### 14. ABSTRACT

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FUTURE WAR PAPER

TITLE:

Colonel John Boyd and the Amphibious Assault: Increasing the agility of Joint Forcible Entry

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF OPERATIONAL STUDIES

AUTHOR: Major Matthew. D Lundgren

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Mentor: Dr. Wray Johnson
Approved: [Signature]
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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE SCHOOL OF ADVANCED WARFIGHTING OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT
Since the end of the Second World War, many individuals in and out of uniform have declared that amphibious operations and forcible entry in general have become obsolete. There are many reasons offered as to why the United States will never conduct another opposed landing. These include emerging threat capabilities like Anti-Access / Area Denial (A2AD) systems, casualty aversion on the part of the American public, or gaps in the US military’s ability to conduct forcible entry operations. While these factors are certainly cause for concern, they do not change the fact that the US still requires a forcible entry capability in order to protect and further its vital national interests around the world. This is acknowledged in strategic guidance such as Sustaining U.S. Global Leadership: Priorities for 21st Century Defense. This document provides the Department of Defense (DOD) with the President’s priorities for the current and future requirements of the force. It specifically requires the US military “to secure territory and populations.”1 The document also notes that “the United States must maintain its ability to project power in areas in which our access and freedom to operate are challenged.”2 The dilemma regarding how to meet these requirements under present fiscal constraints and a waxing threat environment can be answered partially by non-material solutions. Specifically, the concepts developed by Colonel John Boyd, United States Air Force will allow the US military to develop capabilities that will negate enemy A2AD systems and allow the joint force to project itself into denied territories with decisive ground maneuver forces by exploiting superior tempo, agility, and quickness.

Colonel Boyd was a US Air Force fighter pilot whose intellectual contribution to the understanding of warfare was substantial. His work included ideas such as the Observe, Orient Decide, and Act (OODA) Cycle and his enormous briefing titled “Patterns of Conflict.” Of these and other concepts, the OODA Cycle is the most famous. It is present in much of Marine Corps
doctrine and is frequently referred to in discussions regarding competitive decision making exercises. The OODA Cycle as imagined by Colonel Boyd was much more complex than is commonly portrayed. Most individuals understand it as simply a four step cyclical process which if repeated faster than your enemy will lead to victory. This simplified version of the OODA Cycle has eclipsed what was originally described by Colonel Boyd. His version was much richer than a simple “loop”. A greater understanding of the nuances of the concept will lead practitioners of war to view linear speed as less important than quickness and agility, which serve as the key factors to adaptability on the battlefield. Equally important to the OODA Cycle is Colonel Boyd’s “Patterns of Conflict.” This theoretical treatise provided the context within which the OODA Cycle can be understood and used to defeat an adversary. “Patterns of Conflict” set the intellectual framework for maneuver warfare. This warfighting philosophy was adopted by the Marine Corps in the late 1980s as its preferred method for waging war.

Despite Boyd’s impact regarding war on land, current doctrine for amphibious forcible entry has changed very little since World War II. Concepts such as “Operational Maneuver from the Sea” and “Ship to Objective Maneuver” allude to new methods of gaining entry onto a hostile shore but they still involve the rapid build-up of combat power ashore in a single direction from the ship to the shore. While these concepts intend to bypass enemy strengths, they do not provide a detailed explanation of how this feat will actually be accomplished. Joint Publication 3-02, Amphibious Operations, facilitates the delivery of the landing force into the area of operations but fails to account for competing interests between the landing force and the amphibious task force. In an environment where the enemy can threaten the amphibious task force and the landing force simultaneously, it is difficult to see how a force with two command structures can rapidly adapt to the threats that it faces. Existing doctrine for amphibious
operations must be revised to provide for maximum tempo, agility, and quickness as described by Colonel Boyd and the Marine Corps’ own maneuver warfare doctrine.

