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THE NATURE OF NAVAL WARFARE

Presented 7 July, 1937, by

Captain R.A. Spruance, U.S.N.

RESTRICTED

NAVAL WAR COLLEGE
Newport, R.I.
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In May 1884 the Secretary of the Navy appointed a board, of which Commodore Stephen B. Luce, U.S.Navy, was the senior member, to "report upon the subject of a post-graduate course for officers of the Navy." It was the report of this board that laid the foundation for our present Naval War College.

The report was thorough, and covered the subject assigned it at some length. The following excerpt is of interest as expressing the board's idea of what the War College was to accomplish:

> "The board is of the opinion that a cogent reason for such a school is that there may be a place where our officers will not only be encouraged but required to study their profession proper - war - in a far more thorough manner than has ever been attempted and to bring to the investigation of the various problems of naval warfare the scientific methods adopted in other professions.
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> "Although the science of war cannot be mastered through the agency of books alone, yet a complete study of the operations of war both on land and at sea, by which the principles of the science have been illustrated practically, is absolutely essential to the proper education of the officer whose life is dedicated to the profession of arms."

Some further idea of Admiral Luce's conception of the War College may be obtained by reading an article entitled the "United States Naval War College" published in January 1885. In it he says: "It is on these two subjects, then, war, and statesmanship in its relation to war, that the College is to be principally founded."

Since the assembling of its first class in September, 1885, with Commodore Luce as President and Commander Alfred Thayer Mahan ordered as a member of the Staff, the War College has never lost sight of these two subjects. The methods of studying them, however, have changed and developed.

Initially, and for some years after the founding of the College, war was studied by studying the history of wars. The solving and playing of strategical and tactical problems, which is now such an important part of the course, came later.

It is difficult for us at the present time to realize what a practically virgin field except for tactics the scientific study of naval warfare was in the year 1885. Land warfare had a plentiful literature. It had been studied, analyzed, and written about by such masters of the art as Jomini, Clausewitz, and Napoleon. But warfare at sea remained almost unknown in its broadest phases.

The need for a scientific approach to the study of naval warfare was brought to the attention of the War College by Admiral Luce in a paper entitled "Naval Warfare as a Science", read by him at the opening of the College in September 1886. Admiral Luce concluded his paper by saying:

> "Here, then, is the philosophy of history teaching us by great examples. Inspired by the examples of the warlike Greeks, and knowing ourselves to be on the road that leads to the establishment of the science of naval warfare under steam, let us confidently look for that master mind who will lay the foundation of that science, and do for it what Jomini has done for the military science."

In the War College library there is a bound copy of articles written at various times by Admiral Luce. In this, at the end of the paper just quoted from, is written in long hand: "He appeared in the person of Captain A.T.Mahan, U.S.N., S.B.Luce, Newport, R.I., July 26th, 1899."

So much for a brief sketch of the general ideas underlying the War College course at its inception. Let us now make a quick survey of the main outlines of the course as it is laid out for the present year.

Since this is a Naval War College, we are concerned primarily with naval warfare. Naval warfare, however, cannot be isolated and considered as a separate entity. War comes as a result of a conflict of national policies. This conflict of national policies not only causes wars, but it remains a major determinant of their character throughout their continuance. It is not only the existing situation between the belligerents that plays such an important role, but in addition the relations between the belligerents and important neutrals often have a great bearing on the manner in which a war is conducted. The difficulty of maintaining friendly relations between a belligerent, who is strong at sea, and neutrals, who are possessed of

important foreign trade subject to interruption, is well expressed by the following quotation from Corbett: "It may be taken as a law of maritime warfare, which cannot be omitted from strategical calculation with impunity, that every step toward gaining command of the sea tends to turn neutral sea powers into enemies."

Therefore, a study of the foreign policies and of the relations, past and present, of the United States with the rest of the world is necessary, if we are to understand what has caused our wars in the past and what may bring us into wars and greatly influence such wars in the future.

Furthermore, the intercourse between nations, both in peace and war, is governed by certain rules. These rules comprise what is known as international law. That portion of international law, which is concerned with the conduct of war, is of particular interest to the fighting Services. Hence, international law has always occupied an important place in the curriculum of the War College.

These two subjects, international relations and international law, together with such matters as economics, war finance, national psychology, propaganda, geography, all form a part of the background of war. As such, they are an essential part of the course. Each of these subjects in itself would be suitable for an entire year's work, so it must be realized that many of them can be touched upon but lightly. Their importance in making up the picture of war must not be underestimated because of the fact that some of them are merely indicated in their broad outline. It is only by giving each factor its proper place that successful war can be made. A neglect of any one may lead to failure.

Let us now consider what war in general may be, and the part that naval warfare in particular plays in war.

