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OPERATIONAL MANEUVER FROM THE SEA: A COUNTER TO AREA DENIAL IN THE 21ST CENTURY

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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As we enter the new millennium, the United States must maintain its capability to project power at will. When faced with an adversary's area denial strategy, we should be able to out-think our opponent, get into his decision cycle and disrupt it, remain unpredictable, and force our adversary into situations that he is not ready to handle. OMFTS exhibits all the essential elements necessary to enable the United States to continue to project power in the 21st Century.

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Abstract

The ability of the United States to protect its national interest around the globe may be threatened in the 21st Century. A future adversary's use of an area denial strategy consisting of naval mines, diesel-electric submarines, and antiship cruise missiles could pose a challenge to the United States' ability to project power. The United States can attempt to counter this area denial strategy directly or concede the denied area to our adversary and use other options to defeat him. One possible option to consider is the Marine Corps' capstone operational warfighting concept titled Operational Maneuver from the Sea (OMFTS). This new concept uses maneuver, speed, flexibility, and deception and can be a viable option to defeat an adversary's area denial strategy. OMFTS capitalizes on the use of the sea as a maneuver space to protect naval forces, deceive the enemy, and strike swiftly against enemy vulnerabilities.

As we enter the new millennium, the United States must maintain its capability to project power at will. When faced with an adversary's area denial strategy, we should be able to out-think our opponent, get into his decision cycle and disrupt it, remain unpredictable, and force our adversary into situations that he is not ready to handle. OMFTS exhibits all the essential elements necessary to enable the United States to continue to project power in the 21st Century.

Operational Maneuver From The Sea:

A Counter to Area Denial in the 21st Century

Introduction

As we embark on a new millennium, the ability of the United States to protect its national interest around the globe may be threatened. Future potential opponents of the United States have taken careful notes on methods that could be effective in warding off U. S. intervention in the future. A hostile nation's strategy of area denial could pose a challenge to the United States' ability to project power. The Chief of Naval Operations, Admiral Jay Johnson, has argued that "countering a potential adversary's area denial efforts will become the single most crucial element in projecting and sustaining U. S. military power where it is needed."[1]

Operational Maneuver from the Sea (OMFTS) is the Marine Corps' capstone operational warfighting concept that could be the vehicle to defeat an adversary's area denial strategy. OMFTS combines maneuver warfare and maritime operations and uses the sea as a maneuver space to deliver a decisive blow against an enemy's center of gravity.[2] As we transition into the 21st Century and are faced with an area denial strategy, the United States has two options. First, we can conduct operations to counter our adversary's use of naval mines, diesel-electric submarines, and antiship cruise missiles. The use of these systems could delay or deter our access to an area or increase the risk if we entered. The second option would be an entirely a new approach; the United States would acknowledge the adversary's strategy. In other words, we would not try to defeat this area denial strategy directly but would use technology, maneuver, speed, and

deception to bypass their obstacles and attack the enemy where and when they least expect it. OMFTS has all the ingredients to be an effective tool to defeat a potential adversary's area denial strategy using this new approach.

To address how OMFTS can be an effective counter to a future area denial strategy, I will discuss how potential adversaries could employ diplomatic and military means to effect an area denial strategy. I will articulate the capabilities of OMFTS and how these capabilities could be used in a future scenario in which Iran has blocked the Straits of Hormuz and threatened to invade the United Arab Emirates. Lastly, I will explore a number of future challenges facing OMFTS and provide a few recommended solutions.

The Threat Environment

Future potential adversaries might not allow the United States the luxury of a six-month period to build up its forces in theater prior to commencing hostilities, as was the case in the Gulf War. They might devise an area denial strategy that reduces the U. S. military advantage in the area This area denial strategy could be executed through diplomatic or military means Diplomatically, they could try to isolate the area by establishing alliances with adjacent countries in order to prevent the United States from obtaining basing and overflight rights For example, during the Gulf War a major factor in our success was the ability to use Saudi Arabia as a forward base to build up forces and conduct operations. Suitable airfield and port facilities are critical in the deployment phase of a conflict. Saudi Arabian deep-water ports and runway capacity to handle large aircraft were instrumental in the build up of combat power. Once in theater, access to a base area that allows freedom of action, the ability to launch twenty-four hour air