The essence of the problem is that the doctrine, organization, and equipment of the Marine Corps have not caught up with concepts like “Ship to Objective Maneuver.” Indeed, the method of fighting espoused by Colonel Boyd in “Patterns of Conflict” and adopted by the Marine Corps requires more than tilt-rotor aircraft, air-cushioned landing craft, and high water speed amphibious vehicles to become a reality. To truly keep the enemy off balance and impose its will, the joint force must be able to rapidly insert and extract forces which have the capability to deliver decisive actions against regular and irregular adversaries. The limitations placed on amphibious forces by embarkation space, ship to shore movement rates, and logistical re-supply requirements dramatically limit the real combat power that a force that is executing “Ship to Objective Maneuver” can employ against the enemy. Compounding this material deficiency is the disconnect that doctrine creates in the command of a forcible entry operation from the sea. The lack of unity of command between the amphibious task force and the landing force does not facilitate tempo, focus, or timely decision making when faced with issues that straddle the land and maritime domains. Using Colonel Boyd’s principles from “Patterns of Conflict” as evaluation criteria for a new way of conducting amphibious operations, several material and non-material changes can be offered in order to truly realize an amphibious forcible entry capability.

Following the Vietnam War, the US military set about evaluating its ability to fight and win on the modern battlefield. Frans Osinga is a Dutch Air Force officer who wrote the definitive account of Colonel Boyd’s theories regarding war. In his work, Science, Strategy and War: The Strategic Theory of John Boyd, he credits Colonel Boyd with providing what he describes as the “conceptual heart” of US military reforms:
The US Army and US Marines made a transition from a defensive orientation and attrition mentality towards a new concept of maneuver warfare aimed at engaging attacking enemy forces both close and deep simultaneously, and with heavy reliance on air support. This implied a move away from a focus on linear operations, a reliance on overwhelming force and massive firepower towards a style of operation based consisting of multiple thrusts, surprise, deception, non-linear fluid actions aimed at uncovering enemy weaknesses and an emphasis on achieving disintegration, shattering the cohesion among enemy units and their action, rather than destruction by a continuous and predictable battering of enemy strong points. 3

This philosophy for waging war found its way into service doctrine such as Marine Corps Doctrinal Publication 1, *Warfighting*. The influence that Colonel Boyd had was a consequence of his prolific self-study as well as his personal interaction with many of the reform minded officers in the Marine Corps.

Colonel Boyd developed his theory for war based on an extensive study of armed conflict. Through a comprehensive analysis of historical case studies and military theories, he developed “Patterns of Conflict.” This presentation outlined Colonel Boyd’s beliefs regarding how wars should be fought. Rather than winning by simple attrition of forces, Boyd sought to “Create and exploit opportunities to disrupt [the enemy’s] system for communication, command, and support, as well as undermine or seize those connections or centers that he depends upon, thus shake his will or capacity to decisively commit his back-up echelons, operational reserves, and/or strategic reserves, thereby magnify adversary’s confusion and disorder and convince him to give up.”4 Boyd’s theories were not altogether unique. As it was the product of Colonel Boyd’s study of military theory and history his own theory borrowed heavily from other advocates of an “indirect approach” to warfare.

He studied a variety of conventional and non-conventional campaigns to determine which methods were most effective. His study of German *blitzkrieg* and Communist guerrilla warfare
led him to posit that “Blitz and guerrillas, by operating in a directed, yet more indistinct, more irregular, and quicker manner, operate inside their adversaries’ observation-orientation-decision-action loops or get inside their mind-time-space as basis to penetrate the moral-mental-physical being of their adversaries in order to pull them apart, and bring about their collapse.” These principles made their way into Colonel Boyd’s “Patterns of Conflict”, which in turn influenced the development of maneuver warfare.

Current concepts for forcible entry have their origins before the Second World War. During that period, the US military developed a doctrine for landing on a hostile shore and experimented with its implementation. Throughout the later conflict with Germany and Japan, this concept was revised based on the experience of numerous amphibious assaults. At their core, these operations were largely races to build up combat power ashore faster than the enemy could react. The United States Army’s official history of the Normandy Invasion describes the concept this way.

An amphibious assault without cover of darkness or smoke, and without the flexibility of a large floating reserve, depended for success on developing a weight behind the initial attack that would not only crumble enemy defenses but would carry the assaulting troops far enough inland so that follow-up troops could be put ashore behind them to consolidate and then exploit the beachhead. The double requirement that the assaulting troops be able to knock out enemy fortifications and push rapidly inland required a careful balancing of striking power and mobility.