As just remarked, war comes from a conflict of national policies which diplomacy is unable to settle by peaceful negotiations. Negotiations breaking down, force is resorted to. The nature and the amount of force that will be used - that is, the general character of the war - will be largely dependent upon the objects of the struggle, the geographical positions occupied by the contending countries, and their relative strengths.

The underlying causes of war may change from century to century. Sometimes wars have been waged for material gain, such as those for conquest of territory or for extension of trade. Sometimes they have been waged because of a conflict of ideas. Religious wars are wars caused by a conflict of ideas. Wars to unify politically separated parts of a race may be similarly classified. At the present time the totalitarian conception of government is in conflict with the democratic; and within the totalitarian conception the dictatorship of the proletariat, as exemplified by Russian Communism, is today fighting in Spain against the Fascist ideal of dictatorship, as exemplified by the German Naziism and Italian Fascism. Sometimes wars have been waged because of the lust for power. The conflicts between powerful feudal nobles that took place in the Europe of the Middle Ages, and many of the international wars of Europe that came after the monarchs had succeeded in suppressing the semi-independence of their great nobles and lodging all the powers of the State in the Crown, appear to be of that class. But whatever the major cause, some material gain for some person or class is apt to be found in the background.

Of causes of war today in the world, a desire to improve the material well-being of the masses seems to stand out most prominently. Governmental propaganda clothes this desire with the ideals represented by the particular theory of government in power in the country involved. The inequalities in population and natural resources that exist throughout the world between the various countries and the inequalities in wealth that exist between classes within a country, are symptoms of the same source of trouble. Wealth, or opportunities for acquiring wealth, may be redistributed within a country by changing the laws, if the poorer classes possess the requisite political power, or by revolution, if they do not. Internationally, no effective legal means exists for redressing the economic balance. The Covenant of the League of Nations provides for the revision of treaties, but, since unanimous consent is required, the machinery of the League has not proved adequate to relieve the strains developing in the international structure. Nations desiring change have resorted to force, which may or may not have been accompanied by war. Japan has taken over Manchuria and much of Northern China. Italy has conquered Ethiopia. Germany has by unilateral action burst the bonds imposed on her by the Treaty of Versailled. How she will use her newly gained military

power to improve the economic condition of her people is a question on which the peace of Europe hangs today.

Weak countries possessed of an abundance of natural resources are potential sources of international discord, because strong countries may desire to obtain political control of them. Such political control may be direct, as when gotten by annexation, or indirect, as when gained through a dominating influence over the native government. The danger inherent in such weak countries is enhanced, if the government is unstable or if the territory is underpopulated. Examples of this situation today may be noted in the Dutch East Indies and Australia with reference to Japan, and in certain of the South and Central American countries with reference to Europe. Peace exists in these areas because the strength and the national interests of Great Britain and the United States make any attempts to change their status by force unprofitable and unlikely to succeed. What may be done through the subtler means of economic penetration in certain countries remains to be seen.

Wars have been classified by different writers in different ways. One way is by calling them offensive or defensive. Jomini, for example, in his ten classifications of wars, includes "offensive wars to reclaim rights", "aggressive wars for conquest and other reasons", and "wars defensive politically, but offensive in a military point of view". This classification of offensive and defensive requires a consideration of the object of the war. The country that wishes to change the status quo is making offensive war, while the country that is trying to maintain it is making defensive war. This method of classification does not, however, lend itself well to a further clarification of the subject. Wars are often started by a quarrel over a specific object, but, as they progress, this object may tend to become obscured as the national aims are modified by the course of the war. The World War, for example, may be said to have originated in the desire of the Teutonic Powers to expand to the southeastward through the Balkan States into the Near East, the Drang Nach Osten of German policy. But does anyone imagine that a German victory would have left that country content with a peace treaty that would merely have cleared the way to the Balkans? Would not other territorial accessions -

in Belgium, in Russia, and overseas - have been demanded as the price of peace? The Entente Powers, on the other hand, at the outset did not desire war and made every effort to maintain the status quo without war. But this did not prevent their victory from being used to make vast changes in the condition of their defeated enemies. The Austro-Hungarian Empire was broken up. Germany was stripped of her colonies and of much of her home territory as well.

President Wilson's effort in 1916 to bring about a negotiated peace by asking for both sides a statement of their war aims was a recognition of the changes that may take place, as a war progresses, in the objects for which that war is being fought.

Another classification of wars, also based on the object of the war, is one which calls them limited or unlimited. This seems a more useful classification than offensive and defensive, probably because it requires more factors to be given consideration. Certainly, the more factors entering into war that are studied and understood, the better will be our understanding of what war really is.

