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MARITIME STRATEGY

by

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Staff

MARITIME STRATEGY

Over the last half century there have been two generally accepted approaches to the study of maritime strategy. The first has been an analysis of the component elements of maritime strength, with Mahan's classification of these as geography, naval power, merchant marine, and the like usually serving as the basis for this kind of a study. The second approach, more prevalent in our generation, is the discussion of strategy in terms of specific types of operations such as fast carrier strikes, anti-submarine warfare, or organized overseas transport. I think both of these avenues of approach tend to obscure, to some extent, the coherent form of the basic strategy that lies between these two, the strategy that grows from the components to give continuity and direction to the operations. It is this middle ground that I shall explore, the area in which a basic element of strength is transformed by an idea into a positive action. It is a sailor's concept of strategy, what it is, how it works, to what end it is followed, and what its problems are.

In doing this I shall present the subject from these four aspects that seem to me necessary for an adequately rounded appreciation both of the underlying idea and of the translation of that idea into practical and useful results. These four aspects are, first, a theory of maritime strategy; second, past experience in the use of maritime strategy; third, some of the factors that complicate its use in our time; and fourth, our contemporary use of military power and the tendencies with respect to maritime strategy.

--- I ---

A THEORY OF MARITIME STRATEGY

The aim of any war is to establish some measure of control over the enemy. The pattern of action by which this control is sought is the strategy of the war. There are many types and levels of strategies, and many ways in which they may be classified. But since the subject of this discussion is maritime strategy, the classifications we shall use have already been determined. The three main streams of strategic thought in this sense are maritime strategy, continental strategy, and, more recently on the scene, air strategy.

Here, at the beginning of this discussion, it should be emphasized that clear-cut separations are artificial. In practice there is, and must be, a good deal of overlap and merging; the strategies are deliberately set apart from each other in this treatment of the subject only for purposes of study and analysis.

I use the term continental strategy to indicate a pattern of employment of armed forces in which the major and critical part of the action to establish control over the enemy is directed against his armies along a central land axis. All other efforts are in support of the central drive of this continental strategy. In spite of the descriptive title that I have elected to use for this type of strategy, the involvement of an entire continent is not necessarily implied.

The term air strategy I use to indicate an over-all war strategy in which the decision is sought primarily by air action, with predominant emphasis on strategic bombardment. All other efforts are to a greater or lesser degree subordinate to that.

A maritime strategy is one in which the world's maritime communications systems are exploited as the main avenues by way of which strength may be applied to establish control over one's enemies.

Maritime strategy normally consists of two major phases. The first, and it must be first, is the establishment of control of the sea. After an adequate control of the sea is gained comes the second phase, the exploitation of that control by projection of power into one or more selected critical areas of decision on the land.

Too often the first or blue-water phase of maritime strategy is regarded as the whole process rather than no more than the necessary first half. Most naval history, for example, concerns itself with the struggles for control of the sea, the naval battles, the protection of commerce, and the blockade in one form or another.

This phase, also, is the one that attracts the greater part of our own professional attention, and it is the phase that most landsmen accept as the entire concept when one introduces the subject of maritime strategy.

Within the first phase, the control-of-the-sea segment of the over-all pattern, there are initially two components of control. They will be considered separately for analytic purposes although the actual conduct in war may so closely interweave them that the separate goals may not be superficially apparent. One of these components is ensuring one's own use of the sea and the other is denial to the enemy of his use of the sea. At least in the early stages of the struggle for control, these two goals can be analytically considered more or less apart from each other; and, as long as neither contestant predominates in both, there remains

a fairly clear delineation of these two functional components of the struggle for control. Not until one sea power emerges as dominant in both these components do the two of them merge into the single problem of positive and wilful control of all that moves at sea. This is the ideal condition that has many times been striven for but never, except possibly at the very end of the War in the Pacific, been attained in near perfection.

The naval strategies (as differentiated from the more inclusive maritime strategies) and the naval tactics of both contestants are largely determined by the status and progress of the struggle for control.

If, for instance, two nations having roughly equal naval strength go to war, the attention of each of them must be devoted primarily to the flight for naval supremacy. This type of naval contest has a dual purpose in that it embraces both components of control of the sea ---- the positive aim of securing one's own use of the sea (by destroying the force that could hazard that use), and the negative aim of denying to the enemy his use of the sea (by destroying the force that could protect him). This was the case in the recent War in the Pacific when the American and Japanese fleets fought it out until we finally established an ocean-side control adequate to our needs.

