

Strategy, Theory, Tactical Possibilities and the Design of Amphibious Concepts

A Monograph

by

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Abstract

STRATEGY, THEORY, TACTICAL POSSIBILITIES AND THE DESIGN OF AMPHIBIOUS CONCEPTS by Major James A. Davis, Australian Army, 50 pages.

The United States Marine Corps developed Operational Maneuver from the Sea in the 1980s and codified it as a Marine Corps concept in 1996. In brief, Operational Maneuver from the Sea seeks to exploit the sea as maneuver space to defeat access denial systems and exploit gaps in an adversary's defense. Forces move directly from the sea to attack land-based centers of gravity without securing a beachhead or establishing a land based logistics node. Operational Maneuver from the Sea is a theory and as such cannot avoid the influence of its context. This context requires careful analysis if militaries are to apply the theory in other contexts separated by time, geography and governed by different strategies. Such considerations are directly relevant to the Australian Military because in 2009, Australia affirmed its commitment to a maritime strategy. Central to this strategy is the ability to project force from the sea to control maritime approaches and defeat armed incursions into Australian Territories. Whilst the Australian Defence Force practiced amphibious operations in World War Two, its repository of concepts and doctrine has eroded. The planned introduction into service of two Landing Helicopter Docks in 2014 has brought this conceptual erosion sharply into focus. The Australian Defence Force is analyzing international exemplars of amphibious operations with an eye to refining its amphibious concepts. This monograph argues that the Australian Defence Force should not consider Operational Maneuver from the Sea as an operational concept for its amphibious forces and posits an operational concept that serves the aspirations of Australian strategy, nests with Australian Army theory, and considers the tactical possibilities of the force.

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Introduction

In 2009, Australia affirmed its commitment to a maritime strategy.¹ Central to this strategy is the ability to project force from the sea to control maritime approaches and defeat armed incursions into Australian Territories.² Whilst the Australian Defence Force practiced amphibious operations in World War Two, its repository of concepts and doctrine has eroded. The planned introduction into service of two Landing Helicopter Docks in 2014 has brought this conceptual erosion sharply into focus.³ In response, the Australian Defence Force is considering other nation's amphibious concepts with an eye to refining its own.⁴

The United States Marine Corps developed Operational Maneuver from the Sea in the 1980s and codified it as a Marine Corps concept in 1996.⁵ In brief, Operational Maneuver from the Sea seeks to exploit the sea as maneuver space to defeat access denial systems and exploit gaps in an adversary's defense. Landing forces move directly from the sea to attack land-based centers of gravity without securing a beachhead or establishing a land based logistics node.

This monograph examines the suitability of Operational Maneuver from the Sea as a concept for the Australian Defence Force. Any reader with an understanding of Operational Maneuver from the Sea and the Australian Defence Force might wonder if this question really needs to be answered. After all, a brief examination of scale, timeframe, and current United States Marine Corps doctrine is likely to answer it in the negative. The purpose of drawing a bead on such an easy target is to use the analysis of

¹ Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (Canberra: Commonwealth of Australia, 2009) 1.

² Julian Stafford Corbett, *Some Principles of Maritime Strategy* (Annapolis, Md.: Naval Institute Press, 1988), 16.

³ A Landing Helicopter Dock displaces 27,000 tons and carries up to 1000 soldiers and associated vehicles and equipment. For more information, see Sea Power Centre Australia "[Amphibious Ships](http://www.navy.gov.au/Publication:Semaphore)" *Semaphore* issue 14 (Canberra: Department of Defence, 2007) http://www.navy.gov.au/Publication:Semaphore_-Issue_14,_October_2007 (accessed September 22, 2011).

⁴ Albert Palazzo and Land Warfare Studies Centre, *Projecting Force: The Australian Army and Maritime Strategy*, Vol. 317 (Canberra, A.C.T.: Land Warfare Studies Centre, 2010), 38.

⁵ United States Marine Corps, *MCDP3 1998: Expeditionary Operations* (Washington, DC: U.S. Department of the Navy, 1998), 89.

Operational Maneuver from the Sea to gain an understanding of the interrelation between strategies, military theories, and tactical possibilities in the design of amphibious concepts.

Accordingly, the first part of this monograph focuses on Operational Maneuver from the Sea as a theory that connects tactical amphibious capabilities with military theory and strategy. The second part outlines the strategy, military theory, and general tactical amphibious capabilities of the Australian Defence Force. Section three begins by summarily determining if Operational Maneuver from the Sea is an appropriate concept for the Australian Defence Force. However, the primary task of the third section is to develop a broad operational concept for Australian amphibious forces derived from an understanding of Australian strategy, military theory, and tactical amphibious capabilities. This operational concept posits that Australian amphibious forces act at time-critical strategic junctures to deny an adversary the opportunity to either, employ conflict to decisively resolve a confrontation, or deny Australia the ability to intervene in a conflict.

This idea does not lend itself to prescriptive tactical concepts. It points to a requirement for the commanders and staff of the amphibious force to possess an acute sense of the strategic situation, and the amphibious force itself to be equipped with a wide range of tactical tools. The understanding derived from the interaction between the amphibious force and the adversary's systems drives the employment of the tactical tools. The amphibious force's ability to integrate learning and action hinges on the ability to manage the transition of physical forces, information, command and control, sustainment and fire support between the sea and land. Section three concludes by illustrating these ideas through an analysis of the 1982 campaign to recapture the Falkland Islands.

Literature Review

At a glance, the two areas of concern to this monograph, Operational Maneuver from the Sea and the Australian Defence Force, appear to lie separated with few literary bridges between them. The literature review proceeds according to this sequence, first examining literature concerning Operational

Maneuver from the Sea, then publications dealing with the Australian Defence Force, and finally literature focused on linkages between the two.

Marine Corps doctrine is the most explicit literature concerning Operational Maneuver from the Sea. *Operational Maneuver from the Sea* outlines the substance of the concept but makes little reference to the broader context.⁶ Works by Azar Gat and Antoine Bousquet indicate context is equally as important as the substance of the theory itself and this prompts a wider investigation of the context.⁷ The Marine Corps Gazette, Joint Vision 2010 and *From the Sea*, biographies of key leaders and the histories of the Marine Corps and amphibious operations, *Semper Fidelis* and *Soldiers of the sea: the United States Marine Corps, 1775-1962*, and *Sea Soldiers of the Cold War* provide valuable insight into the strategic, historical, technological, and social context of Operational Maneuver from the Sea that will become evident in the narrative to follow.⁸

Of the works examined, only two challenge the underlying assumptions of Operational Maneuver from the Sea. These are *Operational Art and the Amphibious Assault: Will Operational Maneuver from the Sea Break the US Amphibious Assault Sword?* and *Charting the Pathway to Operational Maneuver from the Sea: A Historical Assessment of Amphibious Operations From 1941 to the Present*.⁹ *Charting the Pathway* examines 20 amphibious operations since 1941 as an objective basis from which to challenge the primary assumptions of Operational Maneuver from the Sea. *Operational Art and the Amphibious Assault* tests the feasibility of using the sea as maneuver space with current communications,

⁶ Charles Krulak, "Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore" <http://www.dtic.mil/jv2010/usmc/omfts.pdf> (accessed October 13, 2011).

⁷ Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (Oxford: Oxford University Press, 2001); Antoine Bousquet, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009).

⁸ Marine Corps Association, "Marine Corps Gazette," (1916); United States. Office of the Chairman of the Joint Chiefs of Staff, *Joint Vision, 2010* (Washington: Office of the Joint Chiefs of Staff, 1996); Frank B. Kelso, Sean O'Keefe, and C. E. Mundy, *From the Sea: Preparing the Naval Service for the 21st Century : A White Paper* (Washington: Dept. of the Navy, 1992); Allan Reed Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: Macmillan, 1980); Robert Debs Heinl, *Soldiers of the Sea: The United States Marine Corps, 1775-1962* (Annapolis: United States Naval Institute, 1962); Joseph H. Alexander and Merrill L. Bartlett, *Sea Soldiers in the Cold War: Amphibious Warfare, 1945-1991* (Annapolis, Md.: Naval Institute Press, 1995).

⁹ Brett M. Vaughan, *Operational Art and the Amphibious Assault: Will OMFTS Break the US Amphibious Assault Sword?* (Newport, R.I.: Naval War College, 2003). Carter A. Malkasian, *Charting the Pathway to OMFTS: A Historical Assessment of Amphibious Operations from 1941 to the Present* (Virginia: Department of Navy, 2002).

fires, and logistics capabilities. Excepting these two works, the majority of works surveyed have a narrow focus on Operational Maneuver from the Sea as an accepted theory and do not consider its wider context or its merit as theory in an abstract sense.

