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MARINE AVIATION AND OPERATIONAL MANEUVER FROM THE SEA

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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The Marines are "necking down" to fewer type aircraft and thus, must continue to modernize and close the capability gap created by the MV-22. To accomplish this the new 4BN/4BW will have to be replaced. The most reasonable idea seems to be a small tiltrotor with similar characteristics and capabilities to the MV-22. Additionally, the Marines must lighten the force and retire the CH-53E.

Ultimately the Marines will have a triple punch aviation force of MV-22, MVLA, and JSF that will give much more credibility to the 9-1-1 Force when called and will make Operational Maneuver From the Sea true maneuver and power projection at the operational level.

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Abstract of

Marine Aviation and Operational Maneuver From the Sea

When it finally arrives, the MV-22 Osprey will become the centerpiece of OMFTS because it will give the JFC the ability to maneuver from the sea throughout the operational depth of the battlespace, strike directly at operational objectives and centers of gravity, and exploit critical vulnerabilities. It will enhance the JFC's mobility, speed, surprise, and deception. However, key to the synergistic requirements of OMFTS is the need for all aircraft to be operationally compatible. Because the MV-22 is a quantum leap in capability over conventional helicopters, it causes a serious rift in operational capability between the Osprey, light attack Cobras and Hueys, and heavy lift CH-53E's. This rift presents the JFC with employment problems that must be solved--how will the MV-22 be protected and controlled and how can the capability gap be closed?

As the Marines achieve their Aviation Master Plan goal to "neckdown" to fewer type aircraft over time, they recognize the need to continue to modernize the assault support and attack helicopter side of Marine aviation in order to close the capability gap created by the MV-22. The solution is simple. Plan to replace 4BN/4BW with a light attack version of MV-22 (MVLA) and retire the CH-53E. This solution gives the combatant commander an operational employment capability that will increase operational tempo, extend operational reach, and interrupt the decision cycle of the enemy commander.

Ultimately the Marines will have a triple punch aviation force of MV-22, MVLA, and JSF that will give much more credibility to the 9-1-1 force when called and make OMFTS true maneuver and power projection at the operational level.

Introduction

The end of the Cold War has caused the United States to rethink its National Security Strategy and National Military Strategy (NMS); consequently, the services have had to rethink their individual doctrine and adapt to these new strategies and to this new multipolar world. With countries seeking their rightful place in the world, there will emerge new regional threats that will affect U.S. national interests. No longer are we in a world where two superpowers create constant tensions and huge military machines control national strategies.

Our new multilateral world will find the United States not as the world's sole policeman, but as a nation that plays an important role in many regions of the world.[1] Within this new world, the U.S. Naval Services must carefully plan its force, take advantage of emerging technologies, and ensure they meet the requirements of "Forward...From the Sea" and "Operational Maneuver From the Sea (OMFTS)."

The Marines have bet their future on the success of the MV-22 Osprey as one of the aviation platforms that will ensure their strategy of OMFTS and concept of Sea Dragon are successful. The risk is compounded by the mismatch of aviation platforms that should complement one another and that should operate synergistically within OMFTS. Several aviation problems are created, however, with the introduction of the MV-22. Joint force commanders (JFC) must make their needs known to Marine aviation planners. They must look to the future now, and must ensure that the Marines procure aircraft that complement the MV-22, ensure it has ample protection, ensure that the speed and flexibility required for OMFTS is optimized, and ensure that the problems created by this revolutionary new platform are solved.

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[1] John J. Mearsheimer, "Disorder Restored," in Strategy and Force Planning eds. Strategy and Force Planning Faculty (Newport, RI: Naval War College Press, 1995), 71.

To address these issues, I plan to discuss the evolution of OMFTS and how it will be used by the Marines and the Navy. I will then explore the operational uses of the MV-22 and the problems faced by the newly created mismatch of aviation platforms that could impact on a joint maritime component commander's (JMCC) ability to support joint operations. In order to properly set the stage, I feel I must look into past and present aviation strategies and delve into several aviation issues before proposing a solution that will enable the combatant commander to have the most capable force available, and one that will breathe life into OMFTS.

Marine Corps Amphibious Doctrine Evolves

Shortly after the Spanish-American War, U.S. Naval planners began thinking about the problem of seizing and holding advance naval bases. Commodore George Dewey's victory at Manila Bay brought the problem to the attention of Navy and Marine planners. "Dewey himself remarked afterward that had he had under his command a force of 2,000 marines he could have forced the surrender of the Spanish army and occupied the city of Manila with comparative ease."[2] This statement foretold the doctrinal changes in store for the Marine Corps over the next century.