A somewhat different situation exists when two opposing nations start with unequal naval strength. The primary aim of the stronger in this situation is to protect and extend its own use of maritime communications by both passive and active means --- passive in defending its own forces at sea, and active in seeking out and destroying enemy forces that offer threat to the use of the sea by the stronger power. The primary aim of the weaker is to interfere with the stronger's use of the sea by resort to some specialized technique, such as a war of attrition, a deliberate hoarding of naval threat, or an attack on the stronger's commerce. This was the case in the last two wars in the Atlantic when Germany, as the weaker, hoarded her major combatant ships and placed her hopes in her attacks on allied commerce.

There are many refinements to be applied to this theoretical outline in the actual struggle for control of the sea. Particularly in the early part of a war, control is normally in dispute with neither antagonist able to utilize the sea to his own satisfaction. This dispute leads to two other situations which are frequently encountered: one is local control of some part of the sea and the other is temporary control. The two are frequently combined as when the Germans attained a temporary local control

of the waters off Norway long enough to permit their invasion and consolidation of that position. The control of the Mediterranean was in dispute for the first three years of the recent war, with both sides at times having temporary control of the Central Mediterranean while the British, except for one short and indecisive moment, never lost local control at either end.

This is an all too brief outline of the problem of control of the sea, the necessary first phase of a maritime strategy. When a maritime power is reasonably successful in securing the sea to its own use (that is, in repressing the enemy's power to interfere unduly), then it can turn to the second, or exploitation, phase of maritime strategy. And here the subject becomes considerably more slippery, which is really not surprising since it is, in actual fact, a far more subtle and complex proposition than most of us initially realize.

In order to discuss the exploitation of sea power it is necessary to return to the premise that opened this discussion, the assertion that "the aim of any war is to establish some measure of control over the enemy". If this premise is accepted (and its acceptance in general substance is critical to this theory of warfare), then the next step is the examination of known methods of establishing control.

In wars between powers having their major strength in ground forces, the defeat of one of the two contending armies has generally led to victory. This has been the situation when two continental strategies have opposed each other. In wars in which at least one of the two contestants was a major sea power, the defeat of one contending navy and the establishment by the other of control of the sea has generally led to victory. But this victory has been reached only when the dominant sea power has exploited his strength at sea by projecting at least one other element of force to establish control over the enemy on the land.

In some cases the strength at sea has enabled the naval victor to launch a ground force into a critical part of the other's territory. In these instances the soldiery has been the direct instrument of control that clinched the issue at hand. The sea-borne invasions of Sicily and Italy a decade ago were the exploitation by ground forces of the naval seizure of control of the sea. We have already noted the sea-and-air-borne invasion of Norway by the Germans. This was an exploitation, using ground forces, by a nation with temporary control of the local sea area involved.

Another means of exploitation by sea power is the use of economic force for the application of control. When the

Armada was defeated, England intensified her blockage of Spanish trade with the New World and eventually choked Spain almost to death. Spain has never recovered. In the Anglo-Dutch Wars, England established her naval control at sea and was in position to clamp down on Dutch commerce as she had done against the Spanish. But the Dutch saw what was in prospect, acknowledged the potential strength of British control (augmented by Britain's geographic advantage), and reached agreement with Britain before having to undergo the painful process of having all Dutch commerce destroyed. In the case of the recent war with Japan, the advancing American control of the sea was exploited to stifle Japanese overseas communications. Economic suffocation was the primary instrument that enforced Japanese acquiescence. She was dependent on sea communications, not only for her existence as a major power, but for her very life as a nation.

There are a few instances in which the instrument of control has been some other force, a political pressure of this-for-that, a direct or indirect bribery of men having power of decision, or a revolt somewhere inside the structure of the enemy power. But the main methods by which force has been applied to establish control over the enemy have been these three: a victory by the armies of one land power over another; a victory by a sea power exploiting her power at sea to project a frequently smaller but strategically decisive ground force for the actual establishment of control on land; and a victory by a sea power exploiting her power at sea to project an economic force toward the eventual establishment of governing control over the enemy in his own land. It is the second and third of these, the two main methods of exploiting power at sea, that form the basis of the second phase of maritime strategy.