A war may be said to be of a limited nature if one side is able to accomplish its object without a complete overthrow of its opponent. Nations have gone to war in defense of an object which was by no means vital to their national welfare, but which their prestige or national honor would not permit them to relinquish without a struggle. The possession of Cuba by Spain in 1898 was such an object. Cuba was a liability and not an asset to Spain, but Spanish pride made it difficult for her to negotiate a peaceful settlement of the Cuban question with the United States. Here again we have an unforeseen expansion of the war aims of the United States that resulted in her acquisition of Puerto Rico, Guam, and the Philippines, as well as the liberation of Cuba from Spanish rule. It is hardly necessary to stress the importance of the geographical separation by sea of these territories from the mother country, and the isolation of them from her which came with the collapse of Spanish sea power. This conflict is an excellent example of a limited war, limited both by nature of the objective and by the geographical position of the territories of the contestants.

The geographical separation of the centers of power of two contending nations, which plays so important a role in most limited wars, may be caused by the fact that there is no available overland access between them, as when they are separated by sea or by intervening neutrals. Or it may be caused by the intervention of land areas of such an extent and character as to make it difficult or impossible for either belligerent to exert its full strength against the heart of the other. The Spanish-American War, as just noted, is an example of separation by sea. The Russo-Japanese War is an example of separation by difficult land areas as well as by sea. Japan could never hope to exert force enough to send her armies across Siberia to strike at European Russia, where lay the seat of the latter's government and its principal sources of strength. Russia, on the other hand, even if she had been successful in overcoming Japanese sea power, would have found it difficult to have assembled and have kept supplied over the single track Trans-Siberian Railway sufficient troops to have accomplished the complete overthrow by invasion of Japan.

Napoleon's invasion of Russia is an example of the effect of separation by great and difficult land areas. Napoleon planned an unlimited war, which involved striking the Russians such a blow that they would sue for peace. The scarcity of roads in Russia, the refusal of the Czar to risk the destruction in battle of all the forces he could put in the field in defense of Moscow, and the coming of winter, for the rigors of which the French were unprepared, all contributed to the ultimate catastrophe that overwhelmed the Grand Army.

Under present conditions it seems likely that any war between two civilized countries having contiguous frontiers will develop into unlimited war, provided, of course, that the centers of power of the two are in effective striking distance of each other. The great improvement in means of land transportation that has taken place during the past century has served to increase the facility with which armies can be moved and supplies. On the other hand, the fortification of land frontiers, such as is taking plave between France and Germany, and the great increase in the strength of the defensive given by modern weapons, have raised obstacles equivalent in difficulty to the crossing of great stretches of territory. May it not be that this increase in the strength of the defensive will bring back to Europe wars with limited objectives?

Germany, for example, might seize territory in the east and hold that as her objective without attempting to overthrow the country to which the territory belonged. By remaining on the defensive, she might then make the recovery of the seized territory cost more than it was worth. Of course, wars on the continent of Europe always tend to bring into question the Balance of Power, and so to pass from limited to unlimited, whatever the nature of the original objective may have been. The concern manifested over the civil war in Spain has been caused by the feeling that intervention by any other countries may result in a disturbance to the Balance of Power, which might in turn bring on a general European war.

In his "England in the Seven Years' War" Corbett comments on "the tendency of limited wars to become unlimited in character." He goes on to say: "The process, as between two powerful and determined states, is almost inevitable. In a limited war, correctly conducted, a phase must be reached sooner or later in which one party begins to predominate in the limited area - that is, the area of special object. The other party, as he feels himself unable to retain his hold in that area or shake that of his adversary, will seek to redress the balance by striking him at the center of his power. In other words, the losing party will seek to destroy or cripple the enemy's resources for war at their base, and to inflict upon his home population suffering more intense than the attainment of the special object is worth. A war conducted on these lines is unlimited in character, since by acting thus we seek, through general pressure upon the national life of an adversary, to force him to do our will or to abandon his own."

In this conception of Corbett's, geography again seems to enter in an important fashion. The tendency he speaks of will apply much more to belligerents located close together than it will to those which are well separated. It has always been easy for France to threaten an invasion of England. All that Napoleon required of his admirals was control of the Channel for about forty-eight hours. Had Great Britain during the World War contented herself with the limited objective of getting possession of German colonies, the German submarine war on British trade would have been a counter-attack of an unlimited character. In both of these cases it was the proximity of the belligerents that enabled these measures to be undertaken. In future

limited wars air attacks on commercial, financial, and industrial centers will probably be among the measures taken by the unsuccessful belligerent to "destroy or cripple his enemy's resources at their base, and to inflict upon his home population suffering more intense than the attainment of the special object is worth." On the other hand, given a wide separation between the belligerents, such a change of limited into unlimited war becomes more difficult. For example, the Spanish-American War could hardly have been given an unlimited character by Spain, because she lacked any means of striking at the heart of the United States.