Since that time, the Marines have been researching, perfecting, and employing their amphibious doctrine. Captain Earl H. "Pete" Ellis saw that Japan was beginning to expand its influence in the Pacific as early as 1911. He foresaw the need for advance naval bases and that Japan could try to deny that need. "Ellis believed that in the future, the nation would call

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[2] Jeter A. Isely and Philip A. Crowl, The U.S. Marines and Amphibious War, (Princeton: Princeton University Press, 1951), 21.

on the Marine Corps to conduct amphibious assaults to seize islands for such purposes from the Japanese."[3] In 1921 Captain Ellis published his famous treatise entitled Advanced Base Force Operations in Micronesia. With this document, the operational concept of the amphibious assault was born for the Marines. "His premise was controversial, but his ability to foresee the coming change allowed us almost 20 years to develop the needed doctrine, tactics, and equipment."[4] Captain Ellis set the Marines on a path from which they came to base their OMFTS doctrine of today.

The Marines have always seen their role as one of leaning forward (operationally and doctrinally), forward deployed, and the first to fight. Power projection from the sea and amphibious assaults have long been the tenets of the Marines' success. They see their forces as those "...that can fight on short notice under unpredictable circumstances. Flexible, sea-based, expeditionary, combined arms forces will remain at the forefront of our Nation's ability to respond rapidly and decisively in the event of a crisis."[5] Since these crises tend to occur when they are least expected, "Winning will be determined by the speed at which we can respond and the effectiveness and survivability of the forces that we deliver. If we're going to be successful on these fronts, the unique capabilities of Marine Aviation will be key."[6]

Operational Maneuver From the Sea

In 1992, the Department of the Navy White Paper "...From the Sea" was published and offered a fundamental change in naval operational focus and changed the traditional focus

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3 Charles C. Krulak, "Operational Maneuver From the Sea," Proceedings, Jan 1997, 26-31.

4 Ibid.

5 _____. "Aviation is Fundamental," Marine Corps Gazette, May 1996, 30.

6 Ibid.

of the naval service from warfighting on the sea to joint operations from the sea into the littorals. The reason for the shift is due directly to the change from a bipolar world to a multipolar one consisting of many regional threats and challenges. This new and critical role will see naval expeditionary forces (NEF) shaped for joint operations, tailored for national needs, and operating forward from the sea.[7]

Two years later, "Forward...From the Sea" was put forth to underscore that the role of today's naval forces is to be forward deployed, engaged, preventing conflicts, and controlling crises. It reiterates the tenets published in 1992 with crisis response and a littoral focus operating in concert with a joint task force (JTF).[8]

The Marines further refined their doctrine that will carry them well into the next century when "Operational Maneuver From the Sea" was published. With this approach to employment and warfighting, they will support the NMS by projecting power from the sea and influencing events in the littoral regions of the world. "The sea offers strategic, operational, and tactical mobility to those who control it."[9] OMFTS couples "...doctrine with technological advances in speed, mobility, fire support, communications, and navigation to identify and exploit enemy weakness across the entire spectrum of conflict."[10]

The principles of OMFTS provide the tenets by which the JFC can base his planning for naval operations and the employment of naval forces in the littorals. "What distinguishes OMFTS from all other aspects of operational maneuver is the extensive use of the sea as a means of gaining advantage, an avenue for friendly movement that is simultaneously a barrier

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7 U.S. Department of the Navy White Paper, "...From the Sea," Washington: 1992.

8 U.S. Department of the Navy White Paper, "Forward...From the Sea," Washington: 1994.

9 Krulak, "Operational Maneuver From the Sea," Marine Corps Gazette, May 1996, A-4.

10 Ibid.

to the enemy and a means of avoiding disadvantageous engagements."[11] The focus of OMFTS is on the strategic objective which will lead to winning the campaign. It treats the sea as maneuver space. It creates overwhelming tempo so as to apply force to a critical vulnerability faster than the enemy commander and his staff can react. It generates momentum and applies strength against weakness or at a vulnerability. OMFTS integrates all assets of the naval expeditionary task force (NETF), but is strongest when focused by a single commander. It keys on deception, enemy critical vulnerabilities, and battlespace dominance. It gives the theater commander a "highly mobile power-projection force...and a wide range of tactical alternatives"[12] aimed at operational and tactical objectives.

