Red Sea, and the Arabian or Persian Gulf. When, within the past several months, the United States deployed AWACS aircraft to Saudi Arabia to provide for enhanced air defense, those aircraft were deployed under the command of General Rogers. Out in the Arabian Sea, however, is TASK FORCE 70 of Admiral Long's Pacific Command, a formidable array of one or more carrier battle groups. We in OJCS were thus presented immediately with a problem of providing for effective communication between the AWACS operating over the Arabian peninsula and the fleet at sea, so that there would be a coherent air defense environment across that putative boundary between those commands with distantly located headquarters. Moreover, we had to insure that what the AWACS could see could be transmitted to naval vessels operating in the Persian Gulf. These arrangements were made and are operative, transcending Service distinction and the differences between the two Unified Commands.

But tying a US Air Force E3A AWACS into naval forces is a trivial problem compared with that of concerting an overall strategy for defending US national interests, and developing appropriate plans and military capabilities. What are those interests?

US NATIONAL INTERESTS

- POLITICAL INDEPENDENCE
- PEACEFUL INTRA- AND INTER-REGIONAL RELATIONS AMONG COUNTRIES
- OVERARCHING SECURITY INTEREST: OIL

Noting our commitment to peace and independence for all nations in the region, especially Israel, and in maintaining international stability in general, we have a fundamental interest, as I have said, in access to oil.

THREATS

- 
- INTERNAL INSTABILITY
 - INTRA-REGIONAL CONFLICT
 - SOVIET-SUPPORTED SUBVERSION OR SURROGATE INVASION
 - SOVIET ARMED INTERVENTION

The threats to those interests, listed here in order of immediacy or probability, are these. Our ability to deal militarily with threats to the internal stability, or war among regional powers, is of course, substantially less than our ability to deter or to counter overt Soviet aggression into the region. Moreover, to the degree that we are able to deter such aggression, to that degree we create an environment within which the internal and intra-regional problems might be dealt with more effectively by the states within the region themselves.

SWA ISSUES

- MISSION: DO WHAT? WHERE?
- ADEQUACY: CAN FORCES HACK IT?

FORCES: • DEPLOYABILITY: CAN THEY GET THERE? ON TIME?

- SUPPORTABILITY: CAN WE SUSTAIN THEM?
- AFFORDABILITY: CAN WE MEET OTHER COMMITMENTS?

In planning forces for the purpose of deterring Soviet adventurism in the Persian Gulf region, we military planners have to answer these questions. I am certain you can see immediately that the answers must penetrate beyond technology or choice of weapon systems to address tough issues of force structure, of employment concepts, and of how to deploy and sustain the force.

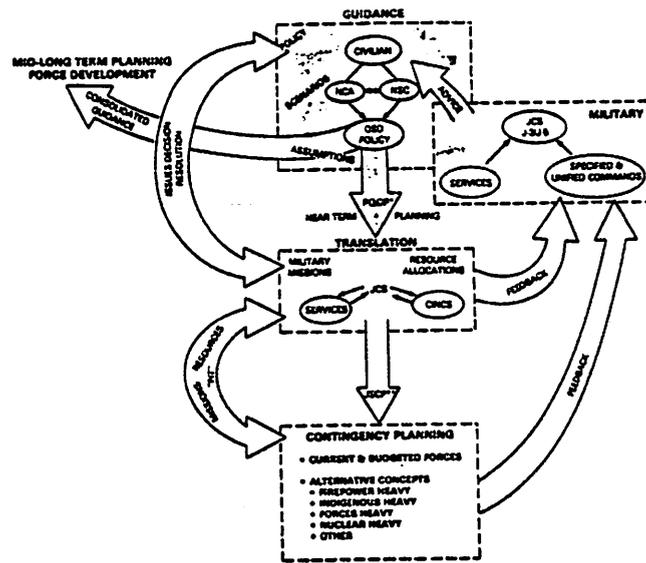


Figure 1. A Model for Defense Planning

* POLICY GUIDANCE FOR CONTINGENCY PLANNING (PGCP)
 ** JOINT STRATEGIC CAPABILITIES PLAN (JSCP)

The Joint Planning process is at least as complicated as this slide suggests. As it has functioned under the last administration the process began with broad direction from the Secretary of Defense through the mechanism of his Consolidated Guidance for Planning (CGP) which gave us our general strategic and budgetary ground rules, and through his Policy Guidance for Contingency Planning, identified here as PGCP, which dealt more directly with the sort of plans he desired for geographic areas such as Southwest Asia.

