



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON 25, D. C.

IN REPLY REFER TO

4 March 1959

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MEMORANDUM FOR ALL FLAG OFFICERS

Subj: Views on Adequacy of U. S. Deterrent/Retaliatory Forces as
Related to General and Limited War Capabilities.

1. The enclosed views on the adequacy of the United States deterrent/retaliatory forces as related to general and limited war capabilities are furnished for your information.
2. This document should be held closely. It is for your information only.

Best regards,

A handwritten signature in cursive script that reads "Arleigh".

ARLEIGH BURKE

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VIEWS ON ADEQUACY OF U. S. DETERRENT/RETALIATORY FORCES
AS RELATED TO GENERAL AND LIMITED WAR CAPABILITIES

Military Posture Must be Responsive to Changing World Conditions

The nation's military posture is based upon requirements which are generated in support of the National Strategy. Strategy is a dynamic art - it has to be responsive to the continuously changing world conditions.

Similarly, military posture must be responsive to changing circumstances. It must undergo constant reevaluation and constant readjustment to new developments on the international political scene as well as to new advancements in the science of war and the technology of weapons.

Developments Requiring Re-examination of Retaliatory Power

There are currently several significant developments which require that a very careful appraisal be made of the future composition of U. S. deterrent/retaliatory forces, and the target system such forces should be designed to hit. These are:

- a. The potential Soviet missile capability versus the vulnerability to surprise attack of U. S. manned bombers and ballistic missiles operated from land bases.
- b. The probability that the precise location of enemy missile launching sites will not be known.
- c. The tremendous costs of strategic weapon systems, and their potential impact upon other vital military requirements and upon a sound national economy.

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d. The decreasing probability of general war in view of the state of mutual intimidation now existing, and the increasing tempo of limited and cold war.

Determination of Proper Amount of Retaliatory Power

The determination of the proper amount of retaliatory power which the United States should have, and where to strike the balance between those forces capable only of mass destruction and those forces useable for limited actions also, is one of the most difficult problems which has ever confronted the President, the Joint Chiefs of Staff and the Services. There is no precise answer.

Stated in very general terms we can say that the United States must have enough retaliatory power to:

- a. Convince the enemy that he cannot gain his objective by starting a general nuclear war against the United States and its Allies, and
- b. Destroy the enemy should he start such a war.

These general terms are susceptible to wide differences of interpretation in determining the capabilities the United States should have.

It is of paramount importance that we have enough power. Since the whole world can have accurate estimates of our military capability, we cannot bluff. We must have ample actual capability to destroy the enemy.

Insofar as the present is concerned, we now have ample retaliatory power to destroy the U. S. S. R. and Communist China in a general nuclear war. Whether we have too much is not the most important point, since this power is already in being and it would be used if there is a general nuclear war.

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It is important to have a thorough understanding of the basic factors which must be considered in order to arrive at sound conclusions as to the amount and kind of retaliatory power required in the future for general nuclear war.

Factors to be Considered in Selection of Optimum Retaliatory Capability

Some of the more important factors to be considered in determining the optimum retaliatory capability are:

1. The types and numbers of enemy installations which should be destroyed to prevent the enemy from conducting the war. How many military targets, how many centers of government control, how many industrial targets does this involve? Should the targets be all military, all industrial, all government centers, or a mix?
2. Our knowledge of the location of enemy installations. Do we know the location of these military installations? Will we know the location of his missile launching sites? Will they be mobile? How difficult is it to conceal a missile launching site? Will we be able to discern between false targets and real targets? Do we know the location of enemy centers of government control and of his industrial installations? On which of the above are we better informed - military installations, or government control and industrial centers?
3. The enemy's capability to strike us. This is a question not only of the enemy's capability in numbers but also of the variety of types of weapon

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systems he might possess. It includes our estimate of his capability in manned bombers, in IRBMs, in ICBMs, in missile submarines and ships.

4. The ability of our retaliatory forces to survive a surprise attack. Is the location of our retaliatory forces known to the enemy? Are all our retaliatory forces located on fixed bases? Can these bases be concealed or hardened? What is the cost of concealing or hardening? Are these forces dependent upon early warning? What is the degree of assurance that effective early warning can be achieved - now and in the future? Can early warning installations themselves be hardened? Can they be spoofed with decoys? What is the effect of adding a concealable weapon such as the POLARIS submarine to our forces?

5. The reaction time of our retaliatory forces after receipt of warning of a surprise attack. What is it for manned bombers - from land bases, from carriers? What is it with liquid fuel missiles, with solid propellant missiles? What is the cost in men and materials to maintain a system on a continuous alert?

6. The capability of our forces to penetrate enemy defenses. What is the extent of these defenses? What is the effectiveness of air defense missiles against high altitude bombers? Against ballistic missiles? What is the effectiveness of low altitude attack against enemy defenses?