These principles and this concept, which will soon be doctrinally ingrained in each and every U.S. Naval Officer, will allow the JFC to win battles by "achieving critical objectives faster and more decisively than the enemy can react."[13] OMFTS will present the enemy commander and his staff with problems of ever increasing difficulty and get inside his OODA (observe, orient, decide, act) Loop. The speed, flexibility, and shock value of OMFTS will cause the enemy commander to become confused, and to fall so far behind in his decision cycle that the decisions (once they are finally made) will no longer affect the ongoing actions or will have a negative impact on them because of the time delay in initiating action.

In order to accomplish this operational feat, the force must remain modern and technologically superior. The Department of the Navy's acquisition strategy "...emphasizes that future programs must produce survivable multimission platforms and weapons

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11 Ibid.

12 U.S. Department of the Navy, "Operational Maneuver From the Sea," Headquarters United States Marine Corps White Paper, Washington: 1996.

13 Ibid.

systems--true force multipliers--capable of meeting a great variety of mission requirements."[14] Therefore as the Marines prepare for the future, OMFTS will be key to further technological and doctrinal changes. "While OMFTS will not define all Navy/Marine Corps operations, the attitudes, skills, techniques and equipment associated with it will provide naval forces with a solid foundation for future improvisation."[15]

Aviation Master Plan and OMFTS

No longer will the JMCC launch amphibious assaults from two to three miles off shore into the strength of an awaiting enemy. Now he will be able to launch from well over the horizon, maneuver around the threat and attack the enemy's vulnerabilities or centers of gravity with relative freedom of action throughout the breadth and depth of the battlespace, thereby achieving tactical and operational surprise. This will effectively keep the NETF out of harm's way and greatly increase survivability of the force.

The MV-22 will soon be introduced to the fleet as the key asset for over-the-horizon (OTH) amphibious operations and OMFTS. It is the cornerstone of the long awaited triad of Landing Craft Air Cushion (LCAC), Advanced Amphibious Assault Vehicle (AAAV) and MV-22, which will substantially enhance the OTH concept. MV-22, AAAV, and LCAC are the three primary vehicles which will enable the Marines to be a credible, balanced, and operationally effective force well into the 21st century. These platforms will launch from far OTH, taking advantage of operational maneuver to surprise and deceive the enemy.[16]

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[14] U.S. Department of the Navy, Posture Statement, (Washington: 1996), 30.

[15] "Operational Maneuver From the Sea: Challenge and Opportunity," Amphibious Warfare Review, Vol. 14, No. 1, Winter/Spring 1996, 10-14.

[16] William F. P. Gresham, "OMFTS and the Single Battle Concept," Marine Corps Gazette, June 1996, 39-40.

The new operational dilemma presented to the JFC and particularly his JMCC--or Commander NETF (CNETF)--is not if the Osprey can be used operationally nor how it can be used, but how can it be protected and controlled once it begins its movements in the operational depth of the battlefield. These problems must be solved soon as planning begins for future replacement aircraft and as OMFTS is perfected.

As the military down sizes, budgetary constraints are placed on the services. As an operational planner, it is understood that modernization does not happen all at once nor does it come cheaply. However, the operational level commander must consider not only budgetary constraints, but also those things that will substantially enhance his warfighting ability. Therefore, the operational level commander must attempt to build as cohesive and synergistic a force as possible through the parent service.

When the MV-22 achieves initial operating capability (IOC) in 2003, the Marines will have created a force strategy dilemma similar to the one identified by Major G. J. Trautman in 1988.[17] He argued that the other assault support assets should be modernized first in order to avoid cost and technology risks and to stay away from the mismatch of amphibious assault platforms that will exist from the original MV-22 introduction date until the remaining force can be modernized, a period of approximately 20 years.

Unfortunately, we cannot go back in time and solve the problems that Major Trautman saw coming, but we can easily see that the MV-22 is far superior in capability to the aircraft it will replace (CH-46E and CH-53D). Operational planners must recognize that the MV-22 is far more that just another helicopter conducting ship-to-shore movement of people and things.

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[17] George J. Trautman, "Over-The-Horizon Amphibious Operations and the MV-22: A Force Strategy Mismatch?," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1988, 1-12.