It should be noted that, in practice, the exploitation of sea power is usually a combination of general slow stiflings with a few critical thrusts. These latter are frequently spectacular and draw our attention to the exclusion of the former, while in point of fact the critical thrusts would not be critical were it not for the tedious and constant tightening of the screws that makes them possible.

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AN ILLUSTRATION OF MARITIME STRATEGY IN USE

Up to this point I have outlined the basic pattern of action from which a maritime strategy may be compounded, never in pure form of course, but with the appropriate blending of armies and navies and air forces, and of political and economic and psychological forces.

Now, after this theoretic description of maritime strategy, let us examine a specific problem. How might we evolve a strategy for the United States and how would we judge its validity in the situation that we face today?

I think the soundest way to reach toward answers in any such inquiry is first to turn to comparable historical experience, to recognize the points both of similarity and of difference in the two situations, and then to take advantage of that experience in light of our own specific circumstances.

The recent war with Japan is already accepted as the modern naval classic. But the problems faced in a war with insular Japan and the problems faced in a possible war with a continental great power are not the same. I do not think the War in the Pacific is a valid precedent to turn to for a study of maritime strategy relevant to a war with a power whose base is Eurasia. Correspondingly, I do believe that much of the confusion and contradiction in our present naval thinking is the result of trying, without careful discrimination, to adapt the war with Japan to a prospective war with a great land power.

Let us look at our situation. We are a great sea power, geographically set apart from the continent by intervening waters. Our hypothetical opponent, a great land power with a much smaller sea power potential, is firmly in control of much of Europe and is seriously threatening the rest. Has that situation ever existed before? And how was it managed?

Yes, that situation has existed before, several times, under reasonably similar circumstances. It existed and was managed with a fair degree of similarity in the First World War and again in the Second World War. But it was managed in what I think was an even closer analogy a hundred and fifty years ago. I have selected that third one as our point of departure in this discussion because it illustrates the application of a maritime strategy with fewer obscuring complexities than either of the two more recent situations. I shall outline the experience of Britain in defeating Napoleon and then, after the skeleton of that strategic process is exposed to view, superimpose on it some of the complicating factors that confront the strategist today.

The British struggle with Napoleon illustrates quite clearly the two major phases of a maritime strategy. At the start of the war, late in the eighteenth century, both Britain and France had a major strength at sea. The struggle initially was a struggle between fleets for control of the sea, a control that was in dispute for many years. This is the portion of maritime history that most of us are familiar

with, and this is the first phase that was completed with the successful campaign culminating in the victory at Trafalgar.

The second phase of that great war is remarkably unappreciated. It opened with Britain's having gained control of the sea at Trafalgar, and it is here that I am going to draw the comparison with our situation today. We have the potential if not the actual strength to establish a workable control of the sea. It need scarcely be said that this will take considerable doing, but I do not question that we can gain control of the sea when we need it.

So let us start from that point in 1805, well along in the middle of the war. At that time Britain, as a major sea power, found herself facing the problem of how to defeat France, a major land power, firmly in control of much of Europe and seriously threatening the rest.

The ten years from Trafalgar to the final downfall of Napoleon in 1815 present, at first glance, a very confusing picture. Over all the scene lay the shadow of the seemingly irresistible and enduring strength of the Emperor's armies. There was a succession of apparently disconnected battles from one end of Europe to the other. There was a continuing bitter economic warfare that reached its climax with the Berlin and Milan Decrees by which Napoleon tried to exclude Britain from her markets. These were met with the Orders in Council by which Britain attempted to control and limit the commerce of Europe to her own advantage. There were unsteady and changing governments, now opposed and now subordinate to Napoleon. There was propaganda, intrigue, bribery, and treachery. And all through that period there were the tremendous British grants of monies to potential allies all over Europe; indeed, Britain literally financed most of Europe at one time or another during those turbulent ten years of war. When examined in terms of these details, it seems almost incredible that Britain ever won. But when the entire period is taken under scrutiny, then three fundamental factors, superimposed on the basic and continued maintenance of her control of the sea, emerge to give coherence to the actions over those years.

First, Britain, in the exploitation of her maritime strength, never slackened her pressure on the French all around the periphery of the Empire. The economic war was waged bitterly and continuously, and advantage was taken of every economic strain that developed within the continental system.