This methodology for winning is still fundamental to success of amphibious operations today. It is a product of the lessons that were learned from the disaster at Gallipoli as well as the successful amphibious assaults during the Second World War where the Allies were able to build up decisive combat power before the arrival of Axis counter-attack forces.
While the "conventional" concept has remained relatively the same, the material realities are dramatically different from seventy years ago. The complete mobilization of the U.S. economy to produce war goods during World War II provided planners with an amphibious capacity that far exceeds what can be provided by the present day L-Class fleet and connectors. For example, the Allies were able to land roughly 35,000 troops in 24 hours at Anzio, on the Italian boot. This is about five times the amount of combat and logistics troops that make up a present day Marine Expeditionary Brigade (MEB). However, despite the fact that it is a fifth of the size of the force at Anzio, a MEB would take the same amount of time to land all of its ground combat and support forces. Clearly there has been a change in capability with no commensurate change in concept. The joint force no longer possesses the capacity to defeat a sizable enemy by simply outpacing the adversary's build-up of combat power in a specific location.

The doctrine outlined in Joint Publication 3-02, Amphibious Operations (JP 3-02), describes the Amphibious Force (AF) as consisting of an Amphibious Task Force (ATF) and a Landing Force (LF). It defines the relationship between the Commander Amphibious Task Force (CATF) and Commander Landing Force (CLF) as supporting / supported. The situation created by the supporting / supported relationship does not facilitate unity of command. Indeed, it creates the potential for an adversarial relationship between co-equal commanders as they plan and execute related but not necessarily identical missions. Colonel Boyd's presentation, "Organic Design for Command and Control," states: "He who can generate many non-cooperative centers of gravity magnifies friction. Why? Many non-cooperative centers of gravity within a system restrict interaction and adaptability of system with its surroundings, thereby leading to a focus inward (i.e., within itself), which in turn generates confusion and disorder,"
which impedes vigorous or directed activity, hence, by definition, magnifies friction or entropy.”7 The supporting / supported relationship voluntarily creates such non-cooperative centers of gravity for the joint force. The relationship may work during contingency operations for an Amphibious Ready Group and a Marine Expeditionary Unit but it is unlikely to facilitate timely decision-making when the ATF and the LF have mutually exclusive and mission critical operational requirements.

The interaction of these competing centers of gravity diminishes the fighting power of the joint force. The concept of unity of command is universally accepted as the ideal for command and control structures. In fact, Joint Publication 3-18, Joint Forcible Entry, which sets the joint doctrine for forcible entry, states: “Unity of command is vital when amphibious, airborne, air assault, and SO (Special Operations) are combined. Forcible entry is a complex operation and should therefore be kept as simple as possible in concept. All elements of the joint force and supporting commands should understand the commander’s intent, CONOPS, scheme of maneuver, and coordination requirements.”8 The designation of a single commander who is co-located with the forcible entry force would alleviate unnecessary internal friction while conducting these very complex operations. Without an AF commander on scene, the higher headquarters for the CATF and CLF will struggle for the situational awareness necessary to make informed and timely decisions.

In addition to a suboptimal command and control structure, joint forcible entry operations lack agility because of a one directional concept for how forces will be employed. Like their Second World War predecessors, present day amphibious operations are based on the rapid build-up of combat power ashore. JP 3-02 lists one of the characteristics of amphibious operations as “Rapid Buildup of Combat Power from the Sea to Shore. The salient requirement
of an amphibious assault is the necessity for swift, uninterrupted buildup of sufficient combat power ashore, from an initial zero capability to full coordinated striking power, as the attack progresses toward AF objectives." This is no different than what occurred during the Normandy Invasion. The result of this focus on rapidly building up combat power ashore is that the joint force creates a lucrative target for the enemy’s area denial weapons systems like guided rockets, missiles, and mortars. Moreover, any combat power that is placed ashore creates an ever growing need for logistic support. Despite efforts to move this “iron mountain” of logistics to a sea base, there will always be a need for some amount of shore-based logistics once heavier forces cross the beach.

