

The navy sociology: organization. heritage, history and future.

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ABSTRACT

Military sociology is predominantly the sociology of armies. Although much of the behavioral science research on military groups has included navy research subjects and naval support (e.g., Bachman & Blair, 1975; Bachman, Blair & Segal, 1977; Forbes, 1976), the literature has not recognized the structural characteristics that distinguish navies from other branches of the armed forces, nor the consequences of these distinguishing characteristics for the role that navies play in the Military system. As an exploratory study of the military system, this research will analyze army- navy differences and clarify the sociological conceptualization of navies and their relation to war.

The manuscript of this research is that armies and navies are organizationally different, and that theories in military sociology rooted in studies of armies are insufficient for understanding naval organizations. This is not to argue that no overlap exists between army and navy organization, but rather that there are differences in modal types of organizations.

The hypothesis of my thesis concerning Army and Navy organizations and their relation to war is that land warfare as a type of war is different from naval war. Accordingly, the nature of war will affect the organizations in a differentiated manner. Differences in the nature of war, whether of conventional or unconventional characteristic depending on the type of war will elicit from each organization (Navy or Army) different organizational responses.

RESUMEN

La sociología militar se centra principalmente en la sociología de los ejércitos. Si bien gran parte de la investigación en ciencias del comportamiento sobre grupos militares ha incluido sujetos de estudio de la marina y el apoyo naval (p. ej., Bachman y Blair, 1975; Bachman, Blair y Segal, 1977; Forbes, 1976), la literatura no ha reconocido las características estructurales que distinguen a las marinas de otras ramas de las fuerzas armadas, ni las consecuencias de estas características distintivas para el papel que desempeñan las marinas en el sistema militar. Como estudio exploratorio del sistema militar, esta investigación analizará las diferencias entre el ejército y la marina y clarificará la conceptualización sociológica de las marinas y su relación con la guerra.

El objetivo de esta investigación es demostrar que los ejércitos y las marinas son organizativamente diferentes, y que las teorías de la sociología militar basadas en estudios de ejércitos son insuficientes para comprender las organizaciones navales. Esto no implica negar la existencia de superposición entre la organización del ejército y la marina, sino más bien señalar que existen diferencias en los tipos modales de organización.

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INTRODUCTION

As an insider to the military system, Air Force Colonel Franklin Margiotta, in his summary of the papers published in his book *The Changing World of the American Military*, made explicit some avenues for future research. Among these, he posed one concerning structural differences among the branches of the armed forces. Moreover, when suggesting this research, he stated that "scholars have continually fallen into the trap of studying the U.S. Army and generalizing about the U.S. military as a whole" (Margiotta, 1978:442).

Naval sociology is different from army sociology because of structural and functional difference between these organizations. Differences between armies and navies can be found in their a) military setting, b) relation to war, and c) in the socio-psychological role of military interaction. These organizational differences, in turn, affect how rigidly or adaptively army and navy organizations respond to conflict situations.

In this context, the hypothesis of works is concerning Army and Navy organizations and their relation to war is that land warfare as a type of war is different from naval war. Accordingly, the nature of war will affect the organizations in a differentiated manner. Differences in the nature of war, whether of conventional or unconventional characteristic depending on the type of war will elicit from each organization (Navy or Army) different organizational responses, as part of the heritage and history.

DIFFERENCES IN THEIR MILITARY SETTING: The military setting of an organization implies two related structural considerations. First, it implies structural characteristics of the basic military unit upon which the organization relies to perform its mission. Second, it involves the environmental characteristics within which the organization operates. Whereas the former is defined by operational conditions, human or physical, which constrain the military unit, the latter is determined by three contingency factors present in the environment: stability, complexity, and hostility. Differences in the military setting of armies and navies then, can be found in the structural nature of their basic military units, and in their organizational environments.

Basic Military Unit: The rapidity of action in war has elicited from army and navy organizations different kinds of responses. Through military history, human factors have prevailed in ground combat situations. In land warfare, the individual soldier is regarded as the real basis of the engagement. Although in land warfare maneuver units

are regarded as the basis of war, any military unit present on the battlefield is still subjected to the threat posed by an individual soldier's weapon. Moreover, in critical situations, responses based upon individual initiative and decentralized command are the only means an army has to successfully perform its mission. It is perhaps no accident that the major sociological study of American military organization in World War II was entitled *The American Soldier* rather than *The American Army*.

Navy organizations, on the other hand, with the exception of units anchored in port, are not endangered by individual fighting, and hence the ship, rather than the individual is considered to be the real basis of the naval engagement. External physical factors constrain the individual sailor in geographical areas and physical spaces, and demand mechanistic responses characterized by a highly centralized command structure and formalized behavior.

Military Environment: Contingency factors present in the environment, distinctive to each organization, play a role in differentially structuring armies and navies. Through environmental variation in stability, complexity and hostility, navies and armies have evolved in different manners with respect to their form of combat operation and their approach to war. In fact, changes in army ground combat doctrine due to changes in technology, have affected the form of combat operation, whose military actions have evolved from mechanistic to organic responses. This evolution in armies has affected not only their approach to war, but also their military function.

Changes in technology in naval war, on the other hand, have reinforced the traditional nature of navies, whose military function has remained unaltered. For a navy, seeking command of the sea by means of offensive actions is a demand of the indivisible nature of the sea as a common environment of war, and it is a function of self defense and individual survival as well.

Differences in organizational relation to war

Differences between army and navy organizations related to the nature of war, can be found in their dissimilar approaches concerning strategic and tactical considerations. These considerations are dependent on a) the nature of war (conventional or unconventional), b) the type of war (land warfare or naval warfare), and c) the structural nature of the basic unit upon which the organization relies to perform its military mission (human or physical factors).

Difference in the nature of military interaction.

Differences between army and navy organizations can be also be found in the nature of their military interaction. Unlike army organizations, whose military interaction has historically been linked to war, in navy organizations military interactions have developed from a broader social role linked to the economic and social development of civilian societies.

Maritime interaction among those societies who used navigable waters as means of communication and transportation has produced a common body of symbols and shared understanding. These naval symbols include a universal nautical jargon, naval customs and traditions, and imply shared value orientations which further differentiate navies from armies and other military organization.



>> Sketche from James Abbot McNeill, circa 1900
Font:https://www.invaluable.com/artist/whistler-james-abbott-mcneill-s0zfkvt3bc/sold-at-auction-prices/?srsltid=AfmBOoq8H_OdrLgoGPihsAi-U2skmct97g9B48TS7uTdg8p-5YSzaDzl



>> JAMES ABBOT MCNEILL WHISTLER, (NY/UK/FR, 1834–1903); "Soup a Trois Sous", circa 1859 etching, signed in plate, a self-portrait in Paris Font: https://live.thomastonauction.com/auction-lot/james-abbott-mcneill-whistler-ny-uk-fr-1834-190_ff0f60cab6

HYPOTHESES

Hypothesizing army- navy differences I will rely on three structural variables:

- a) the nature of their military setting,
- b) their relation to war,
- c) the nature of their military interaction.

Within each of these variables I will first, hypothesize structural and functional differences between both organizations and second, I will relate each of these variables to the type of response, whether mechanistic or organic, that they elicit in army and navy organizations.

Finally, by means of the above hypothesis concerning organizational differences and their corresponding linkages to the types of organizational response being elicited in army and navy organizations I will derive a general proposition concerning army and navy differences.

METHODOLOGY

Seltiz, Jahoda, Deutsch and Cook (1966:52), when writing about research purpose and research design, made explicit the distinction between "exploratory" and "descriptive" study. Stressing the importance of the former they wrote: "if experimental work is to have either theoretical or social value, it must be relevant to broader issues than those posed in the experiment. Such relevance can result only from adequate exploration of the dimension of the problem with which the researcher is attempting to deal". As an insider of the military organization, I will focus my research on an exploratory study of the military system.

As an exploratory study of the military system, through this research I expect to clarify concepts and provide insights regarding the scope of the area upon which the military functions, the major social variables which are most likely to affect its social structure and functions and of the setting of the basic military unit in which these variables occur.