operations, and authorization to overfly adjacent countries enroute to objectives will be key ingredients for success. Potential adversaries might try to counter these advantages with diplomacy and establish alliances with bordering countries to eliminate basing and overflight rights for the United States and our allies. During Operation Eldorado Canyon in 1986, the United States was denied overflight rights for Air Force FB-111's enroute to Libya, resulting in an extended route of flight to the target. In contrast, in 1990 the United States was able to build a coalition of 39 countries with extensive basing and overflight rights.[3] However, in 1998 we could muster only the United Kingdom as a coalition partner and experienced many basing restrictions during Operation Desert Fox.

In addition to diplomatic means, potential adversaries can use military means to physically limit the United States' ability to project power. The use of naval mines, diesel-electric submarines, ballistic missiles, and antiship cruise missiles does limit naval actions and interdict sea lines of communication. The United States was fortunate to have naval freedom of action during the Gulf War, since naval and commercial shipping provided 95% of the military's war material.[4] We may not be so fortunate in the future.

Naval Mine Threat

Potential adversaries could slow the U. S. naval effort by using naval mines deployed in specific choke points and dispersed throughout coastal areas. Over 150 types of naval mines are in the inventory of some 50 countries around the globe.[5] Well-sown minefields consisting of a combination of surface contact mines, subsurface influence mines, and propelled rising mines could delay U. S. naval action in the area. U. S. mine-clearing capability has improved since the Gulf War, but it is still limited and requires significant time to deploy assets to theater. Naval mine warfare assets have been centrally

located at Ingleside, Texas. From Ingleside, it takes over 50 days to reach the Arabian Gulf. A mine threat could significantly delay U. S. naval mobility and restrict access until mine-warfare assets could clear an area for safe naval operations. Deployment and employment would be very time consuming, and commanders would have to accept a level of risk before entering the area.

Diesel Submarine Threat

Since the end of the Cold War, the U. S. Navy has transitioned from bluewater operations to a littoral environment. Further, Navy leaders conscientiously decided to reduce our antisubmarine warfare (ASW) capability against a diminished threat. Potential adversaries' use of diesel-electric submarines is another factor that could delay U. S. naval activity. These submarines are common throughout the world; they are quiet, low-cost, and hard to detect, especially in the littorals. They have the capability to fire a variety of missiles and torpedoes including the effective wake-homing torpedo.[6] These submarines pose a challenge to the U. S. Navy. A diesel-electric submarine threat in the littorals limits U. S. actions in these areas until the threat can be eliminated.

Antiship Cruise Missile Threat

Potential adversaries could also use antiship cruise missiles to raise the risk for the United States entering an adversary's area of operation. Over 75 countries are in possession of as many as 90 different types of antiship cruise missiles; these missiles could be launched from air, land, or sea.[7] The Argentineans' use of the French-built Exocet missile was effective during the Falkland/Malvinas conflict. This radar-homing, sea-skimming missile fired from a Super Etendard aircraft sank the HMS Sheffield.[8] These missiles can also be fired from surface combatants, submarines, or commercial

vessels. They can be fired from shore facilities, remote islands, gas and oil platforms, or positioned near straits to interdict sea lines of communication. An antiship missile threat degrades U. S. naval and commercial shipping capability. Fortunately, the U. S. Navy can be effective against adversary surface combatants armed with these missiles. However, a challenge for the Navy is to identify friend from foe in regions of the world where merchant traffic is heavy, such as the Straits of Malacca or Hormuz where hundreds of commercial and fishing vessels transit every day. Antiship missiles mounted on commercial shipping vessels also pose a significant threat to U. S. naval assets.[9]

Threat Integration

A future would-be aggressor might employ means to deny the United States access and prevent power projection. They may also have an integrated system that can detect, identify, locate, track, target, and destroy U. S. or allied assets entering the area denial zone.[10] This system can be as sophisticated as an ocean surveillance system utilizing space, air, sea, and undersea sensors and satellite imagery linking sensor to shooter; or as simple as an observer with a cell phone passing information to a terrorist on a commercial vessel armed with an antiship missile. A sophisticated system requires advanced technology and significant financial commitment. A future peer competitor might have the wherewithal to develop such a system, but contemporary adversaries' capabilities are far from sophisticated. What we currently face are countries that have limited targeting capability outside of visual range. These countries may have access to commercial imagery, but the availability and currency of this imagery may be dated.