7. Numbers and types of weapon systems for retaliation. Is it to our advantage to have several types of weapons systems? What countermeasures problems are created for an enemy faced with several types of attacking

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weapons systems? What are the chances of a technological break-through negating the effectiveness of a single system? What is the destructive power of the weapon? Is this power more than necessary?

8. The numbers and types of retaliatory weapon systems which our major Allies will have. How much does this complicate the enemy's problem of coordinating a surprise attack? How does it affect the numbers and types of weapon systems required by the United States.

9. The amount of effort which should be expended on active defenses. Is it useful to continue to develop and produce systems to improve defenses against manned bombers in order to protect our land-based retaliatory power? Will the Soviets build up their manned bomber force? How much effort should be expended in attempting to achieve an anti ICBM? Is this in the realm of reality? There is no such a thing as a perfect defense, but is there even an effective defense system possible against ICBM's? Is there a danger of falling into the Maginot line concept?

10. The selection of weapons systems for production. Will the system be obsolete before it is available in quantity? How long will its effective life (shelf-life) be? Does the system have growth potential? Does it replace a system already in production? Should production of an earlier system be cancelled? Should production be started before R&D solutions are available? Should real estate be acquired and construction of bases start before weapons have been evaluated and proven?

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11. The cost of new weapon systems. Are the cost estimates realistic? Do they include the cost of production tools and facilities? Will new test facilities and instrumentation be required? What is the additional cost of the nuclear warhead? What will be the ultimate total cost? What is the cost of constructing the sites or bases? How much real estate is required? What is the cost of hardening? What will be the annual maintenance and operation cost? What other support is required? Can some other system do the job at less cost?

12. The rising cost of national defense. Can the new system be absorbed within present defense budget levels? Will it decrease the funds available for limited war capabilities? Can the defense budget be expended in the future without impairing the national economy?

Targetting Considerations

Although all of the foregoing factors are important, one of the most important is the determination of the enemy target system to be destroyed, since this largely governs the extent and cost of U.S. capabilities required. Should we plan to attack all military facilities, or should we attack enemy government control and industrial facilities, or should the target system be a mix of these two?

In attempting to answer these questions it must be borne in mind that it is the policy of the United States not to initiate a preventive war. Under these circumstances wherein the enemy will have launched his strike first

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It would appear to be of little value to concentrate U.S. resources on building up a tremendous capability to strike enemy military targets from which the aircraft and missiles have been launched.

To be effective at all, a United States strategy based on destroying the enemy's retaliatory capability would require preventive war - in essence, a surprise attack. Also, it would require perfect intelligence on the location of all significant enemy targets. The decision to launch a world holocaust would be the most drastic and desperate decision made since civilization began - and it might very well end civilization.

Theoretically, there is no ultimate limit to the number of enemy military targets, either false or real. Thus this doctrine would force us into a spiraling arms race of matching new targets (possibly including false targets) with additional weapons. This concept becomes invalid when it is recognized that intelligence on large numbers of Soviet military targets will be completely lacking.

We believe that it is not necessary to have the capability to inflict multimegaton destruction on hundreds of major Soviet military targets and on countless other military targets in order to provide adequate deterrence. The concept of destroying the enemy capability to attack in a large scale nuclear exchange has progressively lost effectiveness, and becomes unrealistic when the enemy possesses numbers of dispersed missiles in mobile or fixed locations unknown to us.

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The Finite Deterrent System

Our objectives can be assured by the selection of a target system which will include the most vulnerable and essential elements in Soviet life; that is, the control structure of their government and the Communist Party, and the industrial complex which is the foundation of their national power.

The USSR government and party controls, their industry and their war making capacity are finite and so are the number of nuclear weapons and the numbers of delivery vehicles necessary to destroy them. Moreover, it does not require many megatons to do this.

Until both sides have concealed or mobile ballistic missiles in quantity, we must add to the target list those manned bomber air bases from which re-strikes can be launched against the North American Continent.

Initiation of an attack on our NATO allies will not give them any military advantage - since they know that such an attack will bring the same retaliation on them - just as inevitably - just as quickly - and on the same Soviet targets - as would an attack on the United States. By having the capability to destroy the basic elements vital to Soviet life we do not have to maintain the tremendous retaliatory power which would be required to destroy all significant military targets.

The objective is not the people - it is the control structure and industrial complex operated by them. These elements can be destroyed by a successful attack on a finite and relatively small number of targets.