1. Focussing my analysis on those underlying factors of the military social structure already defined by Mintzberg (1978) as: "contingency factors" which are associated with each particular environment, I will analyze those factors affecting the structure of naval organizations that make them different at the meso and micro levels from those found in Army organizations. Among these contingency factors affecting the military system I will focus my attention on the variables-stability, complexity, and hostility.
2. Stressing the sociological nature of war, I will analyze structural responses of both services constrained first, by a relatively predictable environment exemplified by instances of conventional war, and second, constrained by a dynamic and unpredictable environment exemplified by instances of unconventional war.
3. I will focus my analysis on the naval functions of maritime interaction and on the organizational meaning that navies ascribe to military action. By means of a sociology of human groups I will provide access to subjective aspects of naval action and to the realm of navy meaning and motivation.

In order to provide socio-psychological insight into the military system and navy organization I will focus my attention in those structural responses that have grown up out of social interaction. Through maritime activities these responses have had a broad affect in structuring navies.

These commonalities of naval symbols, providing shared understanding in naval activities, have traditionally

played a socio-psychological role in structuring the naval organization, its military discipline and its institutional cohesiveness. Moreover, these shared values underly and define institutional behavior and naval policies.

The military setting. If we are to compare army and navy organizations in their military setting we have to center our analysis on: a) their military mission; b) the basic military unit upon which each organization relies to perform its mission; and c) the environmental characteristics within which the organization operates.

Organizational Mission of Armies and Navies. The organizational mission of an army is to defeat enemy land forces, and to seize, occupy and defend land areas. The organizational mission of a navy is to seek out and destroy naval enemy forces, to suppress enemy sea command and to gain and maintain general sea supremacy (COPE, 1955). Thus, in fulfilling the function of imposing one's will over an opponent, the two organizations are oriented to seek superiority over the enemy. In doing so, both the army and the navy base their actions on the same implicit assumptions, which is the principle of preserving one's self and destroying the enemy.

Structural characteristics of armies and navies in their units. Armies are functionally organized into combat and support units. In performing their mission there is a hierarchy from corps through divisions, brigades, regiments, battalions, and companies down to the individual soldier. Whatever form the basic unit takes, although it may ultimately lose its social structure, it will not lose its mission. The individual soldier fighting the enemy still performs the army mission on his own.

Fighting a war on land still involves the classic view of armies which rely on soldiers to carry out their mission. Although armored warfare has meant the introduction of armored mobile platforms and weapons to defeat them, the individual soldier has maintained his military role. Fighting a tank in land warfare by means of anti-tank weapons (gun, rockets, etc.) the soldier is still able to perform the army mission. Armies are basically dependent on soldiers.

Military strategists as well as historians and military sociologists have stressed the predominant role of the individual soldier in land warfare. The view of the individual soldier as the basis of the engagement war confirmed by the eminent military strategist Karl von Clausewitz (1953), who, in his famous and remarkable book on war, makes a comparative analysis of the relative importance of the three principal arms which characterized an army of his time. He analyzed and compared the relative importance of infantry, cavalry and artillery. If we substitute armored force and tanks for a cavalry and horses we can realize that his conclusion is also true for modern times.

In the war of present time firearms are by far the most effective means. Nevertheless, the personal combat, man-to-man, is just as clearly to be regarded as the real basis of the engagement. For that reason an army of artillery alone would be an absurdity in war. An army of nothing but cavalry (thank) is conceivable, only it would possess very slight intensive strength. An army of infantry alone is not only conceivable but also much stronger. (Clausewitz, 1953:237 translated by Jolles).

John Keegan (1977), in analyzing the role of infantrymen in modern wars, pointed out that although it is true that great battles of the second world war in France and the desert were characterized by the employment of tanks and aircraft, most of the fighting between armored division was in practice not between tanks and tanks but between infantry and infantry and between infantry and tanks.

Navies, by contrast, are functionally organized into task forces, groups and units. Whatever form the basic unit takes, it will hierarchically be differentiated by physical size and technological characteristics. Ranking from battleship through cruisers, destroyers down to patrol vessels, in the performance of their mission, the naval basic unit will always keep its social structure. Naval operations are not reducible to the individual sailor.



>> Sketches from William Walcott Font: https://www.invaluable.com/artist/walcott-william-t75mndo6rl/sold-at-auction-prices/?srsltid=AfmBOooHuLDLZECSrllnoHh_9NjVqARpitlfepGKtVWiwEtSxGrSwChi

Navies, in the performance for their mission at the individual level, unlike armies, are still dependent on the functional interdependencies of their crews. Because of the fact that naval units operate within a relatively predictable environment where hostility factors can be predetermined, navy organizations, as a function of goal performance and as the only way of ensuring individual survival, must rely on a mechanistic form of organization. Thus, naval organizations are framed in team, oriented activities. Synchronization of behavior manifested by centralized command is the key note of their basic units.

Military Environment. One of the main features of the military organization is that professional soldiers operate within a bureaucratic framework with heavy emphasis on action planning, formal drills, ritualism and discipline.

At the micro-level, however, each particular organization stresses distinctive contingency factors which are peculiar to the natural context upon which the military functions.

If the military organization is to work effectively, it must assume a formulation-implementation dichotomy. whereas the formulation phase concerned with the general direction of the war is covered under the military notion of strategy, the implementation phase which entails deployment of the basic military units of a particular military organization is covered under the notion of tactics.

Both functions, strategic and tactical, presuppose two fundamental conditions; previous information and a relatively stable environment (Braybrooke and Linblom, 1963). As Mintzberg pointed out, "The absence of either condition should lead to a collapse of the dichotomy,

to proceeding with formulation and implementation in an adaptive rather than a planning mode" (Mintzberg, 1979:345). Among the contingency factors which characterize naval organizations, the sea, as a natural environment affects the structure through variables of stability, complexity, (diversity) and hostility. Each of them elicits organizational responses and molds the structure accordingly.

Stability. An organizational environment can range from stable to dynamic. A variety of factors can make an environment dynamic including unpredictable tactical situations, as in the case of guerrilla warfare, where running and hiding are defensive means for aggressive ends. However, as Mintzberg pointed out when referring to such factors, it must be noticed that the notion of dynamic is not defined as synonymous with the notion of variable.

Burns and Stalker (1966), in their book The Management of Innovation, found that for a given structure, parameters concerning formalization of behavior varied according to the factor of predictability of the environment. Some social organizations were better able to handle their dynamic environment with an organic structure, while functioning more effectively in their stable environment with a bureaucratic structure.

The structural assumption that "the more dynamic the environment, the more organic the structure," is a functional response of a given organization to cope with uncertainty. General S.L.A. Marshall, considered by scholars as a leading historian of the European Theatre, in his book Men Against Fire, wrote when referring to changes in the battlefield, "the quality of the initiative in the individual has become the most praised of military virtues" (Marshall, 1947:22).

The above assumption concerning initiative in combat situations has led scholars to believe that this characteristic is sine qua non for military organizations. Likewise, Morris Janowitz, in his book Military Conflict, when referring to changes in military authority wrote, "for combat the maintenance of initiative has become a crucial requirement of greater importance than the enforcement of discipline" (Janowitz, 1975:226).

As John Keegan pointed out in his book, The Face of the Battle, battle for the ordinary soldier is a very small-scale situation which will throw up its own leaders and will be fought by its own rules" (Keegan, 1974:48). Thus, individual initiative in ground combat situations is a reflection of the need for flexibility while performing the organizational function. Moreover, it is required for individual survival.

In naval warfare, on the other hand, external physical factors which affect the basic units constrain individual behavior. As we saw before, navies are not structurally allowed to adopt organic responses. Furthermore, under circumstances of extreme danger, the need for a centralized command is reinforced within a bureaucratic

structure. If a naval unit is to survive, the Skipper's orders as well as those formal procedures learned in formal drills cannot rest on the individual will. Hence, it can be stated that in any Navy, as a function of individual survival and goal performance, a given order and formal procedures must be carried out to the letter.