In unlimited war it is considered that the objectives can best be obtained by the complete overthrow of the armed forces of the enemy, which will bring about the collapse of organized resistance by the defeated Power. In theory this requires the military and naval forces to subordinate everything to bringing the enemy's army and navy to action. At the opening of the World War we see the German armies intent on a crushing defeat of the opposing armies in France and disregarding the opportunity that lay open to them to seize the Channel ports. This is an example of strict adherence to theory. Our own Civil War, on the other hand, while an example of an unlimited war, was largely waged along the lines of conquest and defense of territorial objectives. The fighting in the east revolved around attack on and defense of the two capitals. In the west the Union armies were engaged in capturing the Mississippi River so that the Confederacy might be cut in two. This attack on so vital an objective automatically brought Confederate armies into the field in defense of it. But it was the final surrender of Lee's army at Appomattox, and not the capture of Richmond, that ended the Civil War.

The capture of the enemy's capital may be important because of the moral effect and the confusion that it causes in his government, but if his fighting forces are still undefeated and his morale unbroken, it is by no means a vital blow. We have the example of the French Government in 1914 preparing to move to Bordeaux when Paris was threatened. The capture of Paris by the Germans would not have resulted in the defeat of France, provided the French Armies had continued an effective force. But the overthrow of the French armies in the field probably would have so resulted. The threat against Paris,

however, involved a territorial objective so important to the French that they were obliged to concentrate all available forces in defense of it. The Germans had a chance for an overwhelming victory, but they were either not strong enough, or not skillful enough, to achieve it. The Battle of the Marne went against them, and the race for the Channel, a territorial objective, ensued.

The distinction between operations against the armed forces of the enemy and those against other objectives, which react more directly on the will of the civil population to continue the war, is made by Corbett in another passage of his "England in the Seven Years' War." He says: "It is recognized as a fundamental principle that lies at the root of the higher strategy that wars tend to exhibit two successive phases - phases not always very distinct, yet always existing, and so important in their differences that unless they be kept firmly grasped the conduct of any great war is sure to go astray. There is firstly the phase in which we seek to destroy the armed forces of the enemy, to overcome his means of attack and resistance, so that he is no longer able to gain his own object or to prevent us from gaining ours. If we are successful in this phase, then follows the second, in which we seek to exert our ascendancy over him by bringing to bear upon his national life a general pressure in order to force him to accept our terms. In other words, our main objectives are no longer his armed forces, but what may be called the sources of his vitality; we direct our efforts to inflict upon him or to threaten loss and suffering which he shall recognize as harder to endure than the terms of peace we offer."

Usually these two kinds of operations proceed simultaneously. This is especially true of naval warfare, as will be discussed later.

The distinction between limited and unlimited wars, as Corbett calls them, or wars with a limited or unlimited objective, as Clausewitz calls them, may sometimes be found exemplified in the same war, provided there are more than two combatants engaged. In the World War we find the European countries and the United States fighting an unlimited war. Japan on the other hand, took a limited objective, the conquest of German possessions in the Pacific. Having accomplished this conquest with a comparatively small expenditure of effort, she practically ceased any further active participation in the war.

Even if Germany had won the war in ~~Germany~~ Europe, the great distance separating Germany from her former possessions in the Pacific, and their small value would probably have prevented Germany from making the great effort that would have been necessary to recover them by force of arms. This is especially true when consideration is given to the exhaustion of man-power and of resources and the general war-weariness that inevitably follows the conclusion of an unlimited war.

In writing of wars in which an ally does not participate with all the strength at his disposal, Clausewitz calls this a "war limited by contingent." Corbett develops this idea, as applied to an insular sea power like Great Britain, and discusses "wars of intervention - limited interference in unlimited war."

Japan's part in the World War might be placed in the category of a war of intervention. Obviously, the degree of participation in a war of intervention will depend upon the nature of the objective which the intervening country has chosen, and upon what it may expect will happen to it in case its enemy wins the war. In both respects geography plays an all important part. Had Japan been more vulnerable to the reprisals of a possibly victorious Germany, she would have displayed more interest in the outcome of the war. Italy entered the war with certain territorial objectives, but the location, both of herself and of the lands she coveted, required an unlimited participation, if she were to be successful.

The United States has been classed as having had an unlimited participation in the World War. This was in spite of the fact that her geographical position would have made her almost as safe as Japan would have been from a victorious Germany, and, in addition, she was fighting for no material gain. It seems probable that President Wilson's original idea may have been for a "limited interference in an unlimited war", which would have been all that our material national self-interest would have called for. At any rate, our actual unlimited participation shows that moral, as well as material, considerations play a great part in war.