Second, Britain, in exploitation of her sea communications, never missed an opportunity to launch an army against

a vulnerable point in Napoleon's armed strength. Whenever the Emperor moved one way, then Britain and whoever happened to be her allies at the moment stabbed from the other. In Portugal, in Spain, in Austria, in the Low Countries, in the Baltic, Napoleon was never secure. Whenever Napoleon managed to counter these threats with his own greater force, then Britain took her profits, cut her losses, and withdrew, biding her time till opportunity showed again.

Illustrative of the pressures on Napoleon from the sea were the concurrent activities of two British commanders, the Duke of Wellington in the Iberian Peninsula and Admiral Sir James Saumarez in the Baltic. In 1811 while Wellington was producing what Napoleon described as the 'Spanish ulcer', Saumarez, commanding the dominant sea strength along northern Europe, brought about some unpublicized but critically important secret meetings on board his flagship. In these he induced agreements with Sweden and Russia in which the Czar was given the military and political freedom that he needed to turn on Napoleon. This soon brought Napoleon's armies from Spain into Russia, and that wholesale calamity in 1812 needs no comment except to note that it could never have happened had not British sea power been applied with remarkable political agility in Napoleon's rear.

Third, in the exploitation of her sea power Britain never did formulate and commit herself to a single military plan by which she expected to win the war. She never lost sight that her goal was the defeat of Napoleon; she never missed a chance to apply pressure where it hurt; but there was no constricting rigidity of plan nor any premature commitment in her strategy. Basic to her maritime concept was her practice of taking timely advantage of opportunity as it opened to her.

In our own contemporary atmosphere of intensive and inclusive planning we might pause to realize anew this peculiar advantage in exploitation of sea power. It is the capacity to manipulate the placement, the timing, and in great measure the weight of the strategic centers of gravity on the land.

Britain had the ability and the will and she exploited to the fullest her control of the maritime communications systems of the world. Operating from the base of her firm control at sea, Britain and her allies continued their penetration of every crevice in Napoleon's armor until finally his structure fell at his heels. Napoleon himself seems never to have realized that it was the ubiquity of Britain's sea power that lent the repeatedly resurgent and finally victorious strength in the defeating of Napoleon.

How truly remarkable in the similarity between today and a century and a half ago. The shadow of the dictator's army over the unwilling peoples of Europe. Their hope of independence to be regained with the help of the sea power from off the continent. The Berlin Decrees in the one case and the Iron Curtain in the other, and the intense efforts in both to build an independent economy behind these barriers. The pulling and hauling in the formation of alliances with the great maritime strength of the day. The struggling free nations of Europe helped to their feet by the financial and economic strength of the power across the sea. And the clear understanding by these two great maritime nations, then Great Britain and now the United States, that Europe must be kept free of dominance by a single power if they would themselves survive.

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FACTORS THAT COMPLICATE MODERN STRATEGIES

These are the similarities in the two situations today and a hundred and fifty years ago. But striking as they are we can not disregard the fact that intervening between that time and this are the tremendous upheavals of the industrial revolution, its contemporary successor the technological revolution, and the continuing social and political revolution that still surges throughout the world. These have changed the tools and techniques of warfare almost beyond recognition. In many important respects the visible and active appearance of warfare bears little or no resemblance to that of a century and a half ago. But more subtle than these obvious changes in combat activities are the problems of whether and how the modern innovations have altered the underlying patterns of war, the basic strategies of war. While many of the skills of men-of-warriors today bear little relation to those of the men who sailed under Collingwood, can we properly infer that the strategic problems that faced Collingwood and Nelson and Barham and Pitt are equally unrelated to those facing their successors today? That question is the one at hand when we set ourselves to judge the value of yesterday's experience in today's situation.

In order to open up that question I have selected six major complications of warfare that have grown out of the industrial revolution to perplex the strategist today, six problems that either did not exist before or have undergone such marked change as to be in fact new problems. These are: mechanization in war, explosives in war, arms and revolution, logistics in war, the phenomenon of flight, and nuclear energy in war. This is certainly not an exhaustive list but it is, I think, an indicative one. The extent to which these matters

alter the fundamental pattern of action by which we seek to establish control in war is the extent to which we must modify yesterday's experience in applying it to today's situation.