>> Image. A Frigate at Sea. Pierre Puget French. 17th century Font: <https://www.metmuseum.org/art/collection/search/339658>

Evolution in Army Approach to War. The affect of new technology in army organizations has been to draw their soldiers into wider areas. Changes in army organization have resulted in compound forms of combat operation which call the organization for decentralized functions framed in organic forms of response.

Wars in the past were limited in scope and mobility, in large part because the means available for fighting them were defecient and ineffective. I Accordingly armies in the past adopted their approaches to the rudimentary instrument of firepower available to them. Technical deficiencies then, forced army organizations to mass in tight formation, maneuver into position and then, fire a volley in unison in order to maximize the affect of firepower (Osgood, 1975:65). Thus, as a function of goal performance as well of individual survival, trainging and tactics in the past were tailored by armies oriented to face hostility with mechanistic responses imposed by required maneuvers and positions.

Deitchman (1979), in his analysis of the affect that new technology has had on the scope of operating areas, pointed out that it has changed from roughly the size of a small town to the size of an entire country and much more. He compares the essential maneuvers made by Napoleon, Wellington, and Blucher with armies of 70,000 men in waterloo (1815) in which they covered distances of a dozen mile, with Patton's army in WWII who with an army of nearly 200.000 men covered 350 miles in six weeks. Although the action of battle in land warfare has remained constant

(Keegan, 1976), as the number and means available due to new technology grew, new strategic and tactical considerations came to challenge the military in its approach to war. In fact, since the second half of the nineteenth century, significant advances in technology such as the breech loading rifle, percussion cartridge, machine guns, etc. affected the rate of fire and mobility of armies which in turn affected military approaches.

General Von Moltke, the Field Army Chief of Staff of the Prussian Army, who successfully planned and commanded the army through three consecutive wars (against Denmark, 1864; Austria, 1866 and France 1870-71), recongnized that a true revolution was taking place in weapon affects which deserved new considerations and conceptions in military approaches.

Evolution in Navy Approach to war. The affect of a changing technology in navy organizations has reinforced the nature of navies, which are oriented to face hostility by means of mechanistic responses. Evolution in form of combat operation then, can be seen as functional responses to technological changes and as a reflection of the structural nature of navies.

Sir Julian Corbett, the eminent naval historial, classified the evolution of ships in terms of their historical importance and stated that this division was not artificial but natural. There was a period of oars, and a period of sails, and a period of steam (Corbett, 1899). Russian admiral Gorshkow (1979), commader in chief of the Soviet navy and the creator of contemporary Soviet sea power, in his book The Sea Power the State, links the above taxonomy to the evolution of naval combat operations. Furthermore, the russian admiral desmonstrates how these changes have defined the tendency of naval organizations to rely on functional interdependencies framed on mechanistic responses characterized by a highly centralized command and formalized behavior.

Admiral Gorshkow sees "engagements", "battles," and "operations" as an outcome of technological affects in navy organization within a particular "natural" epoch. Th fleet of antiquity, using oars as motive power, had great maneuverability bu little sea endurance. Therefore, accomplishment of the naval function relied on "clash of vessels" and its naval manifestation was the "sea engagement, "although human factor prevailed in this form of combat operation, which led to some degree of organic response, coordinated actions fradme in formalized behavior were required.

The sailing ship had almost unlimited sea endurance but due to its dependency on the wind, its tactical movement was resrtricted. To gain advantageous positions in the better use of his own weapon, the "maneuver "was introduced in naval war as a structural requirement of changing technology which tightened even more naval actions in machinistic responses. The above aspect persisted until th initial stange of the steam ship, which not only resotred tactical mobility but also reinforced reliance on mechanistic responses in achieving the highest concentration of strike power. Thus, the "battle" was its consequence.



>> Batalla de Trafalgar. Óleo sobre tela, W. Turner, año 1822; 261.5 cm x 368.5 cm. Fuente: [https://en.wikipedia.org/wiki/The_Battle_of_Trafalgar_\(Turner\)#/media/File:Turner,_The_Battle_of_Trafalgar_\(1822\).jpg](https://en.wikipedia.org/wiki/The_Battle_of_Trafalgar_(Turner)#/media/File:Turner,_The_Battle_of_Trafalgar_(1822).jpg)



>> Philip James de Loutherbourg, Lord Howe's Action, or the Glorious First of June, oil on canvas (1795), 266.5 x 373.5 cm Fuente: [https://en.wikipedia.org/wiki/The_Battle_of_Trafalgar_\(Turner\)#/media/File:Loutherbourg-La_Victoire_de_Lord_Howe.jpg](https://en.wikipedia.org/wiki/The_Battle_of_Trafalgar_(Turner)#/media/File:Loutherbourg-La_Victoire_de_Lord_Howe.jpg)

As fleets developed with formation of diverse forces (submarine, aircraft) and widened the nature of their weapons, naval war has implied higher synchronized actions and centralized command. As Gorshkow (1979) pointed out, the gun duels of different ships were augmented by attack of light, rapid, non-armoured torpedo forces, submarines, and aircraft, which meant a sea tactic of diverse forces with higher interaction and precise coordination. The appearance of rocket weapons has accentuated this tendency (Gorshkow, 1979:215).

Hostility. Hostility is another contingency factor present in the military environment. Which plays an active role in structuring military organizations. Military threats, as well as those factors affecting military operations, must be constrained by the diversity of danger to which a military organization is exposed and hence must be ready to cope with.

Hostility factors affect the structure through their effect on predictability of work (Mintzberg, 1979). Each military entity will solve structure. Hostility factors present in the environment such as those found in combat situations or in adverse climatic or geographical conditions can be overcome through either active or passive methods. They can be faced or avoided respectively and both approaches imply distinctive organizational assumptions. Whereas facing hostility is linked to a planned mode which presupposes a relatively predictable environment (i.e., conventional war) avoiding hostility is linked to an adaptive mode of action which presupposes a highly unpredictable environment (i.e., unconventional war). The former leads the organization to the adoption of mechanistic responses. The latter drives the organization to adopt subtle organic responses.

Although hostility factors can be overcome through active or passive methods, the very fact of adopting a particular response, either mechanistic or organic, is linked to environmental conditions and to whether the organization stresses human or external physical factors. Failing to apply the correct model to a given situation might lead to dysfunctional responses.

The Case of Army. The above assumption concerning the nature of response can be demonstrated by the American experience of the Vietnam war. Wayne Eisenhart, in his *Analysis of Modern Combat Training* (1975), comes to the conclusion that American soldiers bent upon killing a dehumanized enemy become disoriented by a war for which they were ill-prepared and which led them, as dysfunctional responses, to intense emotional conflicts. These conflicts were exacerbated by the frustrating nature of the Vietnam war. The Vietnam war had no territorial objectives and the enemy there used passive methods for aggressive ends. American soldiers soon learned that aggressive behavior in the style of classic warfare would not insure victory or even their own survival. Hostility factors present in the battlefield demanded an organic response.

This assumption of dysfunctional response by Eisenhart also appears in the analysis by Horowitz and Solomon in their paper "A Prediction of Delayed stress Response Syndromes in Vietnam Veterans." They state that "the Vietnam situation led to the kinds of events that predispose participants to a denial-numbing type of stress responses while in military services. Unresolved stress will lead to intrusive-repetitive type responses even months or years after situational exits" (Horowitz and Solomon, 1975:79).

The Case of Navy. John Keegan, when referring to naval history in his comments about the deficiencies of Military History, stated that *"naval warfare is very nearly pure warfare, a war without civilians and in which the common sailor cannot, as the common soldiers can, by running away or sitting tight, easily confound his commander's wishes"* (Keegan, 1974:28).