It is a technological leap far ahead of conventional helicopters and it gives the JFC a force multiplier that not only offers physical speed, maneuverability, and flexibility, but also allows him the ability to gain time in his decision cycle and the ability to create a tempo of operations previously unattainable from an amphibious force. It will create operational shock, and greatly extend the commander's operational reach with direct ship-to-objective maneuver, thus, allowing the JFC the opportunity to interdict supply lines of communication, lines of movement and attack directly at operational or strategic objectives and critical enemy vulerabilities.

As the Marines modernize and upgrade their medium lift capability and as more and more MV-22's are fielded, the remainder of their helicopter assets will be left behind, literally and technologically. Fiscally, it is impossible to modernize the entire fleet simultaneously. Therefore, the Marines have been following a neckdown plan that calls for fewer type aircraft over time.[18] Eventually, the fleet will consist solely of the future short takeoff/vertical landing (STOVL) Strike Fighter (the USMC version of Joint Strike Fighter) and the KC-130.

The Joint Strike Fighter (JSF) will provide high speed, on-call fire support and fighter protection for the force. It will have stealth technology, STOVL capability, stand-off weapons delivery, and a point target capability that will effect every dimension of the battlespace--a true force multiplier and a lethal complement to the capabilities of the MV-22.

The helicopter fleet has not enjoyed the same successes as the fixed wing fleet in reducing the numbers of aircraft types in the active inventory. However, this should change

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[18] For example, the fixed wing community has gone from F-4, RF-4, A-6, EA-6, A-4, OA-4, OV-10, and KC-130 to what they have now: F/A-18, EA-6B, AV-8B, and KC-130.

with the MV-22.[19] If allowed to continue, the force of the future will consist of MV-22, CH-53E, and upgraded AH-1W Cobras and UH-1N Hueys.

Although the plans are sound, Marine assault support communities have suffered over the years as new jet aircraft were procured. To compound that, the MV-22 has been slow in coming. It should arrive just in time to save the assault support side of Marine aviation from becoming nearly obsolete. However, it is not the only aircraft needed to keep pace with the tenets of OMFTS. This is the basis of the force dilemma that comes with the MV-22 as it leaps far out in front of the rest of the fleet.

The Marines took the risk and made a leap of faith when they went with a tiltrotor aircraft instead of a conventional helicopter as its medium lift replacement. It will be the cornerstone of OMFTS and Sea Dragon for decades to come. However, there will be a force strategy mismatch with the MV-22, conventional helicopters, and the strategy of OMFTS and OTH amphibious operations until attack and utility platforms (light attack), and heavy lift platforms with characteristics similar to the MV-22 are fielded. This mismatch of platforms will directly impact upon the ability of the JFC to accomplish the mission.

Light Attack

Since the early 80's, the Marines have organized their attack and utility aircraft into composite light attack helicopter squadrons. This was done because of a 75% commonality of parts with the UH-1N and AH-1J, to save manpower, and for ease of deployment.[20] It would

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[19] The helicopter fleet has had its current aircraft types since the mid 1960's to early 1970's. They have all undergone upgrades, had service life extension programs (SLEP), or been recapitalized . The current fleet consists of the CH-46E, CH-53D, CH-53E, AH-1W, and UH-1N.

[20] James P. Sexton, "Why the Marine Corps Needs the 4BN/4BW Upgrade Program," Unpublished Talking Paper for Mr. Webb Joiner, Bell Helicopter Textron, n.d.

forever change both communities in the way they trained, deployed, and conducted warfighting.

The Cobra has undergone several upgrades and the Huey none. Because of this, commonality has seriously decreased. Since both aircraft are being targeted for major changes in the form of mid-life upgrades, they will once again be compatible (approximately 85% parts compatible)[21] with the same engines, rotor head, and powertrain. These upgraded 4-bladed versions are being called UH-1(4B)N and AH-1(4B)W or simply 4BN and 4BW. The plan is for 4BW/4BN to bridge the gap to 2020 when a replacement can be fielded.[22]

This new Cobra will be the most lethal attack helicopter and the Huey will be the most versatile utility helicopter in the military inventory. Not only will they solve some personnel problems with their 85% commonality and ease of maintenance, but they will give the Marines the speed, firepower, communications, and flexibility that they have needed for the past 15 years. Additionally, they will give the combatant commander a new package for his operational bag of tricks. Both aircraft will have maximum airspeeds of 160 nautical miles per hour and endurance near 3.5 hours. However, they will not begin fleet introduction until just after the MV-22 begins its introduction. Although they solve many problems and will be technologically compatible with the MV-22, they do not fully solve the protection problems or the operational compatibility problems with the MV-22 for the JFC. Further, although they

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21 Ibid.