* * *

Mechanization in War

When we consider the industrial revolution we realize at once the unbelievable progress that has given us tanks and jeeps and steam vessels and submarines and automatic weapons. The difference between a primitive or man-power armed force and an industrial or mechanized armed force is apparent. But all the problems growing from these differences have not yet been generally recognized. Our military attention has been concentrated almost exclusively on the problem of fighting one mechanized armed force with another mechanized armed force. That is true in all three of the services, army, navy, and air. However there are two other problems to be considered. One is the business of devising strategies and tactics for use by relatively primitive armed forces against highly mechanized ones; the other devising strategies and tactics for use by mechanized forces against primitive forces. That latter problem is a very real one. It faces us today in Korea and I think we have failed to recognize it as basic. It is a direct challenge to the validity of the strategic concepts applied in Korea. It would be a challenge in a much greater field if the war were to widen.

Our present weapons and techniques are the best we can devise for use against armed forces such as our own. The question we must ask is: are our present strategic concepts, techniques, and weapons also the best that we can devise for use against armed forces whose primary strength is man-power rather than highly refined and complicated machine power?

With respect to ground forces the importance of this query may not be too critical as long as the infantry remains recognized as the focal point of ground strength. That should insure maintenance of the man-power perspective no matter how much machinery may be involved.

With respect to naval forces, a careful pondering of this question could, I believe, lead to a shift of emphasis in our fleet preparations from the blue-water reaches of the sea to the inshore soundings. Apart from countering the atypical (though very real) hazard of uniquely efficient submarines, I believe that a large proportion of our naval effort, particularly in the exploitation phase of a next war,

must be put into tools and techniques that can seize and exploit control of the shoal and restricted waters along the enemy littoral and penetrating into the enemy territory. This subject deserves elaboration, but there has yet been no satisfactory statement of the problem, much less a satisfactory approach toward its solution. That a problem does exist, that it will require a fairly large change in prevailing strategic concepts, and that it will require the evolution of basically simple tools and techniques not now at hand, I am sure. But no one has yet been able to suggest the shape of a generally valid concept tailored to this need, nor the particular functions of the tools that we must adapt or devise. The problem concerns the maintenance and exploitation of control of inshore waters, a matter that I think was handled better a century and a half ago than it is today. That is as far as I have gotten with any assurance.

With respect to air forces, the problem takes a somewhat different turn. While there is no such thing as a primitive or man-power air force, we do find ourselves faced with the business of fighting a relatively primitive force with a highly mechanized air force. It is a problem that must be faced by naval aviation as well as by independent air forces. Here, more than anywhere else, we have fallen into the trap of casting the enemy in our own image. To use a specific illustration: we have done all our planning of air interdiction on the assumption that, if the interdicting effort is strong enough, it will succeed. Against highly mechanized ground forces this may well be true; such ground forces are a most susceptible target. Against a piggy-back army, one whose basic reliance is in men and animals, I think this assumption is not valid. The point is that the theory of interdiction, air against ground, must be modified to the extent that the possible effectiveness of interdiction is a function in part of the strength of the interdicting force and in equal part of the susceptibility of the target to interdiction. A highly mechanized target is maximally vulnerable; as the target becomes more primitive the susceptibility approaches zero. Look at Korea for graphic illustration of this.

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Explosives in War

That is one type of modern complication that the strategist, maritime or otherwise, must consider. Now let us take up a different aspect of the industrial revolution in war.

Gradually, over the last hundred years, the function of explosives in warfare has changed and I think we have missed the significance of this change.

Originally the explosives, gunpowder in one form or another, were used primarily as a propellant for missiles. The purpose of these missiles was direct destruction -- the direct killing of men or the sinking of ships. This led to an efficient imposition of control with little or none of what I shall describe as "over-kill". This word I use to indicate that proportion of effort on the target which can not be used for the direct establishment of control.

Today the infantry rifle is the remnant of this once universal method of warfare. We now use explosives as a propellant as we did before. But we also use explosives both as an agent of destruction at the target and as the on-target propellant of secondary missiles of destruction. The nature of contemporary industrialized and mechanized targets, both civilian and military, invites the use of explosives against them on a grand scale. Modern methods of delivery encourage the use of explosives as a general agent of destruction.

A result of this has been a prevailing tendency to equate destruction with war, and this in turn leads us somehow to associate the idea of maximum destruction with victory in war.