Although individual initiative manifested through professional technical advice is highly appreciated in the navy, and can change the skipper's decision, it must be geared to team-oriented work. However, in the last instance, the prevailing decision will be the captain's as basic units, until beaten, move as their captain's order. The function of those basic units which stress external physical factors in their military structure are well synthesized in the Naval Officer's Manual of the U.S. Navy, written by Rear Admiral Harley Cope. Under the title "The battle is the pay off," the naval states,

"in the final analysis the objective of training day in and day out is readiness for battle. Every effort in training should be a step toward battle readiness. A ship not fully ready for a battle may never have a second chance.

... Be thoroughly conversant with emergency and operational drills. Don't guess the answer; be sure. A wrong guess may not permit another guess... Understand what damage control is applicable to your section of the ship, and insure that your men are well indoctrined in what they should do. Confusion and ignorance of what has to be done have proved costly many times" (Cope, 1955:214).

Because of the fact patterns of behavior established through long periods of training are difficult to change in the face of critical situations, navies rely on formal procedures and operational drills to perform their organizational function. Working as a "contingency bureaucracy," navies depend on technical devices and formal drills to overcome uncertainties and make possible the formulation-implementation dichotomy. Hence communication, fire control, and early warning systems such as radar on sonar, as well as formal procedures such as operational and emergency drills, are all devices and means available to ship to prevent and face hostility.



>> Sketches of Arthur Briscoe, circa 1920 Fuente: <https://www.nga.gov/artists/2404-arthur-briscoe/artworks?page=1>

A. ORGANIZTIONAL RELATION TO WAR

The Nature of war. Tactical considerations in military approaches to war are responses to factors of environment and to the implicit assumptions made on the nature of war, whether of conventional or unconventional characteristics. The nature of war, regardless of the type of war (land or naval war) implies dissimilar assumptions. Conventional war implies a relatively predictable environment. It is fought within conventional rules which imply that opponent forces will face each other by means of aggressive behavior. Conventional wars are exemplified in military history by instances of regular wars which have clear cut military events given by phases, campaigns and sequential battles.

Unconventional war, on the other hand, is based on concealment and unpredictable actions, is more psychological in nature, and implies a highly dynamic environment. Military actions in unconventional war are based upon the implicit assumption that war is an organic whole in which every individual activity flows into the whole (Clausewitz, trans. by Jolles, 1953). Unconventional war relies on passive means for aggressive ends, and it is exemplified in military history by guerrilla wars.

Hypothesis: Conventional war on land demand from Army organizations either mechanistic or organic responses, Unconventional war on land, as a function of individual survival, will always demand an organic form of organizations. Naval war, on the other hand, whether conventional or unconventional, will always demand mechanistic forms of responses from navy organizations.

Types of war and the Nature of war. Land warfare and Naval war are related in different manners to the nature of war. Geographical factors present in each particular environment and linked to the nature of war (conventional or unconventional) play a differentiated role in structuring military organizations and their approaches to war

Conventional war. Natural features of the sea are different from those found on the ground and so Army and Navy organizations differ in their strategic and tactical approaches to war. Land warfare, unlike naval war, features geographical accidents which can be used in defense: mountains, rivers, forest, and swamps are distinctive features of the environment which call for strategic and tactical consideration in military operations. These considerations, in conjunction with the fact that armies holding their positions are not forced to overthrow their enemies, play a psychological role in that the weaker party will tend to favor the defense over the attack. These considerations further imply for any organizations the adoption of mechanistic and organic form of command. War at sea, on the other hand, implies no distinction between what is needed for defense and what for attack (Rosinky). At sea, there are no geographical accidents which can be used in defense.

At sea, unlike land warfare where the terrain gives defensive positions and allows deployment in advance of the various weapons to be employed, its immensity demands high mobility framed in uncertainty as to the position of the adversary. The above characteristics of naval war not only complicate tactical deployment of naval units, but also entail psychological pressures on naval commanders in their need to overthrow their opponents as the only means of ensuring their own safety. At sea, the strength of the weaker navy lies in its capacity to concentrate its own forces against a fraction of its opponent. Therefore, in war at sea, unlike land warfare, military actions will be oriented to favor the attack over the defense, which is linked to mechanistic forms of command.

Unconventional War. Unconventional war has its roots in concealment and unpredictable actions. Accordingly, military actions will be oriented not only by tactical consideration of geographical factors, but also by the structural nature of military units upon which the organization relies to carry out its missions. Differences in characteristics of the environment, as well as in the nature of those military units in charge of their missions, imply differentiation in their military function.

Guerrilla war implies a highly dynamic, almost unpredictable environment, which demands from army of organization. These military actions, characterized by a decentralized command, are geared to overcome hostility factors posed by the guerrilla threat. Because of the fact that submarine warfare is based on concealment and unpredictable actions it can be seen as the naval form of unconventional war. However, due to structural characteristics of its naval units, submarine war, like regular naval war, constrains individual actions in a determined manner. To overcome the submarine threat, navy organizations rely on escorted convoys and on anti-submarine hunter killer groups. Both responses not only reinforce the bureaucratic nature of navies but also sociologically define the structural nature of navies oriented to overcome hostility with mechanistic forms of organization.

Land Warfare. Ground combat forces, more dependent upon human factors than naval forces in their military basic units, are structurally allowed to adopt organic form of response.

Regular Conventional War. Traditionally, regular wars have been described as having clear territorial objectives, presenting defined military campaigns and featuring decisive battles. Military actions in conventional war entail aggressive behavior in close combat situations within a relatively predictable environment. In fighting a war on conventional terms, the fact of seeking dominance over the opponent through raw aggression is a functional response not only of goal performance but also a means of insuring individual survival.

Conventional wars are fought in a planning rather than an adaptive mode. They imply a clearly dichotomized function oriented by strategic formulation and implemented by tactical deployment of military forces. Military actions in classic regular war presuppose a relatively stable environment, because as Feld pointed out in his analysis of military organizations, military operations are painstakingly planned and then carried out with unquestioning resolution (Feld, 1959).