Sea Power, as we have seen in the Spanish-American War and in the World War, may play an important role both in offensive and defensive, in limited and unlimited wars, and in wars of intervention. Sometimes its effect is obvious

to everyone, as when the defeat of the Spanish Armada in 1588 prevented the invasion of England. Sometimes its effect, while equally vital in determining the outcome of a war, is less spectacular and not so apparent, as was the case in our Civil and Mexican Wars. Sometimes, as in the Franco-Prussian War, its effect appears to be negligible."

The use of sea power in time of war rests in the last analysis upon the strength of the navy. When navies enter a war, either against other navies or against military forces ashore, we have naval warfare. It is in naval warfare that we are primarily interested.

The length of time required to build the larger naval types has, in the past, meant that for all practical purposes naval wars have been fought with the ships built and building when the war broke out. This is likely to continue to be the case in the future, so far as battleships and cruisers are concerned. Destroyers, submarines and smaller craft may be built in numbers during a war, as they were during the World War, but probably the changes in air strength will produce the greatest unknown variable in future naval wars.

Reduced to its simplest terms, a navy in time of war is endeavoring to keep sea communications open for the use of its own country and to close them to the use of the enemy. Hence the term "command of the sea". It is seldom, however, that a complete command of the sea is given to one side in a war. This was the case in our Mexican War, because Mexico had practically no navy. But usually the weaker navy is strong enough to control certain areas. Geography is apt to play a predominant part in this. Germany, with the Kiel Canal, never lost control of the Baltic during the World War. Russia's ability to use the sea was never threatened by Japan during the Russo-Japanese War except in Far Eastern waters. The United States never menaced Spain in European waters in 1898. Sometimes the naval strength necessary to obtain control of all sea areas is not available. Sometimes the results to be obtained through the extension of control are not of sufficient value to warrant the necessary expenditure of effort.

When both contestants in a war possess naval forces of a reasonably comparative magnitude, the naval situation usually resolves itself at the

outset into one in which each side has control of a certain sea area. Outside of these two areas there may be other areas which neither controls. As the war proceeds, each side will wish to extend its control beyond the area initially held by it. Each will try to increase its own sea communications and decrease those of its enemy.

Corbett classifies naval operations as those undertaken for securing command, those for disputing command, and those for exercising command. In the syllabus of the War College course they are classified as operations for securing command of sea areas, as operations in sea areas not under command, and as operations in sea areas under command.

As seen by one belligerent, the term "sea areas not under command" may include anything from areas held in great strength by the enemy to areas held by neither. Except in the vicinity of bases, command of a sea area is not an easy thing to maintain continuously. The arrival of a superior naval force in an area may bring about a shift of its control from one belligerent to the other. Such a shift may be temporary or it may be permanent, depending upon whether or not the superiority can be maintained. During the wars between Great Britain and France fought in the 18th Century, we see control of the Mediterranean usually in the hands of the British, but sometimes reverting to the French through the inability or failure of the British to maintain a superior fleet there. The influence of well located bases in retaining control of an area is illustrated by the importance the British attached to holding Minorca during this period, as well as by their capture of Malta in 1800 and its subsequent retention.

Mahan has given the three requirements of a naval base As: (1) Position, (2) Strength, and (3) Resources.

Position cannot be created by man, but the value of position may be modified by changes in weapons and in political conditions. The growth of fleets, both in numbers and sizes of units, has rendered mf little valbe ports that were once of great strategic importance. Port Mahon in Minorca, and Santa Lucia in the West Indies are examples of this. The submarine has made any unprotected anchorage of doubtful value. The increasing range and power of aircraft have rendered dangerous bases in flying range of potential enemies possessed of air power. The decrease in the value of Malta to Great

Britain has been caused by the proximity of an unfriendly Italy with heavy air strength available for use from Sicily less than 100 miles away. A hostile France would have a similar effect on British naval bases in the south of England. A hostile Spain could make Gibraltar untenable.

Strength in a naval base is something that is largely inherent in its topographic and hydrographic situation, but much must be added by man to improve and strengthen the natural situation.

Resources must usually be brought to a naval base. This makes the proximity of the resources that are required, and the security of the lines of communication over which they must come, a matter of prime importance in naval warfare. A little consideration of the comparative difficulty of our keeping a fleet base supplied in the Caribbean, on the one hand, and in the Philippines, on the other, will make this point clear. A base in the Caribbean would be close to home resources, and its lines of communication would be well covered. A base in the Philippines would be nearly 7000 miles from our West Coast, and its lines oc communication across the Pacific would be flanked by Japan. If supplied by way of Suez from our East Coast, the lines of communications would be covered, so far as Japan is concerned, but the distance would be increased to about 11,000 miles.