In this partly justified and partly superficial thinking there is a fallacy. That fallacy is our forgetting that the purpose of destruction in war must be the achievement of control. Other than that it has no point. The degree to which destruction contributes to control is the degree to which it contributes to final victory. Destruction by the massive use of explosives carries with itself the inherent characteristic of a large proportion of over-kill (with its very important secondary effects) and thus a lessened proportion of direct control.

The relationship between destruction and control in war is one critical measure of the efficiency of the conduct of war.

The maritime strategist has long been aware of this, his appreciation emphasized by the comparative economy forced on him by the nature of the tools with which he works. The essence of the exploitation of sea power is the projection of concentrated power to critical points of decision, the establishment of a maximum of control with a minimum of war's general destruction. From this has grown the sailor's firm belief in the need of peculiarly specialized types of ground strength and of air strength as built-in components of maritime strength in order that he may impose his decisive control at critical points of his own choosing. This is a compelling reason why marines and aviators are integral units of the naval service.

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Arms and Revolution

So far we have discussed mechanization in war and the role of explosives in war. There is a third facet of the industrial revolution in war that, in a different field, modifies somewhat the classic patterns of strategy.

During the Napoleonic Wars and up until fairly recently it has been possible for any determined people to revolt almost at will. Before mechanization it was a relatively simple matter for any dissident group to lay its hands on the necessary tools of war and revolution. Some pikes and halberds could be improvised; smoothbores and even rifles could be made or stolen and stored locally until the time came for their use. But the tools of warfare have grown so complex and expensive within the last two generations that in a modern society only the state itself can organize and pay for the production of arms. This means that the support of an army, with its arms, is now a necessary ingredient of revolution. Unless a state's own army joins the rebels, then the help of an outside army must be directly available before any revolution can be successful.

This concerns air strategy to whatever extent airborne and air-supported troops may be adequate to the needs, though even this is more a matter of ground force than of air force interest. More fundamentally it concerns continental and maritime strategy. An outright revolt within the enemy's political or military structure must not be encouraged until an adequate and sympathetic ground force is directly at hand to support it. This limits the possible areas of revolt in war to those along a continental front or along the accessible littoral behind the front. Since this restriction on revolution has developed, a mobile sea-borne and sea-supported ground force has become increasingly important to the exploitation of this type of potential weakness in an enemy.

Logistics in War

Directly related to the growth of the industrial and technological revolutions is the problem of modern logistic support. Primitive armies could, and to a large extent still can, live off the country. Mechanized armies can not. A fleet under sail could stay at sea indefinitely; indeed, Nelson kept his Toulon blockade for over two years without once leaving his flagship. A modern navy can stay at sea for considerable time, to be sure, but not as the sailing vessel did, and not without enormous effort in logistic support. Air forces, while there is no pre-industrial comparison,

are by their nature the most logistically helpless element of armed force. In all types of strategies, continental, maritime, or air, the logistic factor must weigh heavily in arriving at decisions, both with respect to the quality and quantity of material needed and with respect to the time and military cost required for its delivery.

It is of interest to compare the three basic types of strategies in the matter of logistic vulnerability. In the continental strategy, the mechanized army is far more vulnerable than its predecessor by reason of its logistic dependence. While it is tactically more mobile, it is strategically an infinitely more ponderous mass to move or to re-direct. In a strategy basically maritime, the bulk and complexity of logistic support is incalculably greater than that of the classic sea powers, but the application of logistic support may actually be a good bit easier. Easier not only compared to primitive maritime force but compared to mechanized continental force. The flexibility of contemporary maritime communications system compared to those on land, and the lesser degree to which they can be critically interrupted after control is established at sea, combine to make the exploitation phase of a maritime strategy quite attractive when balanced against a drive toward a similar goal by over-land avenues of approach.

After indicating the scope of the industrial revolution's logistic effect on both continental and maritime strategies we can see that, while it is complicating, it is not unique. The problems involved are not novel, they are distorted and magnified but they do not invalidate the traditionally accepted bases either of the continental or of the maritime strategies.