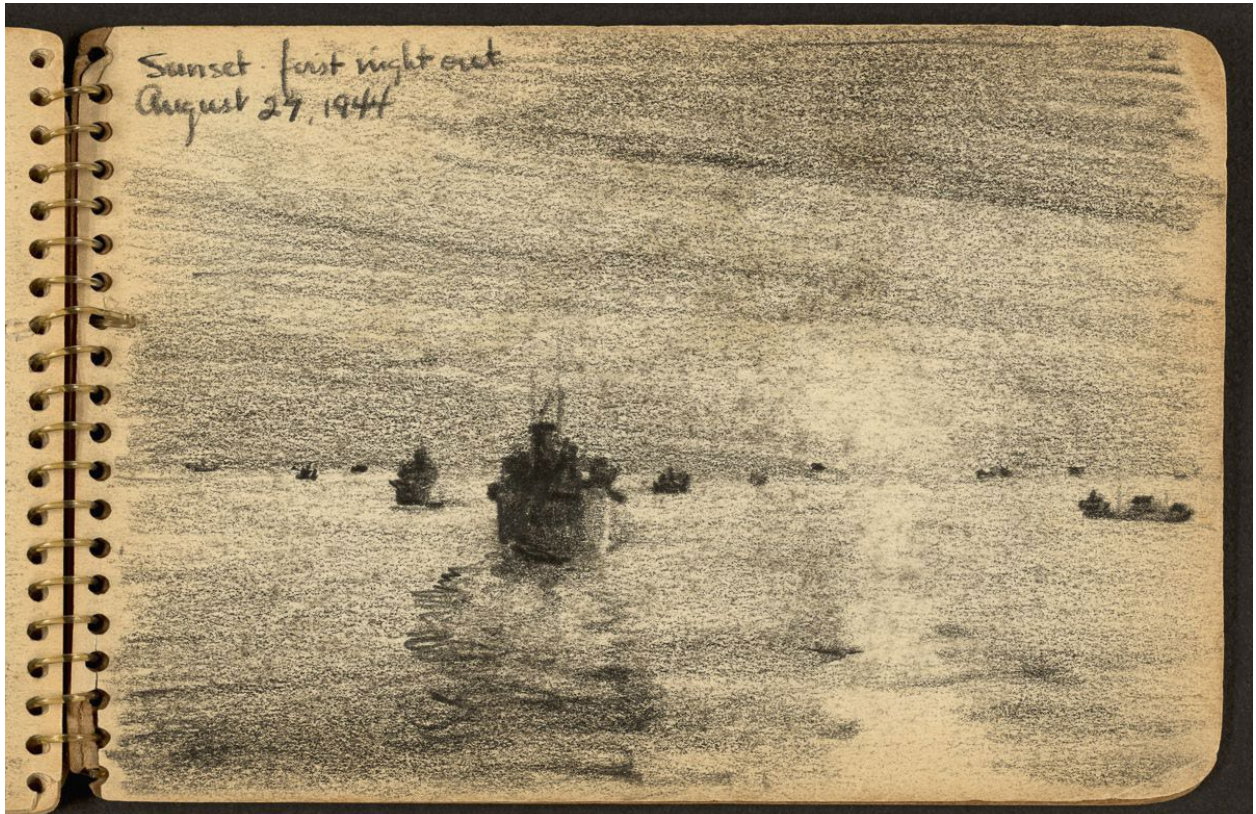
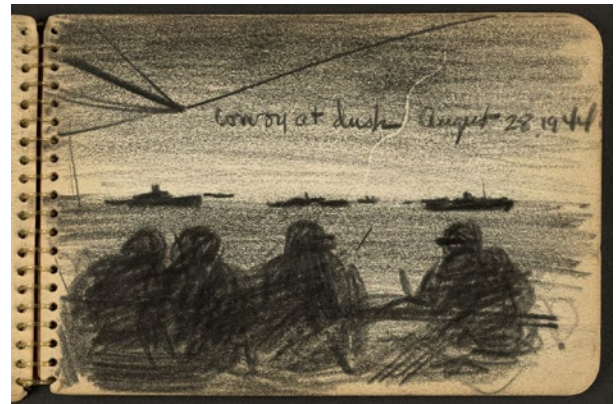
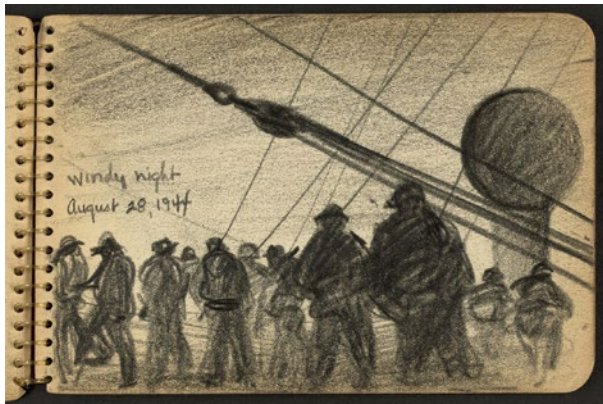
Stressing the morphologic nature of conventional war, military history, is framed in the notion of battles. Battles are directed toward securing military decisions. No matter where the raw material to study regular war is culled in military history, whether from the Campaign of Napoleon, the Prussian wars, or from the modern world wars, morphologic differences among them are in a sense unimportant. They will always be framed in military campaigns and will follow the same patterns of interaction oriented to bring the enemy into battle under their own advantageous terms.



>> Sketches of David Muirhead Bone;

a) Lot 139: *Sir Muirhead Bone, Camouflaged Big Gun Emplacement* Font: <https://www.invaluable.com/auction-lot/sir-muirhead-bone-camouflaged-big-gun-emplacement-139-c-7324071bb2>

b) Lithographic print of original charcoal drawing, 'Tanks', by artist Sir David Muirhead Bone. Published in a series in 1917, it was originally executed in 1916. The First World Font: https://commons.wikimedia.org/wiki/File:Tanks_-_Sir_Muirhead_Bone_-_50_1918_1_7.jpg



>> Figures. Sketches from Victor Lundy, Second War
 Font: <https://flashbak.com/victor-a-lundys-world-war-2-sketchbook-369679/>

Karl von Clausewitz in his remarkable book on War, when referring to military example of war wrote: *"Example from history make everything clear, and in addition they afford the most convincing kind of proof in the empirical field of knowledge. This applies more to the art of war than to anything else"* (Clausewitz, 1953:110, translated by Jolles).

The Alma Battle in the Crimean War (1854). This battle was chosen as an example of conventional because it is a landmark in military history between two different approaches to land warfare. At the Alma battle military force of the Russian army, characterized by mechanistic forms of organization, were confronted by the French and British armies, whose military approaches, more organic in nature, were influenced by a new technology.

The field training of the Russian army was framed in mechanistic responses because of its reliance of highly centralized command manifested in rigid maneuvers and drill formations. Within the Russian approach to war, deviations from planned actions were not permitted, and military actions were to meet operational conditions imposed by tactical consideration of positions and tight formations. The Russians had persisted in their reliance on columns rather than on lines with open order fighting partly because of their unfamiliarity with the capabilities of modern rifled weapons. Moreover, the Russians had been in opposition to the introduction of breech-loading weapons because it would encourage the infantryman to shoot his ammunition and make him disinclined to close with the enemy (Seaton, 1977).

The British and French armies, on the other hand, were familiar with the capabilities of modern rifled weapons. Accordingly, they adopted tactical changes in their military approaches which conversely to mechanistic assumptions were oriented to organic responses. Whereas the former prone to sacrifice speed of movement of good order and regular formation, the latter were oriented to open order fighting and line dispositions enforced by decentralized command.

In the Alma Battle, Russian officers first met an enemy who fought in line dispositions. The need for changes away from mechanistic responses become dramatically evident in this battle.



>> Charge of the Lancers, painting of Umberto Boccioni, 1916 Font: https://commons.wikimedia.org/wiki/File:Umberto_Boccioni_-_Charge_of_the_Lancers.jpg

>> Besides Painting of Ludwig Meidner APOKALYPTISCHE LANDSCHAFT, 1913. Oil on canvas (67.3 by 80cm.)



Albert Seaton in his book The Crimean war makes explicit the need for change and adaptation when he quotes the experiences of a Russian officer survivor of the Alma Battle, "About midday English rifle bullets with their characteristic 'ping' began to fly overhead, a sound not heard before by our troops who had never been under fire and knew little of rifles... the men could not understand how they were shot down by a distant enemy whom they could not even see. The English rifle and artillery grew in intensity so that our commander Gorev began to move the battalion from place to place to escape it" (Seaton, 1977:82).

Because of the outmoded military training given to the Russian army its commander in chief, General Menshikov was unwilling to decentralize. Because of a lack of coordinated control, the Alma Battle deteriorated into a number of localized bloody actions. Indeed, at the Alma Battle, few general officers became involved in the handling of the situation, while the greater part of the Russian formation stood without orders, idle in reserve.

In the Alma Battle, the Russian casualties were 5.209 men whereas the French losses were put at 1.351 and those of the British at 2.002 (Seaton, 1972).

Unconventional Land Warfare. Guerrilla warfare, as unconventional war, is an organic means of fulfilling the military function of imposing one's will over an opponent. It is based on the implicit assumption which has historically underlain war: the principle of preserving one's self and destroying the enemy.

Unconventional war on land implies a highly unpredictable environment which calls for organic responses. The fact that geographical factors can be used in defense deserves tactical consideration in army organizations for the weaker party, whose military approach aimed at the conquest of the enemy emphasizes attacking the mind of the opponent first, and the armies next (Singh and Mei, part 3 1971).

Within a new synthesis of warfare, unconventional war blends violent action like guerrilla attacks, civil insurrections, sabotage, and terrorism with non-violent techniques such as propaganda infiltration, strikes, boycott and espionage (Bjelajac, 1960:440).

The dynamic nature of guerrilla warfare can be understood through the writing of Chinese communist leader Mao Tse-Tung, regarded as the authoritative guerrilla strategist of our time. When developing the tactical principles of operation of Chinese guerrilla warfare, Mao wrote his famous four slogans:

- Enemy advances, we retreat.
 - Enemy entrenched, we harass.
 - Enemy exhausted, we attack.
 - Enemy retreating, we pursue.
- (Mao Tse-Tung, 1941:51).