Operational Maneuver from the Sea

If a potential adversary attempts to deny the United States access by diplomatically restricting basing and overflight rights or by militarily preventing access, the United States can concede this denied area to our adversary. OMFTS allows us to stage and support operations from a location outside the denied area. OMFTS can be an effective tool, using maneuver, speed, and deception to strike at the enemy's critical vulnerabilities, catch him off balance, and defeat him without directly attacking him. OMFTS will cover operations throughout the full spectrum of conflict, from major theater wars through smaller scale contingencies to humanitarian operations. It will couple doctrine with technological advances in speed, mobility, fire support, communications, and navigation to identify and exploit enemy weaknesses across the entire spectrum of conflict.[11] OMFTS will use Ship-to- Objective Maneuver (STOM) to launch naval expeditionary forces from over the horizon (beyond 20 miles) directly to the objective. STOM will eliminate the age-old logistic buildup ashore and capitalize on the naval forces' ability to use the sea as a maneuver space while using the sea as a barrier for force protection.[12] Over-the-horizon operations allow our naval forces to remain in deep water and beyond the enemy's visual range where the Navy can successfully conduct sea control. This reduces naval forces' vulnerability to naval mines, submarines, and antiship missiles. This flexibility will, while maximizing surprise, enable the force to bypass enemy strengths, attack enemy weaknesses, and force the enemy to defend everywhere.

Sea Basing

Sea basing will be an essential element to the success of OMFTS. Command and control, logistic support, and the preponderance of supporting fires will be sea-based.[13] Sea basing will eliminate the need for secure ports and airfields. Historically, the Marine Corps' amphibious operations focused on an assault of a beach area to build up combat power and logistics ashore. After the build-up was complete, the landing force executed a breakout and assault on the main objectives. This effort required tremendous combat power especially if the beach was heavily defended. Amphibious operations also required sequenced operations that limited flexibility and increased the number of forces required to accomplish the mission and to provide rear area security for the logistic support ashore. OMFTS eliminates this intermediate step, maintains command and control, logistics, and fires afloat. The V-22 Osprey and the Advanced Amphibious Assault Vehicle (AAAV), recently acquired by the USMC, will deliver combat power from over the horizon directly to the objective.

Sea-based logistics will sustain the force from the sea, reduce the logistic footprint ashore, and enhance the mobility of maneuver units. By operating from ships, the logistic base will maneuver with the sea-based forces and support sustained operations. Sea-based logistics offers the unique capability to both sustain the future high-tempo battlefield and exploit the advantages inherent in mobility and over-the-horizon standoff.[14]

Sea-based fires in conjunction with aviation assets will provide operational fires to shape the battlefield and provide immediate, responsive, high-volume suppression and neutralization fires in support of the landing force elements. Sea-based command and

control will emphasize the maneuver warfare principles of centralized control and decentralized execution. This command structure will provide landing force commanders with a common operational picture that will enable them to exercise freedom of action to accomplish their mission.

Deception

Potential adversaries may attempt to predict U. S. intentions and script a sequence of actions the United States might conduct in a conflict. A script could depict the United States as an extensively armed arrogant superpower capable of conducting a wide array of operations but requiring forward basing facilities to conduct operations in theater. The script might also show that if denied access, the United States will use all means available including countermine and antisubmarine warfare and forcible entry capabilities to defeat this strategy. We must avoid being predictable, no matter how good we might currently be in projecting power.