With respect to air strategy --- and here I am going to merge logistics into the next major topic, that of flight --- with respect to air strategy, the logistic effect of the industrial revolution takes a somewhat different turn. The logistic problems introduced by the industrial revolution are the basis of prevailing air power theory. The theory of strategic bombardment and the theory of interdiction are both predicated on an assumption of critical vulnerability of the enemy's logistic support. In comparing the capacities of continental or maritime strategies with air strategies, or in the weighing of any derivative lesser strategies, the first point of examination should be this: to what degree is the assumption of the enemy's logistic vulnerability valid? The continental or maritime strategies are not completely dependent on this or any other one assumption; the air strategy is. Only to the degree that this assumption of critical vulnerability is accepted can a comparison be continued past this initial point. Only to this degree can we

then make inquiry as to the relation between logistic destruction and the achievement of strategic control. Only within these restrictions can valid judgments be made.

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Flight

Quite apart from the logistic base of the specialized theory of air power, the phenomenon of flight has had three generally recognized effects on warfare.

First, it has extended the range and quality of observation in the conduct of war, enough so that both the tactics and the strategies of war have been affected. This change in the range and quality of observation has probably affected naval warfare more than war on the land. Flight has had more influence than any other factor on the management of the age-old problem of the unlocated enemy force at sea.

Second, flight has extended the range and affected the use of destruction in war, and altered the comparative value of targets of destruction. The relative importance, for instance, of cities in warfare, now that they have become industrial centers of power, has undergone quite a change since the coming of the airplane.

Third, flight has introduced a new capacity for transportation, a capacity whose capabilities and limitations are so well understood that they need not be set out in detail.

These three effects of flight, the changes in observation, destruction, and transportation in war, have not lacked for attention in military thought and we will not expand on them here.

Finally, flight has introduced the proposition that there exists another great basis of strategic thought, that is, air power as distinguished from sea power and land power. Needless to say this proposition has not been universally accepted, and the skeletal frame of dispute with respect to air power theory has not yet been made clear. Until that is done there can be no general acceptance or rejection of the theories of air strategy, and that lack of general acceptance or rejection is the point I wish to make. I believe a very real influence on strategic decision in any military or naval problem is created, not only by the obvious existence of flight, but by the uncertainty stemming from efforts to fit it into its proper and accepted place with corresponding military and naval activity. The maritime strategist

must adapt his practices not only to the physical fact of flight but to the psychological fact of uncertainty as to its niche in the military power complex of our time.

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Nuclear Energy in War

A direct result of the technological revolution is nuclear energy. We have already experienced its logarithmic increase in capacity for destruction. We are beginning to see a comparable increase in capacity for movement. We seem to be fairly well beyond the emotional shock associated with its initial display. And we are acquiring acceptably objective information as to the capabilities of nuclear weapons in terms of direct destructive effects.

It seems to me that the primary unsolved problem in the field of military employment of nuclear weapons is the problem of explosives and their over-kill --- the relationship between destruction and control that has already been introduced into the discussion.

In tactical terms the results are probably calculable. Against military targets on the land or the sea the effect of atomic bombs will be to force a revision of the pre-atomic techniques. Against non-military targets the imponderables decidedly complicate the issues. I believe the availability in fair quantity of nuclear weapons will force us either to re-examine our notions as to what may be acceptable results of war, or to re-examine our apparent intentions with respect to their employment. This problem, of course, is closely related to the one we face in appraising the position of aviation in the total military power structure.

The maritime strategist, I think, is fortunate, in that the nature of his strategic theory does not induce an almost inevitable dependence on the use of nuclear weapons against non-military targets. So much, in those cases, is beyond calculation. Success is dependent to a governing degree not on what we do but on what the enemy does. We can not accurately predict enemy behavior and thus we must gamble on how an enemy will react to the side effects of the considerable over-kill inherent in the use of nuclear weapons. That is a most difficult hurdle to overcome when one's goal is recognized not as the delivery of destruction but the establishment of control over the enemy.

THE PATTERN OF STRATEGY TODAY

These six problems introduced into warfare within the last few generations are all of major importance. All of them, in one way or another, have appeared to "revolutionize" strategy. Certainly each of them has markedly altered the climate in which the strategist operates and has modified the techniques with which he puts his strategy to practice. But none of them, in my belief, has yet demonstrated conclusively that it has changed the basic patterns of strategy. These problems and others like them are still in the process of digestion in all phases of warfare. They are problems that can be resolved and in most cases are being resolved in practical application. The capacity of a maritime strategy to adapt itself to these major changes is one of the reasons why I believe a maritime strategy should be a most attractive one to the United States in her present situation. Let us see how it is working in practice today.