Passive means for aggressive ends in the underlying assumption adopted in unconventional warfare. Based on the above assumption, Mao developed his guerrilla tactics. And so the Vietminh's manual on partisan warfare and Guevara's writing on guerrilla warfare, are seen as a reflection of Mao's thinking (Singh and Ko-Wang Mei, 1973:53).

Although Mao's principles reflect the communist ability to coin a slogan expressed in such a way that it can be understood and applied by the lowest echelons of guerrilla leadership, as Klonis pointed out "these four principles of unconventional war do not constitute any new principles 'discovered' by Mao (Klonis 1972:63). The above principles of guerrilla war have been applied for centuries.

The Franco-Spanish war (1808-1841), where the "guerrilla" word got its name, is seen as a landmark in guerrilla history because of its new features of universal uprising and highly organized guerrilla forces (Singh and Mei, 1971). The Spanish resistance against Napoleon provided the basis to approach the war through unconventional methods.

Karl Marx and Frederic Engels (1845), when they wrote Revolutionary Spain, made explicit their understanding of the future role that guerrilla warfare would play in their communist ideology. "The Franco-Spanish war is exceptionally enlightening. Armies which for their time were of considerable size (they totaled, 670.000 men and 520 guns) crossed the Pyrenees between 1807 and 1813 to conquer Spain. Only 250.000 men and 250 guns returned to France. The Spaniards appeared suddenly where they were least expected, disappeared in entirely different places. Obviously, this kind of fighting could not lead to any decision, but the Spaniards managed to keep the French constantly on the move and so brought about a fatal dispersal of their forces" (Marx and Engels, 1854).

Dynamic Nature of Unconventional War. Whatever school of thought is attributed to the nature of unconventional warfare it will always emphasize ideological indoctrination, manipulation of crowds, psychological warfare and paramilitary action.

Since guerrilla warfare is characterized by dispersed operation, the methods of command do not allow as high a degree of centralization as in regular warfare. Mao, when referring to the relation of command, pointed out, "if any attempt is made to apply the methods of command in regular warfare to guerrilla warfare, its great flexibility will inevitably be restricted and its vitality sapped" (Mao Tse-Tung, 1966; edited by Central Committee of Communist Party of China). Unconventional war implies a broader conception of war as much as the military operations themselves traditionally regarded as its main component by the conventional approach.

Robert Osgood, in his analysis of the communist approach to war, states that it has been characterized by the use of

psychological instruments of power which are regarded as integral parts of a single struggle that takes its forms from the nature of the total human environment (Osgood, 1957:55). Osgood links the communist's view with the conception of war given by revolutionary warfare. As communist leaders point out, war is regarded as an organic whole in which every individual activity flows into the whole.

Stressing the dynamic nature of unconventional war, it is also named irregular war, revolutionary war, or guerrilla war, for it implies irregular operations which are not bounded by any conventional principle and it is aimed to undermine the enemy forces by means of physical as well as of psychological stress. Unconventional war demands organic response to perform the military function, which must retain full freedom to act. As Singh pointed out when referring to the dynamic nature of guerrilla warfare, *"the only regularity of guerrilla operations, it must be said, is their irregularity"* (Singh and Mei, 1971:88).

Physical Stress: Geographical factors of the environment play a crucial role in providing unstable conditions to the stronger party. In an unconventional war the weaker party is oriented in his tactical considerations by psychological factors aimed to the creation of utmost chaos and confusion oriented to trap the enemy in his own day-to-day survival. Accordingly, stressing its organic nature, unconventional war will always be oriented to operating areas surrounded by hostility factors. Russian guerrillas during W.W.II operated from huge forest and swamps. Lawrence of Arabia operated from vast empty deserts. Mao, Tito, and Castro established their bases in remote mountains.

The Russo-Finnish war (1939-1940) is an example in military history of how geographical factors were used in an unconventional war which demanded organic responses. When the Soviet Union decided on the invasion of Finland, the small Finnish army resisted the invader by unconventional methods. They took advantage of those factors which were in the Finns' favor: terrain, climate and personnel proficiencies (Ionis, 1972). Although guerrilla warfare did not enable the Finnish nation to preserve its territorial integrity, it did manage through organic responses to defeat the Russian intention and to retain its national existences outside the Soviet orbit.

The long-range penetration groups in Burma established by the American high command during the guerrilla war in the Philippines in the fall of 1943 also shows evidences of the dynamic nature of guerrilla warfare and makes explicit the active role that geographical factors play in demanding organic responses to cope with.

Psychological Stress: The organic nature of guerrilla warfare is also manifested in the psychological use of tactical situations, where running and hiding are passive means

for aggressive ends. Unconventional war has no territorial objectives. Instead it aims to affect the enemy's mind.

The "Minuet Tactic" as described in Guevara's writing is an example of the above psychological approach. The "Minuet Tactic," means "the guerrillas surrounded the enemy on all four sides. The dance begins as one side fires on the enemy, who naturally moves toward the side. The guerrillas on that side move back without breaking visual contact and succeed in drawing the enemy out. Then another guerrilla side begins firing and draws out the enemy to a different side. Thus as the parties on all sides participate in the dance the enemy column is rendered immobile, expends vast quantities of ammunition and loses morale, while the guerrillas remain unharmed" (Guevara, translated by Mayor Peterson, 1961). The American war in Vietnam can also be seen framed into organic responses to fulfill the military function. This war was limited, too place within fairly specific hostile area, and was fought by unconventional methods which were psychological in nature. In the Vietnam war the enemy used psychological passive methods of guerrilla warfare for aggressive ends and forced passivity on the American army which affected not only the nature of war, but also its military function.

In commenting on the dynamic nature of the nature the Vietnam war, Lieutenant General Hoang Van Tai, deputy head of the general staff of the Vietnam People's Army wrote: *"In the Vietnam War the Vietnamese people have created extremely subtle forms of struggle: sabotage, scorched land policy, non-cooperation with the enemy, spike traps, lines ambushes, raids against the enemy post network, airfields, dumps, C.P.s, gun-nests"* (Mallin, 1970:249). The above statement not only stressed the dynamic and psychological nature of the Vietnam War but also makes it report as a modern example of guerrilla war.

Naval Warfare:

"At sea there is no halfway house between victory and defeat because there is no difference between what is needed for defense and what for attack. In naval warfare one side only can gain security at the cost of the other or neither" (Rosinsky).

Conventional Naval warfare. Naval warfare in contrast to land warfare, which permits the establishment of direct contact with the enemy from the first moment of the war, features the broad commonality of the sea. As compared with the distance of detection and reach of a fleet, the sea as its natural environment is immense. The immensity of the sea becomes the first characteristic of any naval operation; uncertainty as to the position of the adversary.

In land warfare, the terrain gives defensive strategic-tactical situations and allows advance deployment of the various weapons to be employed. At sea, the mobility of naval units dominates the action, which places priority on coordinate efforts and unity of action which further complicate tactical deployment. Italian Admiral Fiorev, when analyzing tactical approaches in his book Naval Tactical Thought, wrote:

“It is a matter of placing each group in the most favorable situation for battling the enemmain body taking into consideration one’s mobility, offensive power, weapon characteristics and capacity for mobility, offensive power, weapon characteristics and capacity for withstanding attacks. The tactical problem must therefore, find its solution in time and space of the various actions that each group of units is capable of carrying out” (Fiorev nzo, tranlated by A. Holst, 1979:182).

Unlike modern grund warfare, where the superioity of defense over the attack has been imply demonstrated through military history (e.g., the heroic defense of the Finns facing the soviet invasion of their territory (Klonis,1972), the latter stage of the Second world War (Osgood, 1975), and the Korean favor the offensive due to the fact that its strength lies in its capacity to concentrate his own forces against a faction of his opponents’. Stressing the fundamental differences between war at sea and war on land, Rosinsky wrote:

“Because the ‘sea is all one’, because no part of it can be fenced off and defended by itself, effective protection canonly be assured by driving the opponent out from the whole ofit. Thus, whereas on land we need not necessity overthrow our opponent to hod our own at sea we are forced to do so merely for the sake of assuring out own safety” (Rosinsky, reproduced by Simpson III,1979, Chap.11).