Once a heavy force is introduced ashore, the AF loses the flexibility that is inherent to a sea-based force. A lighter force which could be quickly reconstituted or repositioned by air would have the agility to outmaneuver larger enemy forces. It is important to note that this force still retains the striking power to be operationally relevant and impose its will upon the enemy. Colonel Boyd saw the key to winning as the ability to “Observe-orient-decide-act more inconspicuously, more quickly, and with more irregularity as basis to keep or gain initiative as well as shape and shift main effort: to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie-up, divert, or drain-away adversary attention (and strength) elsewhere.” The current concept for amphibious assault merely delays the point in time when the landing force will commit itself to a specific course of action. There are no accommodations in the doctrine to allow for the re-embarkation of forces to regain the flexibility and initiative that the force possesses while it is afloat and the enemy is unaware of its intentions.
There are several threat scenarios that will require amphibious forcible entry in the future. The Joint Operational Access Concept acknowledges that the US can no longer rely upon an ally who borders the country where the joint force needs to gain entry. "To be credible both as a deterrent and as a viable military option for policy enforcement, the Armed Forces of the US must be capable of deploying and fighting to gain access to geographical areas controlled by forces hostile to US interests. Swift and decisive victory in these cases requires forcible entry and the ability to surge follow-on forces." And yet there are a number of potential scenarios that would require a forcible entry operation. In addition to seizing a lodgement from a "peer competitor", forcible entry may be required to conduct lesser contingency operations. An example would be an opposed non-combatant evacuation operation (NEO). It is entirely conceivable that a non-state actor could choose to oppose the introduction of US forces into a failing state for the purposes of removing American citizens. The enemy’s capability to hazard the joint force with high technology A2AD weapons systems is well within the realm of the possible. A commonly cited example of such a threat is Hezbollah. This organization was able to contest the entry of the Israeli Army into Lebanon in 2006 by employing anti-ship cruise missiles, advanced anti-tank guided missiles, and a variety of indirect fire weapons systems. While the Israelis were ultimately able to force entry, the difficulty presented by this non-state actor to a sovereign armed force of the caliber of the IDF was eye opening to militaries around the world.

Examples of future forcible entry operations demonstrate the variety of challenges and threats that the joint force must be able to overcome. Against a peer competitor, the joint force must be able to defeat the enemy’s naval and air forces in order to gain and maintain air and sea supremacy. These two conditions are outlined in current joint amphibious doctrine. While
military leaders will often attempt to distance current concepts from historical examples like Tarawa in World War II, the US military must be able to fight its way onto a hostile shore. This does not mean that the operation will consist of long lines of amphibious tractors methodically plodding their way to shore but it does mean that the United States requires a forcible entry capability. The question then becomes, "What will it look like?"

As early as 1983 the Marine Corps acknowledged that the concepts for amphibious forcible entry had to be re-evaluated. Colonel Richard B. Rothwell authored an article in the Marine Corps Gazette in July of that same year which identified several factors that necessitated a change in methods for amphibious forces. For example, the findings of KERNEL BLITZ 88-1 included: "Complex, flexible amphibious assault plans are manageable by both the Navy and the landing force; Tactical surprise can be achieved, even in unlikely circumstances." A key concept tested during this exercise was Multiple Option Late Decision (MOLD). MOLD allowed the CATF and CLF to hold off a final decision about where to land until friendly forces were within almost twelve hours of the prescribed landing time. This allowed reconnaissance and surveillance assets to better develop the enemy picture. This concept was further validated the following year during KERNEL BLITZ 89-1.

A common commander must be co-located with the amphibious force. This person would be the AF Commander and would serve as the common commander for the CATF and CLF. He or she could be drawn from either the maritime or land component of the Amphibious Force. What s/he would lack in experience or background in a particular domain would be more than compensated for by the establishment of unity of command. In the end, this simple command and control architecture would alleviate the command and control problems of the
supporting / supported relationship that creates unnecessarily complex situations for the Amphibious Force.

Colonel Boyd’s assessment of these types of arrangements was that “Complexity (technical, organizational, operational, etc.) causes commanders and subordinates alike to be captured by their own internal dynamics or interactions—hence they cannot adapt to rapidly changing external (or even internal) circumstances.” The AF Commander (AFC) would facilitate agility by directing and focusing the efforts of the joint force. This individual would not require a large staff as s/he would rely on the efforts of the staffs from the CATF and the CLF. This would provide the AFC with the best advice from the experts of the two domains. The AFC would produce an outline plan similar to those that were produced during the Second World War. These rough outlines of three to five pages sketched out the timing and general concept for major operations and outlined the forces participating. This common point of departure would greatly assist the CATF and CLF as they transitioned to detailed planning.