22 The Marines pursued a replacement aircraft for their AH-1J/T/W, UH-1N, and OV-10 aircraft in the mid 80's called VMAO. This replacement aircraft was deemed unaffordable because the number one priority for the Marines had long been a replacement for its aging CH-46E fleet. The OV-10 was retired without replacement, but the UH-1N and the AH-1W remained. The planned major upgrades will have to get the Marines to the next generation replacement aircraft. When VMAO was canceled because of competing priorities within the Marine Corps (V-22, F/A-18, and AV-8B) and DOD, they had no choice except at some point to revitalize their current fleet. Thus, the 4BN/4BW program was born, and they have been given the go ahead by the Joint Warfare Capabilities Assessment (JWCA) and the Defense Acquisition Board (DAB).

are the most capable helicopters of their kind, they are still helicopters, and therefore, will cause the MV-22 to lose some of its operational flexibility.

The escort, protection, and compatibility mismatch is the essence of the problem. What other assault support, utility and attack functions will have to be neglected or worked around because the MV-22 is so far out ahead of conventional helicopters? In the short term it will have to be protected and escorted by a combination of fixed wing aircraft (primarily the AV-8B) and helicopters (primarily the AH-1W). Later, it will be the 4BW/4BN and AV-8B/JSF. This, however, creates many of its own problems of control, coordination, and complexity simply by the shear number of aircraft, aircraft types, rearming, refueling, supporting the ground commander, and accomplishing operational objectives quickly. This is not the ideal situation. What is required here is an aircraft of similar characteristics to escort and cover the MV-22, one that can accomplish operational objectives in its own right, one flexible enough to conduct the multirole or utility functions, and one compatible with the capabilities of the MV-22.

The answer that current force planners can give to future JFCs is simple, but expensive. The current thought is that the light attack aircraft will be replaced with a common airframe that is called the Joint Replacement Aircraft by Marine planners. Thus far there are no preconceived notions of what this aircraft looks like, but most feel it will be a small tiltrotor aircraft similar to the MV-22.

This aircraft must be compatible with the MV-22 in every category, to include speed, range, and self-deployability. In order to accomplish this, it must take the form of a multirole tiltrotor that can accomplish many tasks--attack, utility and observation. It must be armed

with at least 16 (preferably 24) precision guided munitions (TOW/Hellfire), have a state of the art flex gun, and a state of the art targeting system. It will have to be a fast (250+ knot), maneuverable, survivable aircraft that is more capable and lethal than the current fleet or the proposed 4BN/4BW. In keeping with the force of the future and the Sea Dragon vision, it will have to carry 6-8 combat loaded Marines, have a sophisticated command and control package to link the on-scene mission commander with the JFC, and be capable of controlling the myriad of fires available to these light, mobile forces.

This light attack version of the tiltrotor (MVLA)[23] will have to be smaller in order to increase survivability and tactical employment, but will take advantage of the tiltrotor technology, training, and infrastructure that will already be resident with the fielding of the MV-22. It will be light, flexible, survivable, and responsive to both the aviation and ground commanders, as well as the JFC, a true force multiplier available from beginning to end. The MVLA aircraft will be the perfect complement to the MV-22 and give the JFC a dual capability by extending his operational reach and attacking where it is least expected.

Heavy Lift

The CH-53E is the Marine Corps' sole heavy lift helicopter.[24] It was designed for those heavy external loads that the Marines need to sustain them ashore. However, in the recent past, it has gained some notoriety as an operational platform. It has the needed long

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[23] MVLA is the name I have chosen to call this proposed new aircraft. It is not used in any other publication. It was chosen because it conveys to the reader a sense of this aircraft's capabilities and looks. I see it as two variants that spawn from a single assembly line--one utility and one attack version--just as is planned for the JSF.

[24] Although the CH-53D was the Marine Corps' heavy lift helicopter before the CH-53E, it is used more now for medium lift than heavy lift. There are very few squadrons remaining and those that do remain are based in Hawaii. The MV-22 is due to replace the CH-53D as well as the CH-46.

legs and relative speed to maneuver from ship to objective. It has been the key platform for non-combatant evacuation operations (NEO) and recently for the famous tactical recovery of aircraft or personnel (TRAP) mission to rescue Air Force Capt. Scott O'Grady when his F-16 was shot down over Bosnia.