Commnd of the Sea. Julian Corbett, the eminent British historian, in analyzing the methods of disputing command of the sea, introduced the concept of “fleet in being,” fighting in active defense, which presents a potential threat and may prevent a larger force from obtaining command of the sea. Corbett also in his book, Some Principles of Maritime Strategy, when referring to the object of naval warfare, stated that it must always be directed either to secure command of the sea or to prevent the enemy from securing it (Corbett, 1972).



>> Sketches of David Muirhead Bone;

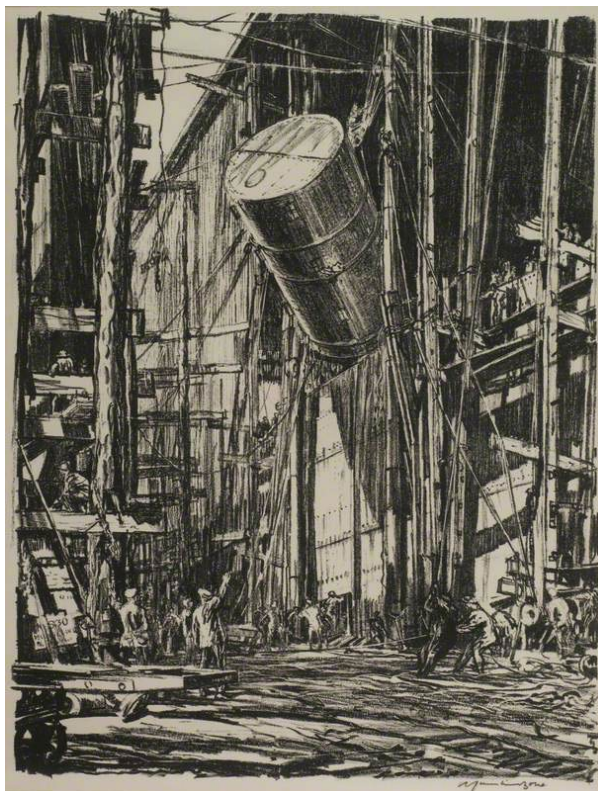
a) Title: On a Battle-cruiser, illustration from The Western Front Font: https://www.reprodart.com/a/david_muirhead_bone.html;

b) Title: 'With the Grand Fleet', Lithograph, Signed in pencil lower right, 37cm x 60cm Font: <https://www.davidlay.co.uk/auction/lot/lot-99---david-muirhead-bone-1876-1953/?lot=158174&so=0&st=&sto=0&au=383&ef=&et=&ic=False&sd=1&pp=48&pn=3&g=1>

At sea there are no mountains, rivers or other geographical accidents which a navy could use to fight a defensive battle. Fighting on the sea it is impossible to take advantage of terrain, although as Mahan pointed out, the sea is not without advantageous positions to hold. "Above the land and peculiar to it in naval warfare the organized force is the determining feature. The fleet, it may be said is itself the position (Mahan, 1911:176).

Mahan emphasized the concept of establishing control for an affect, hence the need of having a strong navy to gain control through the establishment of "command of the sea". Mahan's whole conception of naval strategy is based on the above approach which reinforces the structural nature of a Navy oriented to overcome hostility factors by facing them. Moreover, in his book Nava Strategy, when referring to technological changes introduced into the navy, he states that these changes are external to the subject of naval strategy in itself which, correctly formulated upon fundamental truth, are called "principles" and are themselves unchangeable. "New technology will not change the principles of strategy but they will affect the application of it" (Mahan, 1911: Chap.1).

Systems of commerce protection based not primarily upon the notion of "Command of the sea", but upon direct protection by escort only is an example of the validity analyzes the validity of naval principles in modern naval warfare. He exemplified their unchangeable nature through the danger to which the naval function was exposed without having the "command of the sea."



>> Sketches from Sir David Muirhead Bone,

a) Lifting an Oil Tank into a Train Ferry 1917–1918; from Muirhead Bone (1876–1953) Lithograph on paper Size: 46 x 36 cm, Scottish Maritime Museum: Font: <https://artuk.org/discover/curations/artists-and-wartime-places-on-the-clyde-by-muirhead-bone/slide-page/7>

b) Lithograph on paper, size: 36 x 46 cm. In Scottish Maritime Museum; Title: Building a Cross Channel Ferry Muirhead Bone (1876–1953) Font: <https://artuk.org/discover/curations/artists-and-wartime-places-on-the-clyde-by-muirhead-bone/slide-page/12>

The attacking and sinking to the last ship of the “Bergen Convoy”, including two destroyers of the escort by two German cruisers and their posterior evasion from the grand fleet over a course of 500 miles to their bases during the First World War is a testimony, as we said before, of the indivisible nature of the sea and of the validity of naval principles. Strengthening convoy escort without having command of the sea, as Rosinsky pointed out, far from removing a danger, merely tends to increase it by offering to the opponent in addition a chance of cutting up the main forces in detail as well (Rosinsky 1977:14). Tahan, when referring to changing tactics in naval warfare, wrote:

“A seaman who carefully studies the causes of success or failure will not only detect and gradually assimilate the naval principles but will also acquire increased aptitude in applying them to the tactical use of the ships and weapons of his own day. He will also observe that changes of tactics have not only taken place after changes in weapons but the interval between such changes has been unduly long. This doubtless arises from the fact that an improvement of weapons is due to the energy of one or two men while changes in tactics have to overcome the inertia of a conservative class” (Mahan, 1898:8).

The introduction of naval air tactics into naval warfare made their debut on the battlefield of the Pacific Ocean. The battle of Coral Sea, which marked the beginning of the American offensive against Japanese expansion in the Pacific, and which prevented them from landing at Port Moresby, meant for the first time in naval history that the ships mainly involved in naval fighting were aircraft carriers. Moreover, for the first time in naval warfare, the opposing ships never saw each other. The battle of Coral Sea (7-8 May 1942) and also the battle of Midway (4 June 1942) and the battle of Leyte (23-25 October 1944) made explicit the functional need of unified action between naval air and surface forces. As Admiral Fiorevenzo pointed out, “unity of action requires the continuous constant presence of aircraft on the battlefield and not just their participations which is dependent on chance and rarely timely” (Fiorevenzo, translated by Holst, 1979:205).

Naval logistics provide additional evidence of the centralized nature of navies oriented to mechanistic responses. U.S. Navy Vice Admiral George Dyer, in his book Naval Logistics, wrote: “As long as men of war have gone to sea and to battle the combat ships have been kept to their battle tasks longer by supporting store ships” (Dyer, 1962:128).

Unlike armies, whose logistic support can be obtained from occupied areas, navies at sea preclude occupation and their logistic support demands much greater coordinated action geared to meet operational conditions of their units.

This characteristic of navies, reinforced by the variable “complexity” which calls for mechanistic responses, can be demonstrated in naval history through the “underway replenishment system” which itself is a functional response to demanding sea endurance and mobility imposed by modern technology of war. This system was introduced as a part of the mobile logistic support of a navy which included at sea procedures.

Fueling at sea underway was introduced by the U.S. Navy in 1924 and fully adopted by all navies during the Second World War (Dyer, 1962, Chap.2). Besides the fact that this new revolutionary system of mobile supply bases meant higher readiness with novel forms of superior sea power, it implies the reliance on naval maneuvers of close formation with great demand on operational drills centralized command.



>> Title: “Departure of the first Chilean naval fleet”; canvas, 122x 168 cm. Privet collection From: Thomas Somerscales. Chile

B. MILITARY INTERACTION

The nature of military interaction found in navy organizations differs from that of armies in their relationships and linkages to civilian societies. Whereas army interaction is linked to civilian society through war activities which entail pervasive spread of cultural values to the extent of occupied areas, navy activities through maritime interaction imply a broader social role linked to economic and social development of those societies who used navigable water as a means for their energy sources.