A review of the literature relevant to the Australian Defence Force begins with an appraisal of works that describe contemporary Australian Strategy. First of these is *The Defence White Paper 2009* which describes current Australian military strategy.¹⁰ A full critique of this strategy is beyond the scope of this study, however, Professor Hugh White's *A focused force: Australia's Defence priorities in the Asia-Pacific Century* contains a pertinent discussion of the operational capabilities required to achieve the strategic objectives outlined in the aforementioned paper.¹¹ Major Egan's 2005 monograph *Proposed Force Structure for the Australian Army to Perform Maneuver Operations in the Littoral Environment within the Region of Interest*, whilst narrowly focused, also analyses the Asia Pacific operational environment in some detail and provides both an expansion and verification of the environmental snapshot in the *Defence White Paper*.¹²

The works of Michael Evans, from 1990 – 2002, provide a background to the White Paper by tracing the historical path of contemporary Australian strategic and operational perspectives.¹³ Whilst not directly concerned with maritime strategy, his 2008 and 2011 papers *The Closing of the Australian*

¹⁰ Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*.

¹¹ Hugh White, *A Focused Force: Australia's Defence Priorities in the Asia-Pacific Century* (Sydney: Lowy Institute for International Policy, 2009).

¹² Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*. Anthony J. Egan, *Proposed Force Structure for the Australian Army to Perform Maneuver Operations in the Littoral Environment within the Region of Interest* Masters Thesis (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2004).

¹³ Michael Evans, "Towards an Australian National Security Strategy: A Conceptual Analysis," *Security Challenges* 3, no. 4 (2007); Michael Evans, *The Tyranny of Dissonance: Australia's Strategic Culture and Way of War, 1901-2005* (Duntroon, ACT: Land Warfare Studies Centre, 2005); Michael Evans, *Developing Australia's Maritime Concept of Strategy: Lessons from the Ambon Disaster of 1942* (Australia: Land Warfare Studies Centre, 2000); Michael Evans, "Unarmed Prophets: Amphibious Warfare in Australian Military Thought," *Journal of the Australian Naval Institute* 25, no. 1 (1999); Michael Evans, *The Role of the Australian Army in a Maritime Concept of Strategy* (Canberra: Land Warfare Studies Centre, 1998); Michael Evans, *Amphibious Operations: The Projection of Sea Power Ashore*, 1st ed., Vol. 4 (London ; Washington: Brassey's, 1990); Michael Evans and Land Warfare Studies Centre, *The Continental School of Strategy: The Past, Present and Future of Land Power* (Duntroon, ACT: Land Warfare Studies Centre, 2004); Michael Evans and Land Warfare Studies Centre, *Australia and the Revolution in Military Affairs* (Fairbairn, ACT, Australia: Aerospace Centre, 2001); Michael Evans and Land Warfare Studies Centre, *Changing the Army: The Roles of Doctrine, Development, and Training* (Duntroon: Land Warfare Studies Centre, 2000).

Military Mind and *The Army After Afghanistan* are pragmatic insights into the Australian Military interpretation of strategy and operational art.¹⁴

Lieutenant Colonel Chris Smith continues this theme in his examination of operational art in the Australian context, *Design and Planning of Campaigns and Operations in the Twenty-First Century*.¹⁵ This short study paper details the connection between strategy, operational art, and tactics and is a logical foundation from which to examine works dealing with Australia's amphibious concepts. A number of Australian military thinkers recently produced the officially sanctioned *Projecting Force: the Australian Army and Maritime Strategy* to promote professional debate within the Australian Defence Force. It discusses maritime strategy and the utility of amphibious operations without defining an operational concept.¹⁶ More definitive is the Australian Amphibious Concept (AAC) which is a classified document.¹⁷

The unclassified elements are described in detail in Jon Hawkins June 2010 paper *The Amphibious Amphitheatre*.¹⁸ This paper details Australia's evolving amphibious capabilities and ideas but does not prescribe concepts. The stated purpose of the paper is to:

Define leading edge amphibious concepts and examine the amphibious exemplars of Allies to determine their utility within an ADF construct. It aspires to introduce emerging ADF amphibious concepts to a broader audience in order to evolve it into robust and relevant doctrine. This essay does not propose solutions or rigid conceptual frameworks; these are yet to be developed.¹⁹

Hawkins's paper does not explicitly state that the Australian Defence Force is considering adoption of Operational Maneuver from the Sea, however, the paper indicates the amphibious concept will

¹⁴ Michael Evans, "The Closing of the Australian Military Mind: The ADF and Operational Art," *Security Challenges* 4, no. 2 (2008). Michael Evans, "On Military Grammar: The Australian Army Beyond Afghanistan," *Security Challenges* 7, no. 2 (2011).

¹⁵ Christopher R. Smith and Land Warfare Studies Centre, *Design and Planning of Campaigns and Operations in the Twenty-First Century*, Vol. 320 (Duntroon, A.C.T.: Land Warfare Studies Centre, 2011).

¹⁶ Albert Palazzo, *Projecting Force: The Australian Army and Maritime Strategy*, Vol. 317 (Canberra, A.C.T.: Land Warfare Studies Centre, 2010)

¹⁷ The Australian Amphibious Concept was endorsed by the Joint Amphibious Council on 26 February 2008. The classified AAC is available at <http://intranet.defence.gov.au/navyweb/sites/dgncpp/docs/AAC_version_3-7_Mar_08.pdf> (accessed October 17, 2011).

¹⁸ Jon Hawkins, "The Amphibious Amphitheatre" in *Projecting Force: The Australian Army and Maritime Strategy*, Vol. 317 edited by Albert Palazzo (Canberra, A.C.T.: Land Warfare Studies Centre, 2010)

¹⁹ *Ibid.*, 80.

incorporate distributed maneuver, sea basing, and ship to objective maneuver. Additionally, Hawkins's brief to the Chief of Army exercise in November 2010 graphically depicted Operational Maneuver from the Sea as an aspirational concept for the Australian Defence Force.²⁰

Australian literature refers to Operational Maneuver from the Sea and its component parts as an accepted theory, but none of the works is explicit as to how Operational Maneuver from the Sea or a like concept is to be relevant in the Australian context. This monograph addresses this deficit by constructing a conceptual bridge between Operational Maneuver from the sea and the pragmatic considerations of Australian strategy, military theory and tactical possibilities.

²⁰ Jon Hawkins, "Australia's Future Amphibious Warfare Capability"
<http://www.defence.gov.au/opEx/exercises/caex/pdf/hawkins.pdf> (accessed November 7, 2011).

Operational Maneuver from the Sea - A Theory

In its most basic form, Operational Maneuver from the Sea is a theory of projecting force from the sea to the land. As theory, it cannot avoid the influence of its context. The context of Operational Maneuver from the Sea is simultaneously strategic, historical, social, and technological. The following paragraphs outline this context to render a full picture of Operational Maneuver from the Sea to the reader.

Historical Context of Operational Manuever from the Sea

Man has practiced amphibious operations since the time he devised methods to move bodies of men on water. The United States Marine Corps is the best-known exponent of amphibious operations. This is primarily due to their development of amphibious operations doctrine in the interwar years that led to what is widely regarded as the modern form of amphibious assault in World War Two. Accordingly, this brief analysis of the historical context of Operational Maneuver from the Sea starts with the Second World War.

During the Second World War, the United States Marine Corps conducted 15 major amphibious operations in the Pacific theater.²¹ These operations, conducted by six Marine Divisions, overshadowed the 26 major amphibious operations conducted by the 20 Army Divisions operating in the Pacific Theater.²² In the European theater, the allies conducted army level amphibious operations at Salerno, Sicily and Normandy. Massive preliminary bombardments from naval and air forces, relatively high casualty rates, and large forces typified amphibious operations in both theaters.²³ The United Kingdom,

²¹ Allan Reed Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: Macmillan, 1980), 438.

²² Donald Boose, *Over the beach US Army Amphibious Operations in the Korean War*. (Fort Leavenworth, Kan: Combat Studies Institute Press, US Army Combined Arms Center, 2008). <http://purl.access.gpo.gov/GPO/LPS113721> (accessed January 11, 2012), 40-63.

²³ To cite three examples: Guam, 21 July 1944, included a 13 day preliminary bombardment of 6258 14 and 16 inch shells. This was followed by 1,494 14 and 16 inch shells, 1332 8 inch shells, 15560 6 inch shells, 100 air sorties and 9072 rockets in the hours immediately prior to D day. At Okinawa, 19 Feb 1944, before noon on D-day alone 5000 tons of high explosive shells impacted the islands. At Normandy, 06 June 1944, between 0300 and 0500

Australia and Japan also conducted a number of smaller amphibious operations during World War Two. These operations demonstrated different tactical techniques to United States Marine and Army operations but they are not so unique as to warrant individual analysis.²⁴

In the Korean War, the largest amphibious operation was Operation Cromite. In this operation, the 1st Marine Division conducted an amphibious landing at Inchon. This severed the lines of communication of North Korean forces and allowed the breakout of United Nations forces from Pusan. Cromite differed from amphibious operations of the Second World War in so far as only 45 minutes of preparatory fire preceded it and the landing force suffered relatively few casualties by landing where the enemy was not.²⁵ In addition to Operation Cromite, the United States Army and Marines conducted amphibious withdrawals, demonstrations, and Special Forces raids throughout the war.²⁶ The Korean War also illuminated the potential utility of the helicopter in amphibious assaults and the United States Marine Corps refined these concepts in exercises after the war.