The U. S. should take a new course of action in the future if faced with an area denial strategy. The use of deception, maneuver, speed, and timing could be the tenets for this counter-strategy against our future foes. Deception will be key to this plan. As Sun Tzu stated, " All war is based on deception."[15] He also indicated that deception can be an effective force multiplier:

> If I am able to determine the enemy's dispositions while at the same time I conceal my own then I can concentrate and he must divide. And if I concentrate while he divides, I can use my entire strength to attack a fraction of his. There, I will be numerically superior. Then, if I am able to use many to strike few at the selected.[16]

Through deception the United States can reinforce our adversary's beliefs and

support the script that he develops to forecast U. S. intentions. Demonstrations, feints, decoys, and information warfare can accomplish this deception. Demonstrations and feints could be conducted to enforce our adversary's beliefs that the United States will take a certain course of action. During the Gulf War, the United States was able to reinforce Saddam Hussein's beliefs that Marine forces in the Gulf would conduct an amphibious assault into Kuwait. Underscoring this belief were the demonstration of naval forces and the feint conducted by the Marines. These actions confirmed Saddam's beliefs, resulting in the allocation of his forces in place to defend against this attack. This deception plan kept the Iraqi forces fixed in the east and south, enabling U. S. led coalition forces to conduct a successful envelopment in the west.[17]

OMFTS can easily accomplish the mission of conducting demonstrations and feints. A naval force, inherently mobile when using the sea as a maneuver space, can maintain positional advantage and conduct demonstrations and feints at will. Since OMFTS involves operations from over the horizon, the force can maneuver and appear only when they want to be seen. OMFTS gives the United States the capability to conduct demonstrations and feints to reinforce an adversary's beliefs in the script that he developed regarding U. S. intentions. Once the adversary is sold, then the speed and maneuver of OMFTS will enable us to strike the adversary, catch him off guard, and defeat him.

The use of decoys and information warfare can also be very effective in deceiving the enemy as to actual location and number of forces in theater, types of equipment, readiness of weapon systems, and intentions of a commander. The use of decoys and deception during Operation Bodyguard (1944) helped sell the Germans and reinforced

Hitler's perception that the main Allied assault was to be conducted at Pas de Calais. The use of decoys (wooden tanks, guns, vehicles, landing craft) positioned on the beaches in England across the channel from Pas de Calais confirmed Hitler's assumptions that Pas de Calais would be the site for the cross-channel invasion. Due to this Allied deception plan, Hitler was convinced that the Normandy invasion was a feint and the real assault would be conducted at Pas de Calais. This plan kept German troops occupying Pas de Calais for seven weeks after the Normandy invasion.[18]

OMFTS can use decoys and information warfare to enhance the deception plan. Decoys can deceive the enemy as to the location and size of U. S. forces and their equipment. Current potential adversaries have limited targeting capability, and they can conduct surveillance only in areas (ports, airfields, and naval choke points) where they think U. S. forces might be located in the deployment phase of an operation. The use of information warfare to augment the use of decoys can be an effective deception package. Strictly adhering to operational security (OPSEC) practices and disseminating disinformation by radio, E-mail, message traffic, cellular telephone or intelligence agents can enhance the use of decoys. OMFTS can combine the use of information warfare and highly mobile forces to deploy decoys that create false targets, confuse our adversary, and make him expend his expensive missiles in error. If the United States can create a deception plan that will induce our adversary to expend his weapons on false targets, the adversary's ability to continue the effort may be limited.

Once the adversary's beliefs are reinforced by the deception plan, then the use of maneuver, speed, and timing can overwhelm the adversary and unhinge his plan. For instance, during the Yom Kippur War (1973) the Egyptians' deception plan enforced the

Israelis beliefs that the Egyptians were not ready for combat, and their forces were weak and devastated from their defeat by Israel in 1967.[19] The Egyptians chose the holiday of Yom Kippur as the date for the attack and mobilized forces along the Suez Canal under the pretense of a military exercise. The Egyptians commenced the attack using speed and maneuver and caught the Israelis off guard. After the initial assault, the Israelis were able to regain control, but the Egyptians were able to win a political victory and regain territory lost in the 1967 war. Deception, maneuver, speed, and timing were some of the basic fundamentals used by the Egyptians to win this limited victory over a superior adversary. These same fundamentals are inherent in the composition of forces conducting OMFTS and can be synchronized to achieve great results.