Military interaction then, implies different sources of social relation, which are distinctive to armies and navies. Accordingly, differences between both organizations can be found first, in the role they have historically played in the fulfillment of societal needs concerning economic and social development; second, within the corresponding organizational likelihood of developing mutual understanding manifested by means of a commonality of symbols and by a universal language, and third, in the socio-psychological role that the organization ascribes to its military and organizational symbols

Historical Role. Unlike armies, navies have grown out of maritime interaction, which implies a broader role of social interaction. Naval organization entail a common body of symbols and shared understanding manifested through a universal language and ritualistic codes.

Maritime interaction through the introduction of the sailing ship brought drastic changes in human culture. Increased exchanges of goods took place in the commercial societies which grew up around the use of navigable waters. The sailing ship not only allowed a more extensive field of social interaction at low cost, but it also made possible the use of force over large areas much more effective than before. Fred Cottrell, in his book Energy and Society, when referring to the role of the ship in the development of trade and mercantilism wrote:

“It was the ship, that made important and brought about approval for, the widespread use of money and of exchange based on price and the taking of interest. It was with the sailing ship that a few small nations of western Europe developed control over the trade of the world and gained such power as to subordinate others to the political and economic ends they sought” (Cottrell, 1955:77).

Structural Responses of Maritime Interaction. The above conditions of British superiority in the sea, plus the later use of steam as an adjunct of sail, allowed the rise of England as a trading nation with her pervasive spread of international codes, naval ethics and ritualistic procedures, which underly most contemporary naval activities. Naval traditions and naval customs then, framed in maritime interaction and manifested by a common body of shared

symbols, reflect functional responses not only to the naval mission, but also to social and trading relations. Sharing symbols within a common environment allowed social interaction whenever navies communicated with each other and were affected by recurrent aspects of the naval social context.

Socio-Psychological Role of Naval Symbols. Naval symbols are derived from the human nature of man to respond creatively to their nautical environment through interpretive processes produced through mutual interaction

“Peoples assign meaning to their situations and respond in terms of those meanings (Blumer, 1969:60). This tendency to respond in terms of meaning is expressed in overt behavior and entails the means by which individuals coordinate their actions with those of others as they attempt to achieve their individual and collective goals. Lower and Handel, when referring to the interaction process, pointed out: “we cannot engage in social life generally unless we have shared understanding”. (Lower and Handel, 1977:97).

Since language gives human life its distinctive nature, naval communication plays a vital role in structuring naval organizations. Anselm Strauss has particularly emphasized two broad functions of language. It provides a cohesive factor to the human group and provides the means of organizing individual cognition and behavior (Strauss, 1953:110). Language entails a cohesive factor because it is peculiar to the group and it provides the means of organizing. Through shared symbols people can communicate with each other for either instrumental or ritualistic ends.

CONCLUSIONS: The naval function, through interaction, has developed a common body of symbols and shared understanding which is manifested in naval organizations by a universal language and ritualistic codes.

- a. Naval traditions and naval customs are responses not only to the naval function but also to social and trading relations linked to the social development of those societies who used navigable waters as a means of transportation and communication.
- b. Universal means of communication and reinforce the bureaucratic nature of a navy in its everyday actions, play a socio- psychological role in the maintenance of discipline and cohesion of the naval organization.
- c. Shared value orientations, reflected in a system of roles and pattern of interactions, define the organizational behavior of a navy in a conservative way. Hence, those shared values sociologically explain institutional policies and attitudes of a navy which may differ from institutional policies adopted by other organizations of the military system.

I – MILITARY SETTING	
Basic Military unit emphasize human factor.	Emphasizes external physical factors.
Individual soldier is considered as the basis of the engagement.	Ships are considered to be the basis of naval engagement.
At the individual level the army <u>unti</u> may lose its social structure.	Navy units must always keep their social structure.
Army unit is endangered by the individual fighter.	Navy unit are not endangered by the individual fighter.
Individual fighting may perform the army mission.	Individual fighting does not perform the navy mission.
Army units may disregard functional interdependencies and rely on individual actions characterized by individual initiative and decentralized behavior.	Navy units must always rely on functional interdependencies characterized by formalized behavior and centralized command.
Structural nature of basic military unit allows the organization to afford organic responses.	Structural nature of basic naval unit does not allow the organization to afford organic responses.
Military environment in land warfare within a particular theater of war may be highly unpredictable and dynamic.	Naval war bears the notion of a common environment where most of its contingencies are of regular character. Hence, they can by overcome by drill procedures.
Military approaches to war, due to changes in technology, have evolved in army organizations from mechanistic or response.	Changes in technology have reinforced the nature of navies in their orientation to face hostility by means of mechanistic response
LAND WARFARE	NAVAL WAR
Land warfare features geographical accidents which can be used in defense.	Naval war implies a common environment with almost no geographical accident to be used in defense.
Land warfare implies a distinction between what is needed for attack and what for defense.	Naval war implies no distinction between attack and defense.
Land warfare implies territorial positions and occupied areas	Naval war is devoid of occupation and territorial over the defense.
In land warfare the weaker party will favor the defense over the attack.	In naval war both opponents will favor the attack over the defense.
In holding a position armies are not forced to overthrow the enemy to protect themselves.	In naval war navies to protect themselves are forced to overthrow the enemy.
Land warfare may allow the deployment in advance to the various weapons to be employed.	Naval warfare will always imply uncertainty as to the position of the adversary.
Fighting an unconventional war in land warfare implies a highly dynamic environment which requires army organizations to rely on organic responses.	Unconventional naval war despite the dynamic environment reinforces the propensity of navies to face hostility with mechanistic responses.
To overcome the guerrilla threat in an unconventional war armies, rely on commando type of organizations characterized by improvised behavior and decentralized command.	To overcome the submarine threat in naval war, navies rely on antisubmarine hunter-killer group and escorted convoys characterized by a highly centralized command and formalized behavior.
LAND WARFARE	NAVAL WAR
Land warfare may involve civilian participation and allows the possibility of desertion.	Naval war is nearly pure warfare without civilian participation in which individual sailor finds himself constrained to act in a determined manner.
Land warfare implies environmental and socio-psychological determinants which lead army organizations and their military actions to display organic responses within which individual Initiative is a functional demand of unpredictable actions found in the battlefield.	Naval war implies environmental and socio-psychological determinants which lead navy organizations and their military actions to team-oriented activities where collective behavior and unity of actions are functional demands of the rapidity of actions needed in naval war and of operational conditions posed by their basic naval units.
NAVY ORGANIZATIONS	ARMY ORGANIZATIONS
Pervasive spread of cultural values through maritime interaction implies a broader role of social interaction.	Pervasive spread of cultural values through army interaction is linked to civilian society to the extent of occupied areas.
Maritime interaction implies a common body of universal symbols which arose in the process of economic and social development.	Army symbols and traditions are a function of military history linked to violent action which does not necessarily imply sociological demand for the need of communication by means of shared understanding, across nations.
Navy organizations share a universal language given by a nautical jargon.	Army organizations do not share a universal language to the extent navies do.
Navies identify themselves by almost identical uniforms whose expressive symbols are framed in naval traditions.	Army organizations do not share similar uniforms, but are differentiated in their style, color and traditions, on a national basis.
Navy organizations shared a universal naval etiquette based on establish codes and international regulation.	Army organization in their military interaction are not regulated by international codes to the same extent as navies.
Naval customs and traditions imply shared value orientations in naval behavior which play a socio-psychological role in structuring navies and an effect on the discipline and cohesion of the organization.	Army customs and traditions do not necessarily imply shared values orientations, which leaves more latitudes of changes without disrupting organizational discipline and cohesion.

>> TABLE 1-3. STRUCTURAL AND FUNCTIONAL DIFFERENCE BETWEEN ARMIES AND NAVIES Fuente: Elaboración propia

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