As early as 1946 the United States became aware that there was a very real possibility of all of Europe's falling under the domination of a single great power. There were different interpretations of the type of hazard that this situation would present - - military, political, social, economic, or ideological hazard - - but these need not concern us. We may start from the point where a hazard was recognized and trace our action from there.

Greece and Turkey were both under pressure by Soviet Russia. It was to the interest of the United States to prevent communist domination in these two countries. They were given military and economic assistance by the United States in sufficient strength to effect the communist pressure. This is most interesting because of the geographic situation involved. One of these countries has a land border common to Russia and the other a land border common to a Russian satellite. Both of them are about five thousand miles from the United States. But both of them are accessible by sea. This gives rise to the astonishing paradox: Greece and Turkey are closer to the United States, in political and economic and military terms, than they are to Russia. The common frontier of the sea and our exploitation of maritime communications systems make these two countries more accessible to us than to the communists.

During the late 1940's several of the Central European nations tried to stay out or break out of the Russian orbit. Poland, Czechoslovakia, Rumania, Hungary, and Bulgaria succumbed. Only Yugoslavia succeeded in breaking out of the Iron Curtain. Of all these countries, only Yugoslavia had

access to a sea under western control. I think that is significant; and I also think that if we had had control of the Baltic we would not have lost Poland.

Later NATO was formed. Many men fail to realize that this North Atlantic Treaty Organization is, by its very name, an alliance of maritime nations. The common bond in NATO is the bond of the maritime communications system centered in the North Atlantic. It is significant that Turkey at the far end of the Mediterranean which we control, is a member of NATO, while Sweden, at the very entrance to the Baltic which we do not control, is not a member of NATO.

In the early days of NATO a military organization was started for the immediate purpose of insuring the survival of the western nations on the continent. The structure of this organization indicated that it was designed for immediate defense against the direct military hazard of the continental strategy opposed to it. Since that time the NATO organization has been filled out. The Supreme Allied Commander in Europe is properly an army commander. His Commander in Chief, North, is functionally and properly a naval commander. His Commander in Chief, South, is for the same reason a naval commander. The Supreme Allied Commander Atlantic, co-equal with the Supreme Allied Commander Europe, is, as he must be, a naval commander.

In spite of the fact that I do not agree fully in one important element of the NATO organization (I think that CinCNorth and CinCSouth should functionally be subordinates of SACLANT rather than of SACEur), this present organization means that the United States and her colleagues in alliance clearly recognize the value of a strategy whose governing element is control of the maritime communications system.

Let us compare the implications of this command organization with the elements of a maritime strategy that we identified at the beginning of this discussion. The first phase would be to establish control of the sea. The Supreme Allied Commander Atlantic and the two subordinate naval commanders of SACEur, the CinCNorth and the CinCSouth, are organizationally situated to insure that control. The second phase would be the exploitation of sea power. The two commanders on the north and south of Europe not only command naval forces but they command the needed associated ground and air forces to exploit the control of the sea that they establish. The Commander in Chief Atlantic is in position, not only to insure reliable communications and support for his opposite number on the continent, but to apply the power of his maritime strength either directly to Western Europe or through the sea on either flank by way of the

commanders-in-chief in the north and south. The Sixth Fleet, for instance, is basically an Atlantic unit potentially applied at present through the CinCSouth.

Vast though it be, this is only a portion of the total picture. NATO does not include all of the United States' interests, nor does it include all of the British interests, in potential were all around the globe. These two nations are additionally and individually organized outside of NATO so that each of them may apply its own maritime strength in its own interests around the whole periphery of the Eurasian continent. There is difference in scale and difference in emphasis, but the underlying concepts are the same.

In this struggle between east and west, the western nations are organizing toward the full exploitation of the flexibility, resilience, endurance, and concentrated application of power that can lead to decisive control when it is needed. The whole western world is placing its faith in the concept of a strategy that is basically maritime.

ERRATA

Maritime Strategy

- p. 3 3rd line of para. 3: change "flight" to "fight"
- p. 3 next to last line of para. 3: should be "ocean-wide" instead of "ocean-side."
- p. 5 top para., line 14: correct spelling of "acquiescence"
- p. 7 center para., line 2: correct spelling of "glance"
- p. 14 para. 2, line 13: "system" should be plural; add "s".
- p. 17 para. 3, line 5: delete "effect"; insert "offset"
- p. 19 para. 2, line 4: change to read: "...in potential wars all around..."