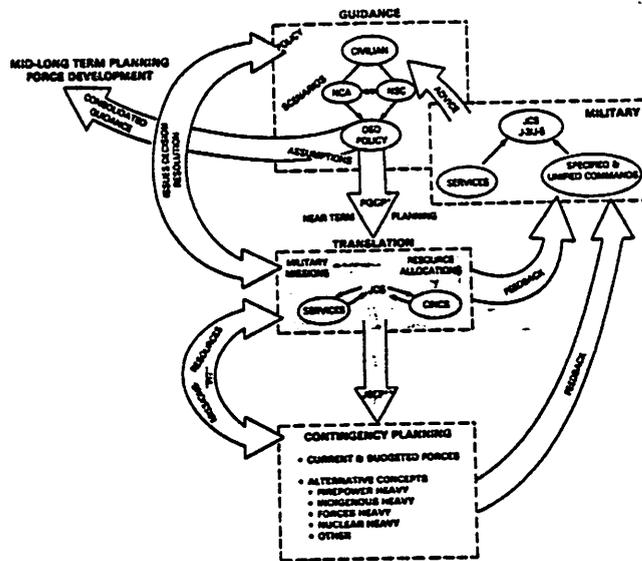


Figure 1. A Model for Defense Planning

* POLICY GUIDANCE FOR CONTINGENCY PLANNING (PCCP)
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The Joint Chiefs then translated the Secretary's guidance into instructions for the joint Commanders in Chief--we call them the CINCs--assigning missions, telling them to prepare appropriate plans, and indicating what forces would be available to them.

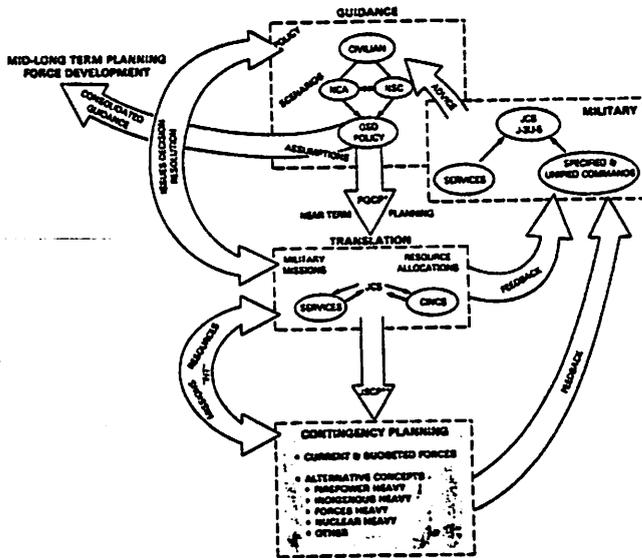
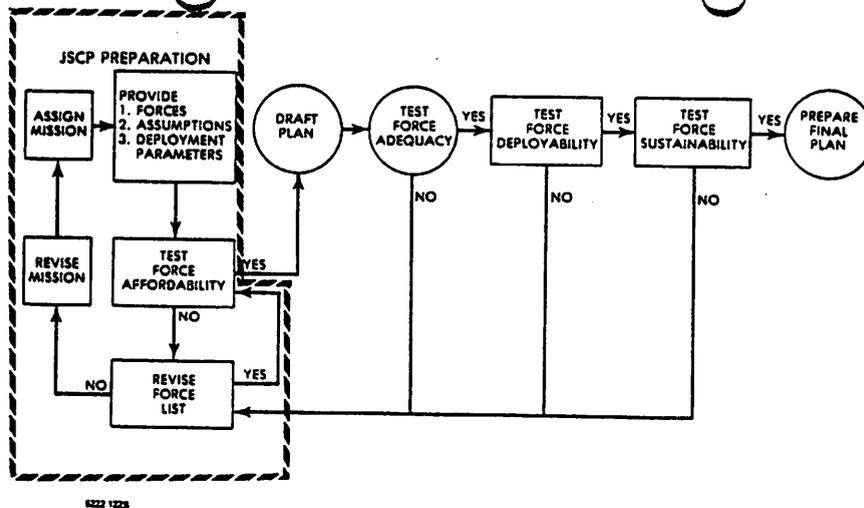


Figure 1. A Model for Defense Planning

* POLICY GUIDANCE FOR CONTINGENCY PLANNING (PCCP)
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The plans were then prepared. Note the feedback loops that were provided for in this process, which permitted the CINC or commander doing the planning to articulate difficulties, to ask questions, or to seek relief from insuperable problems. Note also that the planners had to consider alternative concepts, those different approaches to accomplishing the mission which affect how the force is structured, and how it operates. Some comparable system will be in effect with President Reagan's Administration.