Iran Scenario (2005-2010)

In the future, a possible scenario portrays Iran as a potential adversary. In this scenario, Iran has closed the Straits of Hormuz and has massed troops in Bandar-e Abbas for an invasion of the United Arab Emirates (UAE). Iran has established an area denial strategy to prevent U. S. intervention in the region. The Iranians' use of naval mines in the straits, antiship cruse missiles positioned along the Iranian coast and on Qeshm Island, and Iranian diesel-electric submarines patrolling the littorals pose a challenge for the United States to access the area. Although the United States has good relations with neighboring Gulf states, Iran's intimidation forced these countries to deny U. S. access to ports and airfields in the region. As a global power, the United States has the responsibility to intervene in restoring stability, preserving peace in the region, and reopening the straits to commercial traffic in order to keep the twenty percent of the world's oil supply flowing.

OMFTS could be a significant element of a joint operation to project power into the area. OMFTS forces will conduct over-the-horizon operations to avoid close-in littoral areas where mines and diesel-electric submarine threats are high, and eliminate visual observation from land based enemy forces. OMFTS forces will be protected as they maneuver offshore, due to Iran's limited targeting capability. Deception will be key to the success of OMFTS operations. A deception plan will be developed to encourage Iranian preconceptions that the United States will not tolerate denial of access to the area, will attempt to counter this strategy, and will conduct a forcible entry. A naval demonstration could be conducted off the shores of Fujayrah, UAE, outside the Straits of Hormuz. This action would reinforce Iran's beliefs that the United States is preparing for forcible entry through the straits. Concurrent with this demonstration, Marine forces could commence an assault from over the horizon, capitalizing on the mobility of the V-22, AAAV, and Landing Craft Air Cushion (LCAC) vehicle. This highly mobile force could maintain flexibility, avoid enemy strengths, and exploit any weak flanks of the Iranians. OMFTS could be used in this scenario to accomplish two objectives to unhinge Iran's strategy. First, small Marine units can be inserted into Iran to interdict lines of communication and force Iran to respond to unpredictable events. Secondly, OMFTS can be used to rapidly seize a port or airfield outside of the denial zone to enable the build up of follow-on forces.

Once air superiority is attained by the United States, flights of V-22s can be launched at night from 50 miles over the horizon, escorted by Joint Strike Fighters, Short Takeoff and Vertical Landing (STOVL) aircraft to insert small Marine teams deep into Iranian territory. These highly effective teams would have sensor-to-shooter capability and could

be linked directly to sea based command and control and fire control systems. These teams could interdict Iranian lines of communication and provide targeting information on threat forces and weapon systems. The main assault force could launch from 20 miles over the horizon and attack across an undefended stretch of beach 30 miles east of Jask, Iran. The AAAV's would cross the beach and move along the coast road as the lead element for an assault on Jask. The LCAC's would follow in trail of the AAAV's across the beach and discharge Light Armored Vehicles (LAV) whose high overland speed and mobility could transit to the objective at a rapid pace, bypassing areas of resistance and reinforcing the assault on Jask. Once the port and airfield of Jask are secured and a toehold established, follow-on forces could be introduced into the theater.

At this point, small Marine units will have been inserted throughout Iranian territory, interdicting lines of communication, destroying critical targets, and forcing Iran to deal with unforeseen events. The United States will have secured a port and airfield in Iran, and Marine forces will be in position to assault north to Bandar-e Abbas. Iran's area denial strategy has been defeated, not by the conventional manner of coming through the "front door," but with the use of maneuver warfare and the Marines' new concept of OMFTS.

This scenario shows how OMFTS could be effectively used to insert small unit teams throughout the battlefield and to secure a port and airfield for follow-on operations after the United States was denied access. The objective might have been one of the many missions the Marine Corps is currently capable of performing. Instead of a port or airfield seizure, the objective could have been a non-combatant evacuation operation (NEO) of an embassy, tactical recovery of aircraft and personnel (TRAP), or a direct

action mission to destroy enemy equipment or infrastructure. The size of the OMFTS force is also variable and can range from small units dispersed throughout the battlefield to a large force with mechanized vehicles. OMFTS speed, mobility, flexibility, and deception make OMFTS a significant tool to counter future area denial strategies.