Command of sea areas is gained by defeating, driving off, or immobilizing enemy naval forces threatening the use of those areas. Before the advent of submarines and aviation, such control was gained by the battle fleet of one belligerent defeating that of the other, if the latter would come and fight; or, if it would not, then by blockading it in port. This was the situation that existed prior to the World War. During the Napoleonic wars British squadrons blockaded the French and Spanish in whatever ports the latter took refuge, ready to give battle whenever the enemy put to sea. During the Russo-Japanese War the Japanese fleet under Togo from its base at the Elliot Islands kept a close watch on the Russian fleet in Port Arthur, ready to prevent by battle any interference by the Russians with the Japanese communications to Korea and Manchuria.

The close blockade, in the days of sail, had been liable to interruption by stress of weather, and whole squadrons might escape to sea without being

brought to action by the blockading force. Under steam, however, the close blockade was able to prevent the escape of major enemy forces. Our own Battle of Santiago and the Battle of the Yellow Sea, by which the Japanese turned back the Russian Fleet to its doom in Port Arthur, illustrate the effectiveness of the close blockade prior to the days of the submarine. The surface raider, whether privateer, as in earlier days, or the raiding cruiser, such as the Alabama or the Shanandoah during our Civil War, contained the chief threat to the safe use of the sea, once the enemy fleet had been accounted for, either by battle or by blockade.

So long, therefore, as any hostile naval forces exist, even though they may be inferior, command of the sea is not certain. It may be challenged at any time, either by operations in strength or by individual ships. Once the hostile navy is disposed of, this threat for all practical purposes no longer exists. In theory it would seem that the only proper objective for the naval forces of one belligerent is the naval forces of its opponent. Were it possible for both sides to delay all use of sea communications until the issue was settled by battle, and were both sides willing to submit the issue to the outcome of an early battle, such a theory would work out well in actual practice.

Usually, however, the weaker belligerent has no intention of staking so important an issue on a game in which the cards appear to be stacked against it. So long as it has defended ports, it can withhold its fleet from action with the enemy. The Spanish squadron in Santiago, the Russian in Port Arthur, and the German fleet in its based in the German Bight, are all examples of inferior naval forces withdrawn to places where enemy naval forces could not reach them. Except for the advent of aviation, which reduces to some degree the security of ships at anchor even in well defended bases, this situation still exists.

The problem for the belligerent with the stronger fleet then becomes more difficult than it would if it could at once come to grips with the enemy's fleet, as Dewey did at Manila Bay. It must decide what sea communications are essential to its use; how they are to be used to further the general plan of the war; how they are to be protected against possible enemy action, so long as the enemy has naval forces ready to use against it; and how it can bring

pressure to force the enemy to risk his naval forces in action, so that the threat of these may be eliminated.

Another quotation from Corbett's "England and the Seven Years' War" presents this problem as the British naval historian found it to exist in the 18th Century. He says, "The function of the fleet, the object for which it was always employed, has been three-fold: firstly, to support or obstruct diplomatic effort; secondly, to protect or destroy commerce; and thirdly, to further or hinder military operations ashore. Here then, we get a formula widely different from current definitions of naval strategy. The distorting influence of the enemy's main fleet is reduced as it becomes obvious that we have to think of many things beyond securing command of the sea. We begin to distinguish more clearly between the means and the end of naval policy. In most cases it is true that to secure the command of the sea by destroying the enemy's fleets is the best way of ensuring that your own fleet will be in a position to discharge its three-fold functions. It never has been, and never can be, the end itself. Yet obvious as this is, it is constantly lost sight of in naval policy."

Since the days of sail weapons have changed. The speed of ships and of fleets has increased many times. Movement is no longer dependent on the direction and force of the wind. Information can be transmitted almost instantaneously. But the problem remains essentially the same, and, while better information may be available for the solution of naval problems, the tempo of naval operations has been greatly augmented.

If the mere threat of an inferior fleet were sufficient to prevent the full use of sea communications by the other belligerent, the progress of a war might be vitally affected. The Russo-Japanese War would have been won by Russia without serious fighting, if Japan had waited until the Port Arthur Squadron was eliminated before commencing the transport of troops to the mainland. All the Russians would have had to do was to retain their ships safely in port as a threat, while they built up their military forces in Manchuria and occupied Korea. If the British had waited for the German Fleet to come out for battle before they started their troops to France, the World War might have had an early and a different ending.

So we see that the belligerent who is the stronger at sea must not only make provision for continuing its essential commerce and for stopping that of its enemy, but it must be prepared to protect its coasts and to support its military operations, including, often, the early movement by sea of large bodies of troops. Both from the point of view of the lives involved and of the effect on the course of the war itself, the safe transport of troops across a sea open to enemy action is one of the most responsible duties that can devolve upon a navy. There were many instances during the World War which illustrate the influence that German naval threats against troop movements had on the naval operations of their enemies. There has already been mentioned the early troop movement across the Channel. The protection of French North African troops on their way to France, and the desire on the part of the British government not to offend neutral Italy, both interfered vitally with the concentration of French and British naval effort on the destruction of the Goeben and the Breslau before these ships escaped to Constantinople. This was a subjection of a clear naval objective to the demands of military strategy and of national policy. Who knows what the effect on the course of the war might have been if Souchon had not been successful in getting his ships safely to Constantinople, there to increase German prestige to the point where Turkey came over to the German side and then to give Turkey naval control of the Black Sea? Similarly, there may be cited the effect of the Emden, operating in the Indian Ocean in interfering with both troop movements from Australia and with the movement of commercial shipping in the areas threatened by her.