STRATEGIC PLANNING FLOW



Here is a somewhat more simplified version of the transactions between the Joint Chiefs and the Joint Staff working on the Joint Strategic Capabilities Plan (JSCP) here on the left, and the CINC or Commander doing the planning on the right, outside the box. This diagram accurately depicts, for example, what is transpiring today between us of the Organization of the Joint Chiefs of Staff in Washington and Lt Gen P. X. Kelly's staff in Tampa, Florida. General Kelley plans for Southwest Asia in accordance with the guidance provided by the Joint Chiefs of Staff. But in the process of planning, General Kelley and his staff are uncovering issues and alternatives which they have brought back to OJCS for redefinition or further guidance. Out of this iterative process will emerge plans which will permit General Kelley quickly and efficiently to undertake any one of several military operations against threats to US interests in Southwest Asia.

The complex process is the way it is because the United States has a military system--the joint system--which provides for firm control and direction by civilian authorities. And the joint system must accommodate Armed Forces divided into Services whose separate identities and prerogatives are well grounded in legislation and in executive order, sanctioned by tradition, and nurtured by distinctive systems of Service training and personnel management.

Of course, critics of the joint system include those who would abolish all Service distinctions, put us all in the same uniform, as the Canadians have melded their Armed Services. But let me suggest to you that the significant differences among the Services are functional, and cannot be eliminated, least of all by such cosmetics as a common uniform. The roles and mission would remain unchanged. One might idealistically and unrealistically wish otherwise, as a factory owner might wish that he could hire machinists with micrometers instead of left hands. But as humans come

issued with hands, so, too each Service comes with its own set of concepts, customs, traditions and managerial style. Whether the Joint Commander or joint planner agrees with these or not, or whether indeed anyone, civilian or military, who is involved with their undertaking agrees, each must accommodate the important-differences among the Armed Services.



	<u>MOVEABLE ENTITIES</u>	<u>CONTROLLED BY</u>	<u>COMMUNICATION TO</u>	<u>FLEXIBILITY</u>	<u>DOCTRINE</u>
USN	¹ 10 - ² 10	OFFICERS	¹ 10 - ² 10	MACRO	CENTRALIZE

Let me see if I can illuminate some of these differences by looking at four commanders of deployed forces today, all in comparable circumstances. The first is a two or three-star Navy Admiral commanding a fleet at sea.

My deputy in J-5 is an Admiral, and on the wall of his office there is a plaque consisting of an engraved copy of a letter which he received at the end of his last assignment. The letter begins as follows: "Command at sea is a personal responsibility without parallel in the modern world. There is no other position calling for the great maturity, sound judgement and eternal vigilance that has been required of you daily ... in no endeavor other than command of ships do the character and example of a leader play such a role that shapes the individual lives, the welfare, and mission accomplishment of the team. The authority of the commander at sea is as nearly absolute as possible...." Now without reservation, I subscribe to those sentiments, although I have to confess that I have held no rank in the United States Navy higher than Seaman First Class, and no command greater than sole charge of 35 commodes on the fifth deck of the Fargo Building in South Boston. The Navy Admiral described on this slide is indeed master of all he surveys. He has firmly under his direct command up to a hundred or so maneuverable entities, ships, flights of aircraft, submarines. He knows with great precision both where he is and where they are. He knows with what velocity they are moving, and in what direction. His flag plot can provide him at any time with a full and accurate, real-time visualization of his force. His communications system permits him to talk directly to them, individually or collectively, any time he chooses to do so. And when he does so, he can talk directly

to the officer commanding each. Any one of those officers, within his own sphere, enjoys an autocracy comparable to his admiral. At any rate, when a ship's skipper orders a left turn, he need only persuade the quartermaster to act, and everyone aboard turns left. Flexibility is inherent. The admiral might be somewhat in the dark about the enemy, but he surely knows in real time, what his own forces are doing, and he has the ability at any time to redirect the efforts of any or all of his maneuverable entities to meet the unexpected or to strike when opportunity presents itself. This Navy commander, then, has what I call here macro-flexibility--instant responsiveness--at all echelons.