OMFTS Challenges

Some of the current challenges facing OMFTS are the rapid procurement of the V-22, AAAV, STOVL, DD-21, LPD-17, and enhancing sea-based logistic capabilities. The short scenario addressed above was based on a 2005-2010 time frame. The current timeline for introduction of these systems into the fleet starts with an initial operational capability (IOC) in 2001 and has all systems fully operational capable (FOC) by 2020.[20] Through extensive research and development, these systems have been specifically designed for conducting operations in the littorals of the world. These "mission-based systems" are essential to the success of OMFTS, and the procurement cycle should to be accelerated in order to field these systems as soon as possible.

As OMFTS matures in the 21st century, additional systems may be needed to enhance this maneuver warfare concept. The DD-21 land attack destroyer will be an effective platform providing long range fires and naval surface fire support (NSFS) to the Marine forces ashore, but additional firepower will be needed, as our adversaries grow more sophisticated. A stealthy, submersible platform equipped with hundreds of vertical launch systems (VLS) to launch an array of long-range precision guided munitions (PGM) could provide the superior firepower needed in the future. This vessel could have the capability to launch both aerial and underwater-unmanned vehicles. These UAV's and UUV's could conduct aerial and underwater surveillance, deploy sensors over the

battlefield, or conduct countermine operations. This submersible platform could provide firepower and the surveillance capability to destroy and disrupt the early warning and targeting ability of our adversary.

The V-22 and CH-53E will be the primary platforms used to transport personnel, equipment, and supplies to the Marines ashore during OMFTS operations.[21] Both of these aircraft are extremely capable and will provide rapid combat buildup ashore and provide the mobility and sustainment the force needs to be successful. When the size of the force increases with large logistic demands for fuel, ammunition, food, and water, the V-22 and CH-53E may become overextended and fail to provide sustainment from over-the-horizon sea-based logistic shipping. Fuel and ammunition will be the greatest challenge; the use of forward arming and refuel points (FARP) will be essential to provide thirsty AAAV's with fuel and ammunition.[22] The CH-53E outfitted with a refueling system that can hold 2,400 gallons of fuel can be used to establish a FARP to refuel vehicles and helicopters. The V-22 and CH-53Es can also lift external 500-gallon fuel bladders to established FARP sites for replenishment. There may be a future requirement for a platform larger than the V-22 and CH-53E to support sea-based logistics. This platform should be a tiltrotor, with flight characteristics of the V-22, but lift capacity of a C-130 aircraft. After battlespace dominance is achieved, this oversized V-22 could provide lift capability to transport large quantities of fuel and other bulk items to support sustained operations ashore. This platform can also be used to augment in-theater replenishment of sea-based logistic shipping, providing speed, flexibility and response to the sea-based logistic system. In order for OMFTS to be successful in the 21st Century, these challenges should be addressed.

Conclusion

Operational Maneuver from the Sea is a viable counter to the future area denial strategies of our adversaries. The ability to continue to project power around the world may be restricted by our adversaries' use of diplomatic or military means. Area denial strategies will focus on the littorals of the world. Seventy percent of the world's population lives within 300 miles of the world seas and oceans; eighty percent of the world's capital cities and international markets are located in the littorals.[23] Potential adversaries' use of naval mines, diesel-electric submarines, and antiship missiles could limit the U. S. response to intervene and protect our national interests around the globe. OMFTS enables use of maneuver, speed, flexibility, and deception to strike directly at the enemy's center of gravity, which can unhinge his area denial strategy. The United States should use deception to confuse and disrupt surveillance and targeting and to force our adversary to defend everywhere and expend high value weapons on decoys. We must be able to out-think our opponent, get into his decision cycle and disrupt it, remain unpredictable, and force our adversary into situations that he is not ready to handle. The United States enters the 21st Century as the only global superpower, but we must not rest on our laurels. A potential peer competitor may be getting ready to step into the ring. Regional aggressors or non-state actors may already have the wherewithal to accomplish an area denial strategy that would deter or delay U. S. power projection. OMFTS can provide a successful option for the United States to project power in the future when access is denied.

Notes

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