Following the Marine Corps lead in the use of sea based helicopters, a combined British and French force conducted a heliborne amphibious assault at Port Said in 1956. Marine Corps capability also continued to develop and by 1965, they possessed the capability to conduct a two Regiment strong helicopter borne amphibious assault.²⁷ The United States Marine Corps was to employ this capability

1000 allied aircraft dropped 5000 tons of ordnance. The official British history described the subsequent naval bombardment as “unparalleled.” Robert Debs Heinl, *Soldiers of the Sea: The United States Marine Corps, 1775-1962* (Annapolis: United States Naval Institute, 1962), 456; Malkasian, *Charting the Pathway to OMFTS: A Historical Assessment of Amphibious Operations from 1941 to the Present*, 12.

Okinawa, 19 Feb 1944, 28% casualties, Normandy, 06 Jun 1944, 28% casualties. The average size of landing force in the 14 largest amphibious operations in World War Two was 190,000 soldiers or marines. The landing force at Inchon, Korea 1950, was 53,000 soldiers and marines. Since Inchon the average size of the landing force in the 8 largest Amphibious assaults was 7300 soldiers or marines.

²⁴ Australia conducted 56 amphibious assaults in the Southwest Pacific from 1943 to 1945. R. J. Parkin, *A Capability of First Resort: Amphibious Operations and Australian Defence Policy, 1901-2001* (Duntroon, ACT: Land Warfare Studies Centre, 2002), 22.

²⁵ Heinl, *Soldiers of the Sea: The United States Marine Corps, 1775-1962*, 550.

²⁶ Boose, *Over the Beach: US Army Amphibious Operations in the Korean War*, 111 – 296.

²⁷ Horn, Carl John, "Military Innovation and the Helicopter: A Comparison of Development in the United States Army and Marine Corps, 1945-1965" (Masters Thesis, Ohio State University, 2003),166.

widely during the 62 amphibious operations conducted during the Vietnam War.²⁸ Vietnam, a narrow country with a long coast, was ideal for amphibious operations. To exploit this geography the United States Marine Corps created two battalion sized special landing forces.²⁹

Following the Vietnam War, the militaries of the major powers focused on the prospect of continental land battles and nuclear war. The Joint Chiefs of Staff believed that the United States Marine Corps lacked sufficient combat weight to participate in operations in Europe and nuclear weapons made it undesirable to mass forces and logistics at a point of amphibious lodgment. In light of this, the North Atlantic Treaty Organization's plan for the defense of Europe relegated the Marine Corps to a contingency task to secure air and sea bases in Norway in the event of a protracted land war in central Europe.³⁰ Amphibious operations struggled for relevance in this paradigm.³¹

In 1982, Argentina seized the British Territory of the Falkland Islands. Britain, despite the 12,000 kilometers separating the Falklands from the British Isles, responded by hastily commissioning an amphibious flotilla and recapturing the Islands. The Falklands provided a snapshot of the contest between shore based, anti shipping missile-equipped aircraft and a ship borne air defense system and convinced most defense analysts of the enduring need for an amphibious operations capability.³² A different anti access system, in the form of Iraqi mines, drove the decision to use 1st Marine Expeditionary Brigade in an amphibious feint in the 1991 Gulf War. Arguably, this feint was successful as it resulted in the repositioning of four Iraqi Divisions to counter it.³³ At the end of the cold war, the ability of adversaries

²⁸ The U.S. Marine Corps conducted 62 amphibious assaults in battalion or regimental strength in the South Vietnam between 1965 and 1969. Malkasian, *Charting the Pathway to OMFTS: A Historical Assessment of Amphibious Operations from 1941 to the Present*, 34.

²⁹ Jack Shulimson and Major Charles M. Johnson, USMC, *US Marines in Vietnam, The Marines in Vietnam 1965: The Landing and the Buildup* (Washington: History and Museums Division, Headquarters, U.S. Marine Corps, 1973), 193.

³⁰ Millett, *Semper Fidelis: The History of the United States Marine Corps*, 608.

³¹ *Ibid.* 608.

³² Joseph H. Alexander and Merrill L. Bartlett, *Sea Soldiers in the Cold War: Amphibious Warfare, 1945-1991* (Annapolis, Md.: Naval Institute Press, 1995), 122.

³³ John Brown, "The Maturation of Operational Art" in *Historical Perspectives of the Operational Art*, edited by Michael D. Krause and Cody Phillips (Washington, D.C.: Center of Military History, United States Army, 2005), 460.

to deny the United States the ability to project power through anti shipping missiles, mines, and other non-military means was again challenging amphibious operations advocates.³⁴

From 1990 – 2010, the Marine Corps conducted approximately 104 amphibious operations including demonstrations, raids, and embassy evacuations.³⁵ The most significant of these, and one of only four amphibious assaults during this time, was the Al Faw Operation in 2003. In this operation, United States and Royal Marines conducted a helicopter raid, supported by land based fires, to secure key oil infrastructure on the Al Faw Peninsula in Iraq as a prelude to the ground offensive. Like the Inchon and Al Faw operation, low casualties, use of precision fires, and avoidance of enemy defenses typified amphibious operations from 1991 - 2011.

Since the Second World War, amphibious operations have generally responded to the dictates of strategic context. The Second World War pitted the full resources of nation states against each other in a war of national or racial survival. Amphibious operations lodged forces on land to annihilate the enemy forces occupying that land. The large forces involved, use of firepower and acceptance of high casualties in amphibious operations at the time reflected this. The Inchon operation in 1950 is an example of amphibious forces executing a supporting operation within a campaign, the purpose of which was to facilitate the decisive land operation. Since the Korean War, militaries have generally harnessed amphibious operations to strategies of limited war. The purpose of amphibious operations in this context has been the destruction of a component of an adversary's military, the seizure of critical terrain, or protection of civilians.

Even this brief review of the history of amphibious operations revealed the rise of a desire to land where the enemy is not and move directly to a land based objective. This desire was driven by the rise of anti access capabilities to include mines, anti shipping missiles and tactical nuclear weapons. Ship to Objective Maneuver is the tactical action designed to allow an amphibious force to bypass these defenses,

³⁴ National Defense Panel, *Transforming Defense* (Washington: DC, 1997) under "Report of the National Defense Panel 1997" <http://www.fas.org/man/docs/ndp/part03.html#12-13> (accessed October 22, 2011).

³⁵ Office of the Chief of Naval Operations, *Sea Power for a New Era: 2006 Program Guide to the U.S. Navy*, Appendix A "Navy-Marine Corps Crisis Response and Combat Actions" http://www.navy.mil/navydata/policy/seapower/spne07/appendix_a-07.pdf (accessed October 11, 2011), 92.

which according to Marine Corps doctrine is the idea at the hub of Operational Maneuver from the Sea. Ship to Objective Maneuver offers a method for conducting an amphibious assault from over the horizon to attack operational objectives deep inland, while avoiding the anti landing defenses and the establishment of an iron mountain of logistics at the beachhead.³⁶

Technological Context of Operational Maneuver from the Sea

Technology underpins Ship to Objective Maneuver and therefore Operational Maneuver from the Sea in both a practical and conceptual sense. Marine Corps doctrine published in 1996 stated that:

The Marine Corps will consistently blend future technology with newly developed operational concepts. Today, the Navy- Marine Corps team is rapidly implementing our strategic and operational concepts set forth in the White Papers of Forward from the Sea and Operational Maneuver from the Sea (OMFTS) to take full advantage of the littoral environment and the maneuvering space it provides. Emerging technology now makes the Operational Maneuver from the Sea concept a near-reality and enables a tremendous increase in the flexibility, agility, and lethality of our Marine expeditionary forces while significantly expanding our naval power projection abilities.³⁷

The emerging technologies referred to are the MV 22 Osprey tilt rotor helicopter, the Landing Craft Air Cushion (LCAC), and the Expeditionary Fighting Vehicle (EFV).

The Marine Corps first conceived the utility of helicopters in amphibious operations during the Korea war.³⁸ Twelve Marine Landing exercises conducted in 1952 validated this belief.³⁹ The United States Navy and Marine Corps subsequently developed the Landing Helicopter Platform, amphibious transport dock (LPD), and medium lift helicopters to execute amphibious helicopter operations.⁴⁰ In the

³⁶ Marine Corps Combat Development Command, *Ship-to-Objective Maneuver* (Quantico, VA: Department of the Navy, 2011), 3.