	<u>MOVEABLE ENTITIES</u>	<u>CONTROLLED BY</u>	<u>COMMUNICATION TO</u>	<u>FLEXIBILITY</u>	<u>DOCTRINE</u>
USN	$10^1 \cdot 10^2$	OFFICERS	$10^1 \cdot 10^2$	MACRO	CENTRALIZE
USAF	$10^2 \cdot 10^3$	OFFICERS	$10^2 \cdot 10^3$	MACRO	CENTRALIZE

Let's now compare the Admiral with an officer in the Air Force of the same rank. He would probably command more maneuverable units, referring here to flights or single sorties of aircraft, of an order of magnitude more. And while these elements would on the average move much faster than the moveable entities under command of the Admiral, the Air Force General would have nearly as good information as to where his elements were and what they were doing. Moreover, his communications would also permit him to bring about, instantly, and directly, for any or all, a change of mission, a diversion, or abort. And once more, he could, if he chose, conduct such transactions directly with the officer commanding the entity in question. So again, I have characterized the responsiveness of his command as macro-flexibility, meaning that the commander can approach any prospective operation with high confidence that he can quickly and surely adapt his force to meet any unexpected contingency, or unanticipated thrust by the enemy. For both commanders shown, centralization is the preferred modus operandi, and both Naval and Air Force doctrine--the fundamental concensus from which they operate--assumes a high degree of centralization.

The implications for planning are simply that neither of the two commanders portrayed will be overly interested in planning in great detail all aspects of the campaign well in advance of the event, preferring to use the inherent flexibility of their forces to cope with circumstances obtaining, once they have deployed their forces, proximate to the place of force mission. From the planning point of view a Naval carrier battle group is not unlike a tactical air squadron: positioning it within reach of its mission, and supporting it while there, is much more important than attempting to anticipate in elaborate detail how it will be employed once there. In short, planning priorities should go to force projection and sustainment.



	<u>MOVEABLE ENTITIES</u>	<u>CONTROLLED BY</u>	<u>COMMUNICATION TO</u>	<u>FLEXIBILITY</u>	<u>DOCTRINE</u>
USN	$10^1 \cdot 10^2$	OFFICERS	$10^1 \cdot 10^2$	MACRO	CENTRALIZE
USAF	$10^2 \cdot 10^3$	OFFICERS	$10^2 \cdot 10^3$	MACRO	CENTRALIZE
USMC	$10^3 \cdot 10^4$	ALL RANKS	$\sim 10^2$	MICRO	DECENTRALIZE

The Naval commander and the Air Force commander may be contrasted rather sharply with a Marine Commander participating in an amphibious operation, and, conducting an ensuing campaign ashore. In the first place, the Marine will have more moveable entities, albeit these would be moving much more slowly on the average than those maneuver elements under the Air Force General or the Navy Admiral. In the instance of the Marine General, we're talking about fire teams and rifle squads, tank sections, artillery batteries and survey crews, air support radar teams, command posts--all the numerous elements of a Marine amphibious force deployed. Another significant difference between the Marine Commander and the other two is that the Marine maneuver elements will--many if not most of them--be under the command of noncommissioned officers. And while such a Marine amphibious force is well endowed with modern communication elements, being an integrated air-land operation team, an ability of the Marine General to communicate with subordinate commanders is distinctly more circumscribed than that of the Air Force Commander or the Navy commander. Similarly

circumscribed is his ability to influence operations once they are under way. He has by no means the flexibility to shift assets, or to readjust missions, comparable to that open to his Air Force or Navy counterpart. Hence, his flexibility is characterized here a "micro." This relative lack of flexibility is directly related to Marine Corps doctrine, or management style, which emphasizes decentralization--that is, the force commander assigns missions to subordinates, and allows them broad latitude in execution, without expecting to intervene unless circumstances be exceptional.