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The destruction of any particular number of enemy control structures and complexes is equally unpalatable because it means killing a lot of people. However, hitting large numbers of military targets would result in killing a much larger number of people due to the wide-spread fallout caused by ground bursts of large weapons. The targetting of enemy government control and industrial facilities does not require specific damage to any one physical element of the complex target in order to render the complex ineffectual as an entity. Moreover, a ground burst is not necessary for this purpose - on the contrary, a more optimum damage radius is realized through air bursting - and to achieve the same radius, this requires far less yield than a ground burst. Such a system offers a realistic basis from which we can establish a reasonable military requirement for our deterrent/retaliatory force.

Need For Multiple Strike Systems

As the means to accomplish the above, the U. S. must develop and maintain sufficient nuclear strike forces which the enemy will recognize are capable of causing unacceptable damage to the industrial and governmental base of the USSR and of Communist China, regardless of any effort he may undertake.

As has been previously stated, we have ample retaliatory power now to destroy the enemy, no matter what he does. This power is in our Strategic Air Command's bombers and missiles, our European IRBMs, in our carrier air, in our missile submarines, in tactical air, and in the Army's missiles.

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It is placed in several systems to insure that an enemy breakthrough in defense against one system does not checkmate our total retaliatory capability.

Need For Invulnerability

The problem is in the future - as the Soviets phase in their ICBM's our land-based forces become extremely vulnerable, and there is nothing we can do to prevent major destruction of an unpredictable but, appreciable amount of our land-based forces. The problem is to build sufficient invulnerable forces - forces whose survival is insured no matter what the enemy does.

Maintaining the invulnerability of United States nuclear strike forces in the years ahead will be crucial. Attempting to achieve this by advancing the capabilities of manned bombers is of questionable value. Such forces would have to be maintained airborne in order to insure survival. It would require large forces of tankers, dispersed bases, airborne stand-off weapons - in other words, an entirely new, complete manned bomber weapon system, a system of questionable effectiveness against future enemy defenses. The cost of such a program would be prohibitive. Nevertheless, research only on fast, high speed bombers should be continued until the retaliatory of ballistic missiles is proven.

Another aspect in this future problem is that the enemy will know the location of our land-based missile sites. Our security system is simply not good enough to prevent disclosure of this information.

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Invulnerability will exist only when the enemy does not know the location of our deterrent forces. This can only be achieved by true concealment and mobility. Both of these factors are essential. The seas provide a natural environment for achieving both - no artificial means are required. The seas also offer the means of drawing enemy fire away from our continent - away from our population.

Invulnerability is a must in the future in order to insure inevitable retaliation. But, it is also important for other reasons. It permits incremental application of force if the situation indicates that it is the course of wisdom, and it certainly minimizes the risk of hasty or ill considered and irrevocable, disastrous decisions in time of international tension.

Sufficient Time For Decision More Important in the Future

In the coming years the ability to consider and weigh such decisions will increase in importance. When both sides have quantities of ballistic missiles, there may be periods of tension in which there are some indications that missiles might be launched by the enemy but these indications are not positive. Our political leaders will then be in a quandary as to whether or not to launch missiles before they are sure the enemy has launched its attack. If they wait, our ballistic missiles in known locations may be destroyed. If they launch on false information, we will have started a devastating war. This is one of the fears of our Allies.

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Summary

As long as the U.S. has the capability of inflicting unacceptable damage to the enemy regardless of any efforts undertaken by him against the U.S. or its Allies, and the enemy knows we have and will use this capability, the deterrent is effective and the chances of a general war become less and less likely. And yet general nuclear war does remain a possibility. Therefore, the United States must be capable of inflicting heavy unacceptable damage to the USSR should the Soviets ever undertake the desperate suicidal act of starting a general war. The United States has this capability now and there is nothing the USSR can do to avoid destruction of her government controls, her industry, her war making capacity or her people should she start a general nuclear war.

A finite deterrent policy will be equally applicable to enemy attack on our NATO allies. The Soviets know such an attack will bring just as quickly, just as inevitably, the same devastating attack on their control system, as would an attack on the United States. It will not be necessary to maintain the tremendous retaliatory power required to destroy all their military targets.

Since we have enough retaliatory power to do the job now we should also insure an adequate limited war capability. Although there has been no general war, there have been a total of 18 limited wars since World War II.

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Therefore, deterrence of limited wars does not automatically follow a successful deterrence of general war. Situations requiring quick action and strong, capable forces will probably occur again in the future. Crises such as Lebanon and Taiwan, occurring simultaneously and on opposite sides of the world, severely tax our limited war capabilities.

We must have adequate and ready forces, in the right place at the right time and in sufficient strength to cope with what ever actions are required. It is not always necessary that our forces engage in a shooting conflict; in fact one of the primary functions of our limited war forces is to apply strength so that war is prevented, but at the same time, be ready for war if an aggressor attacks. As stated above, we have adequate forces to deter a general nuclear war. However, we must also continue to provide for adequate forces capable of deterring aggressive action throughout the entire spectrum of war situations from cold war to wars just short of all out nuclear exchange.

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