The necessity for continuing the use of sea communications, in order that the normal life of the country may not be unduly interfered with, and in order that the plans for the war may be vigorously prosecuted, while at the same time endeavoring to nullify the effect of the enemy's fleet either by battle or by blockade, presents a difficult problem.

Your study of German Cruiser Warfare will bring this home to you. The British had to destroy Von Spee's squadron and at the same time to keep sufficient strength in the North Sea to contain the High Sea Fleet in its bases or to defat it if it came out for battle. The first force under Craddock,

which the Admiralty sent against Von Spee, was unsuited to its task. With the Canopus it did not have speed enough to bring the Germans to action. Without the Canopus it was too weak. After the defeat of Craddock at Coronel, Fisher was forced to weaken the Grand Fleet, at a time when its margin of superiority over the High Sea Fleet was none too great, by the despatch of two battle cruisers under Sturdee to do the job. This time the force sent was adequate, and Von Spee was destroyed at the Falkland Islands. Fortunately for the British, the High Sea Fleet was not operated during this period with a view to relieving the pressure on Von Spee, so no bad results came from the absence from the Grand Fleet of these two important units.

The reverse of this picture is the operations that may be undertaken by the weaker belligerent in sea areas which it does not control, in order to dispute or interfere with the control exercised by its opponent. Such operations have a considerable range of variation. They may be anything from a single ship, such as a submarine or cruiser, preying on the enemy's commerce, to the operations of an entire fleet, avoiding a decisive engagement but possibly using its greater mobility and freedom of action to inflict damage on isolated and inferior portions of the superior enemy fleet - the use of the fleet-in-being.

Operations of this character must be studied by the stronger, as well as by the weaker, naval Powers. As already remarked, it seldom happens that the stronger belligerent can control all sea areas. In some its enemy will reverse the role and be "top dog". Castex refers to "the 'no man's land', which ordinarily in naval warfare in period of stabilization separates the 'fronts' held by the principal surface forces" - a vivid way of describing the area in dispute between two contestants, whole fleets have been established within striking distance of each other. A further reason for the stronger naval Powers studying such operations is that only by so doing can they grasp the potentialities of a fleet-in-being and learn how best to counter such a fleet and bring it to action.

Although you will give much time and thought while at the War College to that climax of naval effort, the fleet action, it is well to remember that, historically, fleet actions on a large scale are rare compared with the

number of minor naval actions that are fought. Your study of the World War will bring this home to you. There always exists the difficulty, previously mentioned, of forcing a weaker fleet to accept decisive action. Naval operations as a whole however must be based on the fleet. As Mahan puts it: "In naval war the fleet itself is the key position of the whole."

There is one factor inherent in a naval battle which must not be overlooked. This is its effect on the morale of the warring countries. If decisive, there is something so complete and spectacular about a naval battle of any magnitude as to command immediate world wide attention. A defeated army may often be rebuilt with fresh men. A defeated fleet is, on the other hand, in large part sunk. Years are required to build new ships and train new crews for them. Mahan, in describing the Battle of Cape St. Vincent, speaks of Jervis's statement before the battle - "A victory is very essential to England at this moment" - and goes on to tell of the tremendously inspiriting effect which the news of the victory had on the British public.

As there will be separate presentations on operations for securing command of sea areas, on operations in sea areas not under command, and on operations in sea areas under command, these subjects have only been touched upon here to indicate their general relationship to naval warfare as a whole.

Several references have been made to the "science of naval warfare". This brings up the distinction between war regarded as a science and war regarded as an art. Both terms are in common use, sometimes apparently synonimously. The War College, however, makes a distinction. By the science of war is meant knowledge which has been gained, verified, and classified by observation and correct thinking. This knowledge comes chiefly from a study of the history of wars, of naval and military campaigns. Many writers have tried to summarize the lessons they have drawn from their study of war. Such summaries frequently take the form of what are called the "principles of war". Correctly understood, such a statement of "principles" is of much value. But because of the wide variation, both in the number of them and in the manner of presenting them by different writers, the War College no longer gives them as such to the students. The substance of them will, however, be found embodied in the pamphlet on "Sound Military Decision", which you will study later this month.