³⁷ United States Marine Corps, *Concepts and Issues*, www.usmc.mil/r-c&i96/22b6.htm, 16 Aug, 1996) (accessed 07 October 2011).

³⁸ Two land based Marine Corps helicopter units, HMR -161 and VMO6, transported 60,046 men and 7.5 million pounds of cargo during the Korean war. Horn, Carl John III, *Military Innovation and the Helicopter: A Comparison of Development in the United States Army and Marine Corps, 1945-1965*, 114.

³⁹ Ibid.

⁴⁰ The CH 46 Sea Knight is a twin rotor medium lift helicopter capable of transporting 25 combat equipped soldiers. The CH 53 Super Stallion is a single rotor medium lift helicopter capable of transporting 38 combat equipped troops. William R. Falls and Marine Corps. History and Museums Division, *Marines and Helicopters, 1962-1973* (Washington: History and Museums Division, Headquarters, U.S. Marine Corps, 1978), 226 -235. The Landing Helicopter Platform had a 590 foot flight deck and could carry 24 CH – 46 helicopters and 1500 marines. Ibid.

aftermath of the failed Desert One Operation, British Experience in the Falklands and the aging Marine Corps helicopter fleet, the idea of a long-range replacement for the CH 46 became desirable.⁴¹ Tilt rotor aviation emerged from the 1981 statement of need for Joint Service Advanced Vertical Lift capability. By 1990, this aircraft, later named the MV 22 Osprey, was viewed a central component of Marine Corps concepts.⁴²

In a similar vein, the LCAC enabled a force to penetrate anti landing defenses by landing where the enemy was not. The LCAC uses air cushion technology to transport troops and equipment at speeds of up to 40 knots, from up to 100 nautical miles over the horizon, through the surf zone and beyond the high water mark. The LCAC, unlike a boat, does not have a displacement hull and is therefore less vulnerable to obstacles and mines. Additionally, the LCAC is less constrained by tides and other hydrological effects than a displacement hull vessel. The Marine Corps considered the LCAC complimentary to the helicopter because it has a similar level of operational mobility but could do what the helicopter cannot, that is, transport heavy vehicles, equipment, and supplies.

Unfortunately, both of the over the horizon platforms, MV 22 and LCAC, were extremely vulnerable to anti-landing defenses. Neither was suitable for landing where the enemy was or surviving an unplanned encounter with even a relatively benign land based access denial defense. The Marine Corps platform that afforded the landing force a degree of protection was the AAV- 7, a tracked amphibian capable of carrying a squad of marines and armed with a heavy machine gun or automatic grenade launcher. The Marine Corps introduced the AAV -7 into service in 1972, however its armor is considered insufficient against modern hand held anti armor weapons and, more critically, it must be unloaded from

⁴¹ Desert One was a failed hostage rescue operation attempted in Iran on 24 April 1980. Whilst the operation suffered a myriad of problems, of particular note to this discussion is the mechanical failure of three helicopters and the difficulties of operating rotary wing aviation over long ranges.

⁴² “The Osprey’s introduction to the Marine forces is of paramount importance to the Marine Corps as it epitomizes our philosophy of procuring and fielding leap-ahead, advanced technology systems to best employ our expeditionary forces.” The Marine Corps believes that the Osprey will give them an unprecedented capability to quickly and decisively project power from well over the horizon. Indeed, the Marine Corps considers the V-22 Osprey more than just an Aircraft. Instead, the Osprey is an important foundation upon which its vision for projecting naval power ashore (operational maneuver from the sea, or OMFTS) rests. Christopher Bolkcom, *V-22 Osprey Tilt-Rotor Aircraft: CRS Issue Brief for Congress* (Department of Defense, Updated 2001), 1.

its parent ship a mere two miles from the shore. In short, it has no utility for over the horizon amphibious assault.

The Marine Corps designed the Expeditionary Fighting Vehicle (EFV) to address these deficiencies and more. The EFV was an armored, fully tracked infantry combat vehicle operated by a three-person crew that can carry 17 combat-equipped Marines. Crucially the Marine Corps designed the EFV to transport Marines from ships positioned over the horizon to objectives inland and with the speed, maneuvering capabilities, firepower, and protection to operate with main battle tanks on land.⁴³ In 2011, the United States Secretary of Defense, citing cost overruns and technical risk, cancelled the EFV project. Subsequently, the United States Marine Corps submitted three requests for information to industry to determine the feasibility of fielding an armored vehicle capable of transporting 10 marines, from a ship positioned 12 miles from shore, whilst maintaining a counter IED capability and the ability to operate with tanks.⁴⁴

These three platforms, the Osprey Helicopter, LCAC and EFV are a critical part of the technological context of Operational Maneuver from the Sea. Their existence, or rather conceived existence, gave life to tactical possibilities that informed the logic of Operational Maneuver from the Sea. In the late 2000's, the Marine Corps worked hard to dispel the notion that, contrary to the claims of Krulak in the 1990's, Operational Maneuver from the Sea was underpinned by these tactical possibilities.⁴⁵

Strategic Context of Operational Maneuver from the Sea

This examination of the historical context of Operational Maneuver from the Sea revealed that amphibious operations have evolved in tune with the strategic context. Specifically, that discussion used strategic context as a broad descriptor of the nature of war in a given period. However, there are a number

⁴³ Andrew Feickert, *The Marines' Expeditionary Fighting Vehicle (EFV): Background and Issues for Congress* (Washington, DC.: Congressional Research Service, 2011), 7.

⁴⁴ *Ibid.*, 7.

⁴⁵ Charles Krulak, *Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore* <http://www.dtic.mil/jv2010/usmc/omfts.pdf> (accessed October 13, 2011).

of other specific strategic contexts relevant to the consideration of Operational Maneuver from the Sea. Before considering these, it is necessary to define strategic context. Broadly, “strategy is the use or threat of force for the ends of policy.”⁴⁶ It is multi-faceted, relative to an adversary, continual, and evolutionary. “Strategic context describes the accepted strategic theory of a given time and place.”⁴⁷ In *Modern Strategy*, Colin S. Gray posits that strategic theory takes a number of forms.⁴⁸ The form of strategic theory previously outlined, described the character of war in a particular period and is dependent on assumptions about the capabilities of certain types of military power and their effectiveness.⁴⁹

Joint Vision 2010 is the United States Military’s expression of this form of strategic theory in the 1990’s. Released in July 1996 by the Joint Chiefs of Staff, Joint Vision 2010 placed a premium on the use of technology to enhance joint war fighting.⁵⁰ Joint Vision 2010 further promised that: “applications of new technology will transform the traditional functions of maneuver, strike, protection, and logistics. These transformations will be so powerful that they become, in effect, new operational concepts: dominant maneuver; precision engagement; full dimensional protection; and focused logistics.”⁵¹ Underpinning these concepts was a hope that “increased access to information and improvements in the speed and accuracy of prioritizing and transferring data brought about by advances in technology would mitigate the friction and the fog of war.”⁵²

Another form of strategic theory, described by Gray, is a strategic theory that explains how function and geography interact. Maritime strategy is an example of this form of strategic theory.⁵³ In *Some Principles of Maritime Strategy*, Sir Julian Corbett defines maritime strategy as a strategy that projects power from the sea to the land.⁵⁴ *From the Sea*, the United States Navy capstone doctrine

⁴⁶ Colin S. Gray, *Modern Strategy* (New York: Oxford University Press, 1999), 17.

⁴⁷ *Ibid.*, 125.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

⁵⁰ Office of the Chairman of the Joint Chiefs of Staff, *Joint Vision, 2010* (Washington: Office of the Joint Chiefs of Staff, 1996), 34.

⁵¹ *Ibid.*

⁵² *Ibid.*

⁵³ *Ibid.*

⁵⁴ Corbett, *Some Principles of Maritime Strategy*, 15.

released in 1992, embraces a maritime strategy, and specifically depicts a Naval service focused on the ability to project power from the sea in the critical littoral regions of the world.⁵⁵

Whilst Operational Maneuver from the Sea is a Marine Corps concept, the Corps developed it in concert with United States Navy concepts.⁵⁶ *From the Sea* reflects a transformation in the Navy's approach from the defeat of the Soviet fleet to the support of land operations.⁵⁷ This change in approach is as much about institutional survival as it is about serving national strategy. A navy required to contain the next largest blue water competitor, namely the USSR, would be a fraction of the size of the existing force. Thus, to maintain relevance in the post cold war security environment; the Navy, and by extension the Marine Corps needed to make a compelling argument for their role in land operations.