Even with its recent successes, the CH-53E is relatively slow (in comparison to the MV-22) and extremely vulnerable, especially in and around the objective area. Its size and huge heat signature make it vulnerable not only to small arms, but to the many variants of surface to air missiles that have become so easily obtainable in today's multipolar world. With the introduction of the MV-22, the Marine Corps must investigate its real need for a single mission aircraft such as the CH-53E.

As with light attack, heavy lift needs to complement the force. When the MV-22 arrives, the CH-53E will no longer be needed to conduct those long range missions because the MV-22 will be able to accomplish them without the logistical overhead that the CH-53E requires. Although a capable aircraft, it will be quickly relegated to its heavy lift mode and conduct traditional ship-to-shore movement. This does not match the tenets of OMFTS, the concept of sea-based logistics, nor is it compatible with operational speed and depth. The Commandant's Warfighting Lab and Sea Dragon concept are exploring many facets of warfighting that are "out of the box." Perhaps it is time the Marines consider lightening its force and rethinking their tactical and operational employment so that the MV-22 and future MV-22 variants will be able to carry all that is required of our forces ashore. This will allow the Marines to retire the CH-53E, make the assault force even quicker, and add to the tempo needed by the JFC to surprise, and deceive the enemy commander.

Conclusion

"The ability to maneuver against an enemy's center of gravity depends heavily on the ability to project a highly mobile and sustainable landing force ashore."[25] The JMCC of the future must be able "...to anticipate and adapt to a broad spectrum of military missions ranging from major regional conflicts to military operations other than war."[26] With Sea Dragon and OMFTS, the NETF will be able to act against critical vulnerabilities simultaneously with "Dispersed, independent, and coordinated units ashore in conjunction with remote and timely fire power and logistics afloat that in total will achieve a dramatically more adaptive, effective, and far less vulnerable force"[27] that will confuse the enemy commander and disrupt his decision cycle.

The aviation force that will give the JFC this lethal, forcible-entry capability from the sea will consist of MV-22, MVLA, and JSF. These aircraft will be survivable, flexible and fast. They will operate synergistically and without any unnecessary logistical overhead required of a force with widely varying capabilities. They will allow greater movement into operational depth with more speed and lethality than was ever conceived with the OMFTS idea.

The MV-22 is the long awaited fix for the Marines' medium lift helicopter force. It brings depth to OMFTS. It signals the true awakening of what the Marines have been discussing, writing about, and exploring since planning began for the MV-22. Joint operations are key to operational success, and since the MV-22 will soon be introduced, the Marines, the

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[25] Carl E. Mundy, "Thunder and Lightning: Joint Littoral Warfare," Joint Force Quarterly, Spring 1994, 45-50.

[26] "Operational Maneuver From the Sea: Challenge and Opportunity," Amphibious Warfare Review, Vol. 14, No. 1, Winter/Spring 1996, 10-14.

[27] Ibid.

CNETF, and the JFC must be aware that they have a far superior capability than any previous assault support aircraft--much more than another transport helicopter. Commanders at every level will have to explore the limits of its employment possibilities.

However, before this force can be optimized, the remainder of Marine Aviation must also make a technological leap. The 4BN/4BW will provide much more to the JFC, will be much closer in capability to MV-22 than the current Huey and Cobra, and will capably bridge the gap until MVLA; however, without foresight on the operational planner's part now, MVLA will never become a reality and OMFTS will never achieve its fullest potential. Similarly the CH-53E is not a complement to the MV-22/MVLA force. With lighter, more mobile forces, the CH-53E will not be needed.

The MV-22 will bring the Marines and their sustainment directly to the objective, MVLA will provide close protection, instant and on-call point targeting, as well as command and control, and JSF will provide air superiority, deep strike, and any additional on call fire power needed to support operational and tactical maneuver. Once this team is fielded, they will give a new meaning to reaction time, and operational shock when the 9-1-1 force is called into action.

The next OMFTS triad that is spoken of may very well be the MV-22, MVLA, and JSF. It could also be the light, mobile and lethal air-ground-logistics team of the Marines. It could be the naval triad of air-surface-subsurface with the full range of Marine and Navy capabilities. However, since each Service will most likely work together in any future conflict, it may very well be the JFC's triad of Army, Air Force, and Naval Forces tailored for joint operations that ensures the power projection that comes from OMFTS is successful.

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