The composition of the force should also be re-evaluated. The MEB is the most frequently mentioned amphibious forcible entry unit. There is also the Marine Expeditionary Force (MEF) but limited capacity for amphibious lift makes the employment of that sized unit difficult if not unrealistic. While there is no precise explanation for what a MEB is comprised of, there is a planning construct titled the “Baseline MEB” which is used for planning purposes in the Marine Corps. The Baseline MEB is a Marine Air Ground Task Force (MAGTF) which consists of a Command Element, Regimental Landing Team, a Composite Air Group, and a Combat Logistics Regiment. While the MEB does have substantial combat power by combining its organic aviation and ground combat forces, it is limited in just what it can control. If the purpose of the forcible entry operation is to introduce other elements of the joint force,
then the obligation of the MEB is to “clear” a sufficient area of enemy A2AD capability so that follow-on forces can land via air or maritime lift. With only a regimental sized maneuver unit, the MEB will have difficulty meeting this task.

A two-regiment ground combat element (GCE) should be explored as it will have the capability to set the conditions for the introduction of follow-on forces because of its additional combat power. The key issue with a force of this size is the embarkation requirement that would come with it. Most estimates for the amphibious lift requirement for a MEB include 17 L-Class ships. A two-regiment GCE could provide the MAGTF commander with a separate air assault regiment which could be flown in to reduce the enemy’s mobile A2AD capability through a combination of fire and maneuver. This force must be light enough to be air transportable but lethal enough to fight and win the space required by the Navy to close with the beach. As described by Colonel Boyd, such a force should be able to “Generate many non-cooperative centers of gravity, as well as disorient, disrupt, or overload those that adversary depends upon, in order to magnify friction, shatter cohesion, produce paralysis, and bring about his collapse; or equivalently, uncover, create, and exploit many vulnerabilities and weaknesses, hence many opportunities, to pull adversary apart and isolate remnants for mop-up or absorption.”19 The air assault regiment would rely on air and surface delivered fires from the MAGTF and Joint Force to prevent enemy forces from massing in response to the company landing teams (CLT).

Force protection for the CLTs would rely on mobility and dispersion. With nine air assault CLTs at the commander’s disposal, the MEB would be able to introduce multiple maneuver units over a vast area. These units could be repositioned by air to rapidly disorient the enemy commander. This would allow them to, in Colonel Boyd’s words, “Exploit ambiguity, deception, superior mobility, and sudden violence to generate initial surprise and shock followed
by surprise and shock again, again, again.\textsuperscript{20} The actions of the air assault regiment would be a shaping effort for the MAGTF and the joint force. Enemy A2AD assets such as mobile surface-to-air missiles and anti-ship cruise missiles that escaped the original shaping effort by the joint force would be compelled to move as company-sized maneuver elements conducted operations in their vicinity. The movement of these enemy assets would increase their vulnerability to identification and destruction by joint Intelligence, Surveillance, and Reconnaissance (ISR) and strike assets that are coordinated with the maneuver force’s operations. The removal of these residual A2AD assets would be the last step before the ATF would close with the beach to introduce the heavier elements of the LF.

Finally, material solutions that will increase the agility of the AF must be developed. Fortunately, at present, many of the deficiencies of the joint force are being addressed. The Zumwalt Class destroyer will greatly increase the naval surface fire support capability that will support the LF, and the Amphibious Combat Vehicle is in the early stages of development. However, the most significant deficiency that is not being worked is an MV-22 internally transportable mobility solution for the infantry that will conduct the initial entry operations. Adding this vehicle type to the inventory to the landing force will help to set the conditions for the introduction of the joint forces that will have decisive effects on the enemy. This would be a much more effective investment than the Joint Light Tactical Vehicle which is too large and too heavy to be of use in the employment of an air assault regiment. Acquisition programs should conform to the method of warfare described in “Patterns of Conflict.”

The concepts developed by Colonel Boyd will allow the US military to develop capabilities as well as tactics, techniques, and procedures that will negate enemy A2AD systems and allow the joint force to project itself into denied territories with decisive ground maneuver
forces by exploiting superior tempo, agility, and quickness. Amphibious forces have utility across the spectrum of conflict. Forward deployed expeditionary forces play a vital role in the United States' ability to respond to crisis. While smaller contingency operations certainly represent the most likely model for the employment of amphibious forces, it is imperative that the ability to forcibly enter a contested territory is maintained as such a scenario represents the most dangerous circumstance in which amphibious forces will execute their mission. Current experimentation with small unit landing forces are only be the beginning of what should be the development of a larger concept. A company landing team's impact on the battlefield only becomes operationally relevant when it is woven together with the efforts of many other like units as well as the rest of the joint force.

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12 Matt M. Matthews, We Were Caught Unprepared: The 2006 Hezbollah-Israeli War (Fort Leavenworth: Combat Studies Institute Press, 2008).
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