	<u>MOVEABLE ENTITIES</u>	<u>CONTROLLED BY</u>	<u>COMMUNICATION TO</u>	<u>FLEXIBILITY</u>	<u>DOCTRINE</u>
USN	$10^1 - 10^2$	OFFICERS	$10^1 - 10^2$	MACRO	CENTRALIZE
USAF	$10^2 - 10^3$	OFFICERS	$10^2 - 10^3$	MACRO	CENTRALIZE
USMC	$10^3 - 10^4$	ALL RANKS	$\sim 10^2$	MICRO	DECENTRALIZE
USA	$10^4 - 10^5$	ALL RANKS	$\sim 10^1$	MICRO	DECENTRALIZE

To complete our comparison we have to list an Army corps commander conducting a land campaign, such as XVIII Airborne The Army commander will probably also be involved with combat service support, or in the of logistic business, far more than his Marine counterpart, operating ports and depots and lines of communications over much longer distances than the Marines, and conceivably providing logistics support for both the Air Force and the Marines operating in the same theater. Hence, the number of movable entities, or maneuver elements is higher in an Army Corps, encompassing not only all of the movable entities I cited for the Marines, but those additional supply detachments, truck convoys, stevedore teams, communications elements and the like which would have to be deployed as infrastructure for a theater or operations. Once again, as with the Marines, many, if not most, of these moveable entities are under the leadership of noncommissioned officers. And the Army Corps commander's ability to communicate directly with any of them will be less than that of his counterparts of other Services.

You see, the Marine and Army commanders face the problem of conducting military operations amid all of he natural and manmade clutter of the earth's surface--an

environment significantly more complicated and more regionally particularized than the more homogenous and predictable environments within which the air or naval campaigns will be fought. One part of aerospace, or the ocean sea is much like every other part. Even if the Army Commander chose to do so, he would be unable to track, position or talk directly to many of his subordinates. Many of the latter, perhaps the majority, will have only indefinite ideas of where they are located, and will be able to report on their activities only infrequently and imperfectly. Even with all the wonders of modern surveillance and communications devices, that Corps Commander's understanding of how his forces are doing may lag events by hours. His ability, therefore, to intervene effectively, is limited. Accordingly, even more so than his Marine colleague, who after all has organic, high performance air elements and their powerful command control at his direct disposal that Army commander must decentralize. And along with imperatives toward decentralization, in both the case of the Marine Commander and the Army Corps Commander, come attitudes toward planning which lead to seeking to anticipate, in as much detail as possible, how the forces will be employed, and when and where, so that appropriate provisions can be made to support them, logistically and otherwise. In short, planning should start with employment, from which, via "backward planning" logistic and deployment planning then are devised.

Therefore, in developing strategic plans for fighting on distant battlefields, we in the Joint Staff must cope with the very different approaches to and emphases within planning which we are likely to find in each of the Services. The Navy's Standard Operating Procedures, and the nature of their peacetime operations, are such that they need little more from strategic plans than an indication that the JCS desires them to have a certain capability in a given area at a given time. Air Forces will need more guidance, since they face far more significant problems of projecting their forces into a theater and sustaining them once they are there. But, if assured of operating bases in the theater, and assured of logistic support, an Air Force planner needs only an indication of tactical capabilities desired when and where.

Planning requirements for a Marine commander are considerably more complicated. It makes a great deal of difference, for example, whether he is going to have to make an amphibious assault, or whether he can plan on bringing in his forces more or less administratively by air or through a seaport. And in order to anticipate training and supporting his forces ashore, he has to know where he will be fighting, over what kind of terrain, against what kind of enemy, and in what kind of weather, for the variables in any of these will profoundly affect what he provides for in his plan.

Perhaps the most difficult planning task of all faces the Army commander, for he has to provide logistically for the theater overall, as well as to confront the difficulties of the sort just mentioned for the Marine Commanders.

I know of no authoritative attempt to quantify the complexities of planning by Service, but I would suggest that that complexity may be a function of the number of movable entities that I have displayed on this chart. As a corollary, I would suggest that Service-unique approaches and styles in both planning and doctrine are a function of communications capabilities, especially stemming from constraints on the real-time flow of information within forces operating on land.

I conclude by telling you devoutly, once more, that as a planner I wish these differences among the Services were less pronounced, and therefore more manageable. But that day when a land force commander can manage his forces with the flexibility and sureness of a naval commander or an air commander remains in the future. And so, joint planners and joint commanders will have to do what they can to provide, through anticipation, for fighting and winning land battle distant from our shores, and sea and air battles as well.

At this juncture, I think it would be useful for me to stop talking and accept questions on the propositions thus far advanced.