Principles of Maritime Strategy and *From the Sea* are both pragmatic discussions of Maritime Strategy. In contrast, Everett Dolman's work *Pure Strategy* is a detailed analysis of domain centric (sea, air, space, space, cyberspace) strategic theory.⁵⁸ Dolman disaggregates strategy into what he describes as operational strategy. Operational strategy describes strategy within particular domains (air, sea, land, space, and cyberspace).⁵⁹ This is an important idea as Operational Maneuver from the Sea projects force from one domain into another and seeks to control an inter domain interface.⁶⁰

Dolman claims land, sea, air, space and cyberspace forces exist to control their domain. Governments seek domain control because it allows the application of measured violence through that medium against another entity in pursuit of some political objective.⁶¹ The littoral is an environment at

⁵⁵ Frank B. Kelso, Sean O'Keefe, and C. E. Mundy, *From the Sea: Preparing the Naval Service for the 21st Century : A White Paper* (Washington: Dept. of the Navy, 1992).

⁵⁶ Gen M. W. Hagee, *USMC, 33rd Commandant of the Marine Corps Guidance* [http://www.marines.mil/cmc/33cmc.nsf/attachments/\\$FILE/33cpg.pdf](http://www.marines.mil/cmc/33cmc.nsf/attachments/$FILE/33cpg.pdf) (accessed 13 November, 2011); Gen M. W. Hagee, *USMC, ALMAR 018/05, 33rd Commandant of the Marine Corps Updated Guidance (The 21st Century Marine Corps - Creating Stability in an Unstable World)* <http://www.marines.mil/almars/almar2000.nsf/52f4f5d11f10b4c4852569b8006a3e35/35a74723d7bcc61085256fe70061040a?OpenDocument>; Internet; (accessed 11 October, 2011).

⁵⁷ Kelso, O'Keefe, and Mundy, *From the Sea: Preparing the Naval Service for the 21st Century : A White Paper*, 2.

⁵⁸ Everett C. Dolman, *Pure Strategy: Power and Principle in the Space and Information Age*, (New York: Frank Cass, 2005).

⁵⁹ *Ibid.*, 33.

⁶⁰ *Ibid.*, 33.

⁶¹ *Ibid.*, 33.

the confluence of the sea and the land.⁶² Dolman describes this as a domain interface and acknowledges that such an interface creates an overlap between the purposes of the services with each seeking control of their own domain but dependent to a degree on other services to achieve this. Some parts of the world, like archipelagoes, are all interfaces and no homogenous domain. An island that has no part of its surface beyond the reach of the fires of a naval force is an example of this.

The Marine Corps contends that because the majority of the world's population, capitals and marketplaces lie within 300 miles of a coast, the vast majority of 21st century conflicts and crises are likely to take place in the littorals.⁶³ Further, the Marine Corps argues, littoral control is likely to be strategically decisive in the 21st century.⁶⁴ Considering this, it is perhaps not too much of a stretch to see Operational Maneuver from the Sea as a theory for control of what Dolman might term the littoral domain. Accepting this idea momentarily, Operational Maneuver from the Sea can be viewed as a component of a third form of strategic theory. This third form explains how a particular kind or use of military power strategically affects the course of conflict as a whole.⁶⁵ Specifically the Navy and Marine Corps contended that naval power could be strategically decisive through Operational Maneuver from the Sea because it promised to control the littoral and the littoral loomed as strategically decisive in future conflict.

The previous paragraphs described the logic of Operational Maneuver from the Sea in three strategic theories prevalent in the 1990's. Each of these descriptions illustrated the conceptual link between Operational Maneuver from the Sea and strategic theory but none described the function of Operational Maneuver from the Sea. Before addressing what Operational Maneuver from the Sea is supposed to do as an operating concept, it is necessary to answer two supplementary questions. First,

⁶² The *littoral* is composed of two segments. The *seaward* portion is that area from the open ocean to the shore that must be controlled to support operations ashore. The *landward* portion is the area inland from the shore that can be supported and defended directly from the sea. This confluence is infinite in its variations. Charles Krulak, "Operational Maneuver from the Sea," *Joint Forces Quarterly*, Spring issue 21 (1999), 78.

⁶³ Krulak, *Operational Maneuver from the Sea*, 78-86.

⁶⁴ OMFTS treats the littoral as a single environment in which the cooperation of units on land, at sea, and in the air is based on a shared vision of what must be done Krulak, *Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore*.

⁶⁵ Colin S. Gray, *Modern Strategy*, 125.

what is an “operating concept?” and second, does the operational concept have an underpinning logic or theory?

Operations and Operational Logics

Operational concepts derive from operations. “Operations,” as conceptualized in Western militaries, developed in response to the rise of Napoleon’s nation in arms and the impact of the industrial revolution. Prior to the Napoleonic wars (1803 -1815), relatively small forces fought wars in pursuit of modest political goals. Battlefields were but a few kilometers wide, armies rarely exceeded 150,000 men, and the immediate presence of the sovereign shackled those armies to the achievement of political objectives. Societal changes during Napoleon’s time and the industrialization of Western Europe further increased the scale and scope of conflict. By 1871, the Prussian Army alone consisted of 1.2 million men, ranging across a battlefield hundreds of kilometers wide, removed from the sovereign by both distance and the limitations of 19th century communication. Single battles were no longer decisive in conflicts of this size. Thus, soldiers were compelled to link the tactical actions they were executing with the strategic aspiration of their political masters. The term “operations” developed to describe these groups of tactical actions, synchronized in time and space, and directed by a common purpose.⁶⁶

Political objectives are by nature conceptual and relative to another dynamic political entity, like a nation or group of people. It is possible to organize tactical actions in any number of ways and these may produce unexpected results when imposed on another military force or civil populace. Given this, the linkage between the conceptual political action and the tactical actions must be dynamic. A continual dialogue “between the aspirations of strategy and the possibilities of tactics describes this dynamic interaction.”⁶⁷ Harnessing this dynamic linkage defies scientific methods and is ostensibly an art. Military theorists have conceptualized this as operational art and codified it in the most recent US Army doctrine

⁶⁶ Christopher R. Smith, *Design and Planning of Campaigns and Operations in the Twenty-First Century*, (Dunroon, A.C.T: Land Warfare Studies Centre, 2011), 39.

⁶⁷ *Ibid.*, 38.

as “the pursuit of strategic objectives through the arrangement of tactical actions in time, space, and purpose.”⁶⁸

The visualization of the arrangement of tactical actions is not prescriptive but describes a governing logic.⁶⁹ Thus, an operational logic or concept is a governing logic between the aspirations of strategy and the possibilities of tactics. In the case of Operational Maneuver from the Sea, JV2010 and the tenets of maritime strategy describe the strategic aspirations. The technology available, capability of the adversary, state of readiness and training of the force, and the nature of the earth’s domains define the tactical possibilities.

The majority of the discussion thus far has focused on operations in war. In peace, a conceptual operational logic remains a dialogue between strategy and tactics with some subtle nuances. First, it is explanatory; it shows policy makers why they need to expend resources on equipment, soldiers, and training. Second, it tells the force what tactical capabilities they must have. Without this operational concept, tactical forces would be free to train and organize as they like. Third, it provides a start point for the dialogue between strategy and tactics in war. An adversary, who has at least a start point for the dialogue and a common lexicon, may gain a temporal advantage by exploiting an adversary’s lack of an existing logic.⁷⁰

The logic of Operational Maneuver from the Sea is that the Navy and Marine Corps can control the littoral domain and assure the free exercise of military power for political ends by using multiple means and approaches to attack multiple centers of gravity and thus collapse an adversary’s system. The base of operations for the friendly system is located over the horizon at sea, outside of the littoral, in the

⁶⁸ Headquarters, Department of the Army, *Army Doctrine Publication 3-0 Unified Land Operations*, (2011), xiv.

⁶⁹ Smith, *Design and Planning of Campaigns and Operations in the Twenty-First Century*, 38.

⁷⁰ It would be unwise to suggest that the possession of an operational concept is the decisive factor in war. No amount of operational expertise is likely to compensate for bad strategy or bad tactics relative to an opponent. However, a better operational concept is desirable. For example, Germany’s operational concepts for the employment of its tactical forces in France in 1940 gave them a decisive advantage over the qualitatively and quantitatively better French tactical forces.

little contested sea domain in order to protect it from the adversary's actions.⁷¹ This logic simultaneously exploits the Navy's freedom of action in the post cold war security environment and promises to make Sea Power relevant in the still contested land domain. The following paragraphs will explain how this logic is deeply imbued with the theory of John Boyd.

Operational Maneuver from the Sea and the Theory of John Boyd

The crux of Operational Maneuver from the Sea, the idea of protecting one's own center of gravity and the disruption of the enemy's center of gravity, derive from the theory of John Boyd. Three factors support this contention. First and most contentious of these is the anecdotal descriptions of Boyd's influence on the Marine Corps in the late 1980s.⁷² Second, is the strong personal and professional relationship between Boyd and General Charles Krulak, who was the Commandant of the Marine Corps when Operational Maneuver from the Sea was codified as a concept.⁷³ The final and most compelling evidence is the obvious similarities between Boyd's theory and the tenets of Operational Maneuver from the Sea as shown below in figure 1.