It should be noted that the science of war is not an exact science, like mathematics or physics, but it more nearly resembles the science of medicine. Just as there is a science of medicine, and an art of medicine, which consists in the correct application of that science in the treatment of human beings, so we have a science and an art of war. The art of war lies in applying its science to the solution of military problems.

The science of war the War College endeavors to give you by means of your reading course, by staff and student presentations of important historical campaigns and battles, and by the lecture course.

The operations problems give you an opportunity to apply the science of war to the solution of military problems - in other words, to learn something of the art of war. You will note the subject of Military Planning is covered in the syllabus of the course. These operations problems will be designed to bring out different features of naval warfare. Since geography plays so important a part in all strategy, the situations envisaged by the problems will occur in different areas that are considered of special concern to the United States. The problems represent no attempt whatever to be all or a part of any war plan.

Operation problems are classed as strategical or tactical. This brings up the question - what is the difference between strategy and tactics.

Clausewitz says that strategy is the theory of the use of combats for the object of the war and that tactics is the theory of the use of military forces in combat.

Jomini defines strategy as all that goes on in the theatre of war, tactics as the art of fighting on a field of battle.

Von Moltke states that strategy shows the best way leading to the battle, it tells <u>where</u> and <u>when</u> it ought to be fought; while tactics teaches the method of using the different arms in the battle, it tells <u>how</u> one ought to fight.

These definitions of strategy and tactics embody the most generally accepted ideas of the distinction between them. Castex calls this the horizontal separation of the two fields, and adopts it as his own, although explaining that a more modern school of French and Italian writers prefers

what he calls the vertical separation - that is, strategy is conception or planning, tactics is execution.

The pamphlet on "Sound Military Decision" has the following to say about strategy and tactics:

> "As usually defined, strategy, the art of projecting and directing the more extensive military movements and operations of war, is distinguished from tactics in that the latter is the art of handling forces in battle, or in the immediate presence of the enemy. When used in this sense, tactics is not to be confused with evolution and maneuver.
>
> "Tactics is the employment of means to gain an immediate local aim, in order to permit strategy to gain a further aim."

This is in line with the horizontal separation.

It is impossible, however, in the solution of any military problem to disregard either strategy or tactics. Both enter into any actual situation requiring action. Strategy uses tactics as its tool to accomplish the ends desired. No tactical action can be taken without due consideration being given to its strategical background.

The chief distinction between operations problems classed as strategical and those classed as tactical is that the strategical ones emphasize strategical considerations and they may or may not lead to major tactical action; whereas the tactical ones are expressly designed to lead to major tactical action and, as a result, strategical considerations are subordinated to a large extent.

In addition to the subject of "Military Planning", there are in the syllabus of the course the subjects of "Military Operations", "Naval Types in Strategy and Tactics", and "War Command".

The need for information on how best to use the different types of weapons available in our forces and how best to organize the command of them is so obvious as to require little discussion. It may be, however, that the necessity for the inclusion of "Military Operations" in a course at the Naval War College is not so clearly indicated.

A study of past wars will show few that have been won by naval action alone. The wars between England and Holland were naval wars, but in these the object of both belligerents was the destruction of the sea-borne trade of the other, obviously a suitable naval objective. While naval action that ensures the use of sea communications to one side and denies it to the other, is a potent weapon, such a weapon, used alone, can usually be effective only against a country which cannot exist for long without sea-borne imports and exports. Countries, which are actually, or for all practical purposes, insular, are of course most likely to succumb to naval pressure alone.

For island Powers to win wars against continental enemies, military action must generally be used in conjunction with naval action. Sometimes, in the case of British wars, allies on the continent of Europe furnished the major part of the military forces used there. But Great Britain has always supplied some army for use on the continent, even if a large part of her military effort were being used elsewhere to expand the borders of the Empire.

The geographical position of the United States makes it likely that in any war waged by her without allies against a European or an Asiatic Power, naval warfare will play a great part. But that such a war can be fought and won by the Navy alone without military support and assistance is hardly possible. Joint operations will play an important part whether our fleet is to carry the war to enemy waters, or whether we are to seize enemy territories in our own hemisphere and then to remain on the defensive. Hence the necessity for some knowledge of the capabilities and requirements of military operations. We must be prepared to use military operations to assist in the attainment of naval objectives. We must be prepared to use naval operations to help reach military objectives. Only through a sympathetic understanding of the difficulties of each other's problems and a comprehension of the possibilities and the limitations of the tools with which the other must work can the army and the navy achieve the coordination required for success in joint operations.

The presence at the War College, both in the student body and on the staff, of officers from the Army and Marine Corps enables us to study more intelligently the many problems that are involved in joint operations and to build up a mutual trust and confidence between individuals that in later years may be the basis for that spirit of cooperation without which no war involving close relations between our military and naval forces can be successful.