Figure 1. A comparison of the theory of John Boyd and Operational Maneuver from the Sea

Boyd ⁷⁴	Operational Maneuver from the Sea ⁷⁵
Goal. Diminish adversary's freedom of action while improving our freedom of action, so that our adversary cannot cope, while we can cope, with events/efforts as they unfold.	Goal. Operational Maneuver from the Sea seeks to generate high operating tempo by combining ship-to-shore movement and what has traditionally been called subsequent operations ashore into a single decisive maneuver directly from amphibious shipping.
Reconnaissance. Probe and test adversary to unmask strengths, weaknesses, maneuvers, and intentions.	Reconnaissance. Advance operations and real-time reconnaissance identify highly exploitable Littoral Penetration Points (LPP), through which the attacking forces swarm by air

⁷¹ Krulak, *Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore*.

⁷² James G. Burton, *The Pentagon Wars: Reformers Challenge the Old Guard* (Annapolis, Md.: Naval Institute Press, 1993), 86.

⁷³ Krulak, C.C.: 'Obituary', *Inside the Pentagon*, 13 March 1997, http://www.dnipogo.org/fcs/cowan_proceedings.htm (accessed November 21, 2011).

⁷⁴ Frans P. B. Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd*, (London ; New York: Routledge, 2007), 173.

⁷⁵ Krulak, *Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore*.

	and surface means to overwhelm enemy defenses.
Maneuver. Move along paths of least resistance (to reinforce and exploit success).	Maneuver. The sea is an avenue for friendly movement (dominant maneuver) and a barrier to an enemy (force protection). ⁷⁶
Disruption. Subvert, disorient, disrupt, overload, or seize adversary's vulnerable, yet critical connections, centers, and activities that provide cohesion and permit coherent observation orientation decision action in order to <i>dismember organism</i> and isolate remnants for absorption or mop-up.	Disruption. Operational Maneuver from the Sea is directed against a center of gravity—an objective (such as unit, capability, or perception) whose seizure, destruction, or neutralization will <i>profoundly impact an enemy's capability to continue the struggle</i> .
Support. Superior mobile communications to maintain cohesion of overall effort and sustain appropriate pace of operations within available resources. Only essential logistics.	Support. Improvements in the precision of long-range weapons, greater reliance on sea-based fire support, and, <i>quite possibly, a decrease in the fuel requirements of military land vehicles promise to eliminate, or at least greatly reduce, the need to establish supply facilities ashore</i> . When combined with a command and control system oriented towards rapid decision-making at all levels of command, the additional speed and flexibility offered by these new techniques translates into a high tempo of operations.

Inherent in the concepts described in figure 1 is Boyd's best-known idea of the Observe Orient Decide Act (OODA) loop. The idea of an OODA loop is important to subsequent analysis because the Australian Army claims to have complimented it with the Act Sense Decide Adapt (ASDA) Loop.⁷⁷ Frans Osinga provides a full description of the depth and breadth of Boyd's OODA ideas in *Science, Theory, and War*.⁷⁸ For the purpose of this discussion, it is sufficient to observe that the OODA loop is a theory of adaption and action applicable tactically, strategically, and operationally.

The officially published explanations of Operational Maneuver from the Sea focus largely on Ship to Objective Maneuver; that is, the ability to land where the enemy is not and move seamlessly across the beachhead to a land based objective. This focus excludes components of Krulak's original

⁷⁶ Charles C. Krulak, "Operational Maneuver from the Sea," *Joint Forces Quarterly*, issue 21 Spring (1999), 78.

⁷⁷ Head Modernisation and Strategic Planning - Army, *Army's Future Land Operating Concept* (2009), 49.

⁷⁸ Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd*, 100.

concept that would more completely operationalize the ideas of Boyd. The excluded components are mission command, operational maneuver groups, and infestation.⁷⁹ Mission command is a supporting or complimentary concept therefore an in depth discussion of it does not benefit the central theme of this paper.

Operational Maneuver Groups

In the physical domain, Krulak saw the role of a ground based operational maneuver group was to penetrate the adversary's system in a similar way that a helicopter assault might. The tension in the concept is that an operational maneuver group generally has a combat weight that requires a large logistic support node. Such a logistic support node precludes a force from transiting seamlessly across the beach without establishing a beachhead. The conceptual solution to this tension was to use the Light Armored Vehicle (LAV) as the primary platform in the operational maneuver groups.⁸⁰ The Sea Dragon exercises of the 1990s experimented with such an operational maneuver group, supported by notional sea based precision fires.

The concept of a combined air and operational maneuver group penetration conforms to Boyd's ideas regarding "non-linear tactics, avoiding and bypassing enemy positions, venturing deep into enemy territory without too much concern for one's own flanks. The prize was not territory but time, surprise and shock. Such tactics would force the enemy to react. It would create the impression marines were everywhere and could strike anytime anyplace."⁸¹ Maintaining multiple options for ground or air

⁷⁹ "Mission command and control accepts the turbulence and uncertainty of war. Rather than increase the level of certainty that we seek, by mission command and control we reduce the degree of certainty that we need. Mission command and control can be described as spontaneous: unity of effort is not the product of conformity imposed from above but of the spontaneous cooperation of all the elements of the force. Subordinates are guided not by detailed instructions and control measures but by their knowledge of the requirements of the overall mission. This definition is taken from the 1996 version of MCDP 6 which is prefaced by Krulak and includes a number of specific references to the command and control theory of John Boyd. This reference defines mission command in the context that Krulak was using the term. This definition should not be confused with the current US Army definition of Mission Command as, unbelievably, a warfighting function. Headquarters United States Marine Corps, "MCDP 6 Command and Control," (1996), 86.

⁸⁰ The LAV is wheeled, weighs approximately 13 tons, and is equipped with a 25mm chain gun.

⁸¹ Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd*, 125.

penetration increased the requisite variety of the Marine Corps fighting system and was central to Operational Maneuver from the Sea. Boyd understood requisite variety from his study of Complex Adaptive Systems theory. Frans Osinga elegantly explains the desirability of requisite variety as follows:

The greater the number of sets and elements comprising the system, the greater the variety a system has, and importantly, the greater the number of states a system can achieve. Variety is an extremely valuable commodity for a system to possess because a system is “constrained” if it does not have sufficient elements and arrangements of elements to deal with variety imposed upon the system by the environment or other systems. Thus only by incorporating required variety into internal controls can a system deal with the variety and challenge posed by its environment.⁸²

As presented here, the penetration of an adversary’s defensive system, by either a helicopter borne force or an amphibious operational maneuver group, has brushed over two assumptions. The first is that the attacking force has assured air superiority, a component of which is the destruction of the adversary’s air defense system. The second being any armored reserve possessed by the adversary with sufficient combat weight to threaten either the disembarked helicopter assault force or the lightly armored operational maneuver group needs to be dislocated or destroyed. Krulak’s conceptual solution to these problems was infestation.

Infestation

The logic of infestation is that small groups of dismounted soldiers could penetrate a defensive system in advance of an amphibious landing and destroy an adversary’s air defense systems and reserves with sea launched operational fires. Infestation is not a new tactic; German forces on the Western front in 1918 employed small groups of soldiers to penetrate defensive lines and disaggregate strong points from the system.⁸³ Infestation’s renaissance in the 1990’s resulted from an interest in swarming theory and perceived advances in precision fires and information technology that pointed to vast improvements in the

⁸² Ibid.,132.

⁸³ Showalter, Dennis. E. “Prussian-German Operational Art, 1740 – 1943” in *The Evolution of Operational Art: From Napoleon to the Present*, edited by John Andreas Olsen and Martin Van Creveld (Oxford: Oxford University Press, 2011), 47.

application of the theory.⁸⁴ Technology enthusiasts peering into the future predicted that unlike the German soldiers in 1918, small groups could share information in real time and self organize in response to changes in the environment.

The components of operational maneuver groups and infestation were largely absent from the ‘official’ description of Operational Maneuver from the Sea. Had Krulak’s full vision of Operational Maneuver from the Sea been endorsed, it would have comprehensively operationalized Boyd. That it was not highlights a fundamental flaw in the Marine Corps approach. To connect the theory of Boyd with the explicit strategy of the time, Joint Vision 2010, Operational Maneuver from the Sea simplified and reduced Boyd’s theory. This simplification conflates the OODA loop with tempo, diminishes the importance of requisite variety as manifested through operational maneuver groups and infestation, and gives insufficient weight to moral and mental considerations.

There are two principle reasons for the simplification of Boyd. First, the OODA loop concept is an attractive bumper sticker; however, the theory of John Boyd in both its form and substance does not connect easily to the strategy described in Joint Vision 2010. Conversely, the components of Boyd that promise clean, decisive operations against enemy centers of gravity leading to system collapse connect very well. These ideas appealed to the wider Department of Defense, in the thrall of the Joint Vision 2010 paradigm. Second, despite the broadness of Krulak’s appreciation of Boyd and the likely nature of future conflict, the “politics of procurement” enmeshed the hierarchy of the Corps and denied them the opportunity to focus on the less platform-centric elements of Operational Maneuver from the Sea.⁸⁵

The unstated circle of logic that drew the Corps hierarchy into this problem ran that the Marine Corps must retain an amphibious capability to distinguish itself from the Army. To do this, Operational Maneuver from the Sea needed to explain how Marine Corps amphibious operations were relevant and viable in the Joint Vision 2010 strategic context that pervaded the department of Defense in the 1990’s. Unfortunately, Operational Maneuver from the Sea hinged on the acquisition of particular capabilities

⁸⁴ Bernard Trainor, “The Marine Corps in the Next Century” in *The Emerging Strategic Environment: Challenges of the Twenty-First Century* edited by Williamson Murray (Westport, Conn.: Praeger, 1999), 320.

⁸⁵ James G. Burton, *The Pentagon Wars: Reformers Challenge the Old Guard*, 86.

(Osprey Tilt rotor Helicopter and the Expeditionary Fighting Vehicle); therefore, the Marine Corps was compelled to emphasize the components of Operational Maneuver from the Sea that required these capabilities and nested in the Joint Vision 2010 paradigm.

The Practice of Operational Maneuver from the Sea

A number of papers and studies have applied Operational Maneuver from the Sea to operations retrospectively in search of its utility. Unfortunately, these works mold history to the idea; they do not describe the concept in action.⁸⁶ Whilst sea basing and ship to objective maneuver were observed in Korea, Vietnam and Task Force Rhino operations in Afghanistan in 2003, the concept in its entirety did not yield the fruit that Krulak promised in 1996. Krulak derived Operational Maneuver from the Sea from the theory of Boyd and believed that it had the potential to collapse an adversary's system, and because of the rising importance of littoral regions, it could be strategically decisive.

As Operational Maneuver from the Sea's 'non use' continued, officers of the Marine Corps nuanced the concept away from its original form. Indicative of this is an article from the year 2000 in the Marine Corps Times that states:

The heart of Operational Maneuver from the Sea is the maneuver of naval forces at the operational level, a bold bid for victory that aims at exploiting a significant enemy weakness in order to deal a decisive blow. This is not a new principle and its application was witnessed numerous times (in varying degrees) in the Pacific theatre during World War II when allied forces attempted to bypass strongly defended islands, bases, and coastlines. The epitome of successful Operational Maneuver from the Sea type operations was evidenced at Inchon during the Korean conflict. While this operational application of naval forces is not new, there are new methods to perform this function that are presented in Operational Maneuver from the Sea (i.e., seabasing, ship-to-objective maneuver, etc.). Therefore, the means are improving while the intent remains unchanged. Operational Maneuver from the Sea is the direction in which the Marine Corps is heading, not a system in and of itself. Just as Operational Maneuver from the Sea is yet another evolutionary stage in the development of amphibious operations, it must also undergo its own evolution. Operational Maneuver from the Sea will not be recognized and fulfilled in the near term but will grow and mature over time.⁸⁷

⁸⁶ William Mitchell, *The Inchon-Seoul Operation: A Lesson in the Design of Operational Maneuver from the Sea* (Newport, R.I.: Naval War College, 1995). Michael Morris, *Flying Columns in Small Wars: An OMFTS Model*, (Unpublished research paper, 2000); Gary J. Ohls, *Somalia . . . from the Sea* (RI: Naval War College, 2009).

⁸⁷ Lawrence J Oliver "Operational maneuver from the Sea: Realizing a concept" *Marine Corps Gazette*, September 1, 2000, 44-48. <http://www.mca-marines.org/gazette/operational-maneuver-sea-realizing-concept> (accessed December 1, 2011).

Taken literally, the article implies that the central idea of Operational Maneuver from the Sea is that as technology has increased, amphibious tactical actions have sought to bypass enemy defenses and aim at objectives further inland than amphibious operations had in the past. This benign insight does not equate to the potential Krulak envisaged in 1996.

This separation of the concept from the military strategy of the United States and the theory of John Boyd effectively marks the end of the life of Operational Maneuver from the Sea as Krulak conceived it. Section one of this monograph explored the life of Operational Maneuver from the Sea and its context. This determined that Operational Maneuver from the sea was an operational logic that attempted to connect three forms of strategic theory to the tactical realities of amphibious operations in the mid 1990's. Ultimately, Operational Maneuver from the Sea waned in its utility as the strategic context evolved from that of the mid 1990's and the tactical possibilities of the force remained only possibilities, not realities. The Australian Defence Force does not have a developed amphibious operations concept. However, it does have a strategy, military theory, and tactical possibilities that will bound such an amphibious concept. The next section of the monograph will explore these factors in more detail.

Australian Strategy, Theory and Tactical Possibilities

As previously noted, there is more than one form of strategic theory. In the Australian military, the first form of strategic theory, which is how a military views the character of conflict, derives from the military theory of Clausewitz. The Australian military considers that:

The nature of conflict remains enduring; however its characteristics have and will continue to change. War is fundamentally a human, societal activity, rather than a technical or engineering problem. In essence, war is a form of armed politics, and politics is about influencing and controlling people and perceptions. War is therefore a free and creative human activity, inextricably linked to human will, emotion, and psychology.⁸⁸

Another form of strategic theory is one that explains the interaction between forces and geographical domains. The White Paper all but defines a maritime strategy by stating that “the ability to deter or defeat armed attack on Australia is the primary force structure determinant of the ADF..... this means focusing predominantly on forces that can exert air superiority and sea control in our approaches.”⁸⁹ The purpose of maintaining sea and air control is to enable the maneuver and employment of joint Australian Defence Force elements in the maritime and littoral approaches to the continent.⁹⁰

The strategic logic underlying control of the sea and air approaches to the Australian mainland is that because of the uniqueness of Australia’s strategic geography, it will deny an adversary the prerequisites to gain land control.⁹¹ Within this logic, the role of the Army is to defeat other land forces that leak through the sea/air gap and secure terrain in order for the Air Force and Navy to gain or maintain sea and air control.⁹² The idea that air and sea control on the approaches to the Australian mainland will lead to ultimate strategic success is an example of Gray’s third form of strategic theory that posits

⁸⁸ Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (Canberra: Commonwealth of Australia); Head Modernisation and Strategic Planning - Army, *Army’s Future Land Operating Concept*, 4.

⁸⁹ Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, 53.

⁹⁰ Ibid.

⁹¹ Australia is the only continent-country in the world. It has a large land-mass, no land border with another country, a substantial natural resource base and vast ocean surrounds that include extensive areas of very shallow water. Australia’s people, industries and infrastructure are largely concentrated on the coast, in our eastern, south-eastern, and south-western fringes, remote from the major population centres of the world.

⁹² Ibid., 60.

dominance in a particular form of war will lead to strategic success. Australia's capstone strategic document, *White Paper 2009*, contains elements of each of these forms of strategic theory.

The *White Paper 2009* defines four facets of Australian Strategy. These are deterring and defeating attacks on Australia, contributing to stability and security in the South Pacific and East Timor, contributing to military contingencies in the Asia Pacific region, and contributing to Military contingencies in support of global security.⁹³ Two other facets are worth noting because they are a strategic constraint on the possibilities of tactics. First, Australia's strategy is inherently defensive, although it does not preclude a tactical offense, and secondly it requires the Australian Defence Force to fight in ways that minimize casualties.⁹⁴

Tactical Possibilities of Australian Amphibious Forces in the 21st Century

Whilst Australian strategy is explicit, the practicalities of tactics are a more contentious topic. What is tactically practicable is a function of one's own capability, the enemy, and the terrain. History, although nuanced, provides the only guide to the art of the possible. Combining a study of amphibious assault since 1941 and analysis of United States Marine Corps amphibious operations over the last 20 years suggests a number of useful practicalities for the conduct of amphibious operations.

The first of these is that amphibious assaults generally overcome amphibious defenses. In *At the Water's Edge*, Theodore Gatchel examines anti-amphibious defenses since Gallipoli and observes that in all but three cases they were unable to repel an attacker. Gatchel identified, for the attacker, that the establishment of sea and air control, superior doctrine and unity of command were the major contributing factors to this success.⁹⁵ From this it can be deduced that an amphibious force, assuming an appropriate

⁹³ Ibid., 56.

⁹⁴ "The ADF will, as necessary, tailor its operations such that we do not fight in a manner that sees a high rate of attrition and mass casualties among our forces. We will seek to avoid battle on unfavourable terms, apply force in a precise manner, in a way that the adversary is not expecting, and seek to overmatch at decisive points in battle." Ibid.

⁹⁵ Theodore L. Gatchel, *At the Water's Edge: Defending Against the Modern Amphibious Assault* (Annapolis, MD.: Naval Institute Press, 1996), 6.

force ratio, with sea and air control, unity of command, organized, and trained in accordance with amphibious doctrine is generally going to successfully breach an anti amphibious defense.

The second conclusion is that amphibious assault is a relatively unlikely task in the present strategic context. In the past 20 years, the United States Marine Corps has conducted only four amphibious assaults compared to two amphibious raids, 19 amphibious strike operations, three amphibious demonstrations, ten embassy evacuations and 65 other amphibious exercises, humanitarian aid or disaster response operations.⁹⁶

The third conclusion is that the causes of delay at an amphibious beachhead have been misinterpreted. The Operational Maneuver from the Sea concept paper claims that:

For most of the 20th Century, the usefulness of sea-based logistics was limited by the voracious appetite of modern landing forces for such items as fuel, large caliber ammunition, and aviation ordnance. As a result, the options available to landing forces were greatly reduced by the need to establish, protect, and make use of supply dumps. Concerted efforts were delayed and opportunities for decisive action missed while the necessary supplies accumulated on shore.⁹⁷

In general terms, this statement is incorrect or at least misleading. *Charting the Pathway: An Assessment of OMFTS* analyzes the cause of delays at the beachhead in 34 amphibious operations. Its conclusion is that operational pause at the beachhead is caused by the interplay between the size of the force, nature and form of defense employed by the defender, and finally the nature of logistics support being used. The implication being that the enemy, terrain and weather all determine if a force can move seamlessly from the sea to a land based objective.

A fourth conclusion is that sea basing is unlikely to be the sole means of supporting an amphibious force. Sea basing is a concept to provide logistics, fires and command and control from ships at sea to a force operating on land. It will do this by employing a “direct one stage method of supplying

⁹⁶ Office of the Chief of Naval Operations, *Sea Power for a New Era: 2006 Program Guide to the U.S. Navy*, Appendix A “Navy-Marine Corps Crisis Response and Combat Actions” 92.

⁹⁷ “Operational Maneuver from the Sea,” *United States Marine Corps Warfighting Concepts for the 21st Century* (Quantico: Concept Division, Marine Corps Combat Development Command, 1998), I-10.

the end user rather than a two-stage process making use of depots ashore.”⁹⁸ The most enthusiastic proponents of sea basing promise that it will support land based operations in their entirety with supplies, fires and command and control.⁹⁹ More sober analysis suggests that, for the time being, sea basing remains a component of the logistical and fire support arrangements for a landed force and is unlikely to become the sole means of support.

Major Kemp’s 2008 analysis of the use of sea basing in six major amphibious operations since 1943 illustrates its role within a broader system of sustainment and support which includes strategic air lift and shore based support nodes.¹⁰⁰ The story of sea-based fires is even less conclusive regarding the feasibility of the concept. Sea based fire support should not be confused with the concept of sea strike. Sea strike destroys enemy capabilities but does not necessarily provide direct support to land force maneuver. The evidence suggests that sea based fires are not yet sufficiently flexible, responsive or reliable to be the only fire support for littoral based operations.¹⁰¹

These four factors outline the general tactical possibilities of an amphibious force. Further discussion of the tactical possibilities of the proposed Australian Amphibious force is difficult without diverging into either an entirely speculative or classified realm. However, it is necessary to outline the shape of the Australian Defence Forces’ amphibious force if for no other reason than to afford the reader an understanding of the scale of operations concerned. The Australian Amphibious Force consists of two Landing Platform Docks supported by 12 Landing Craft Medium, intended to deploy an amphibious

⁹⁸ Geoffrey Till, *Naval Transformation, Ground Forces, and the Expeditionary Impulse: The Sea-Basing Debate*, (Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2006), 17.

⁹⁹ Ibid.

¹⁰⁰ Jesse Kemp, "Viewing the Future of Sea Basing through the Lens of History" (Masters Thesis, Marine Corps University, 2008).

¹⁰¹ The Al Faw operation in 2003 emplaced four 155mm Gun batteries on Bubiyan Island prior to the insertion of the air assault. Operations Starlite, Belt Tight and Beau Charger all employed land based fires in generally equal proportion to sea based fires. Operation Starlite was supported by 5400 rounds fired from field artillery versus 1500 rounds from naval gunfire. Marine Corps. History and Museums Division, Whitlow, and Shulimson, *US Marines in Vietnam*, 159.

The general problems of fire support in the battle of Goose Green in the Falkland Islands are well known. Of specific relevance to this discussion is the heavy reliance on the fire of HMS Arrow. HMS Arrow suffered a gun malfunction and there was no redundant system. By the time the malfunction was rectified the ship needed to move to open water in order to defend itself against land based Argentine aircraft. Martin Middlebrook, *Operation Corporate: The Falklands War, 1982* (London: Viking, 1985), 265.

ready group of approximately 2000 soldiers.¹⁰² The Amphibious force will have sufficient rotary wing assets to air transport a company group and normally embarks a composite light armor group.

The tactical and technological capabilities of the United States Marine Corps were what gave life to the theories of John Boyd in military operations. Before exploring the connection between tactical possibilities and theories in the Australian context, it is necessary to determine where to focus the discussion. In the case of Operational Maneuver from the Sea, the existence of a dedicated amphibious force simplified the question. The Australian Defence Force does not have a dedicated amphibious force, prompting one to wonder if the discussion should focus on joint or service theory. This discussion focuses on the theory of Army concepts because the land element of the amphibious operation is generally decisive and the underpinning theory of the Australian Army stands in sharp relief relative to the other services.

The Operating Concept of the Australian Army

The theory of the operating concept of the Australian Army, Adaptive Campaigning – Future Land Operating Concept (Adaptive Campaigning) is similar to Boyd’s theory in many regards. To highlight the claimed differences between Boyd’s theory and the theory of complex adaptive systems used by the Australian Army, it is necessary to outline Adaptive Campaigning in more detail. Adaptive Campaigning is a response to a vision that

Future conflict will display the trends of diffusion of lethality, the proliferation of technologies and ideas, disaggregation of the battlespace, and a retreat by our adversaries into complex terrain. As a result of these trends it is argued that three characteristics will emerge: detection and discrimination thresholds; the dominant narrative; and, operational uncertainty.¹⁰³

In this environment Adaptive Campaigning aims to influence and shape the overall environment to facilitate peaceful discourse and stabilize the situation, noting that there may be no end state to an

¹⁰² The LCM-1E is a 110-ton class fast landing craft designed and built by Navantia shipyards for the Spanish Navy. These vessels are intended to deliver troops and equipment onshore during amphibious assaults. The LCM-1E vessel can achieve a top speed of 22 knots and has maximum range of 190 nm at economic speed. In September 2011, Australia announced its intention to purchase 12 LCM-1E crafts. http://www.navy.gov.au/Future_Ships (accessed November 12, 2011).

¹⁰³ Head Modernisation and Strategic Planning - Army, *Army’s Future Land Operating Concept*, 49.

operation but rather an enduring set of conditions conducive to Australia's national interests."¹⁰⁴ Of particular relevance to this discussion, Adaptive Campaigning claims,

The complexities of the modern battlespace are such that it cannot be understood by remote analysis alone; rather, detailed situational understanding will only flow from physical interaction with the problem and success is achieved by learning from this interaction. In response, Land Force action will be characterized by the Adaptation Cycle.¹⁰⁵

The Army states that the "adaption cycle is not intended to replace the body of theory on which it rests. Like the Boyd Cycle, it is simply a metaphor for conflict—albeit one that emphasizes certain aspects of conflict which are particularly important in our contemporary setting. In particular, ASDA takes a systems view."¹⁰⁶ This view represents people, armed groups and the environment as interactive Complex Adaptive Systems. A complex adaptive system is open to "flows of energy, matter and information, which flow through networks of both positive and negative feedback."¹⁰⁷ Given Boyd's study of complex systems, it should be no surprise that these ideas are also present in the Marine Corps doctrine of 1997.¹⁰⁸

Adaptive Campaigning claims that its adaption cycle supplements the work of Boyd which is limited in its utility because the OODA loop is primarily a reactive tool most suited to tactical contexts like air to air combat. Australian officers disagree on this point. To some the idea that Boyd's OODA is only relevant tactically is indicative of a superficial read of Boyd's work.¹⁰⁹ Others like Michael Brennan and Justin Kelly argue that the Adaption Cycle is more than a compliment to the OODA loop:

The OODA Loop is a powerful, accessible, and widely applicable model of combat, whereas the ASDA Cycle is intended to capture systems thinking without resting on the jargon and formal analysis of systems theory. ASDA is deliberately couched to highlight the importance, and difficulty, of acting in the absence of actionable intelligence and the need to approach conflict as competitive learning.¹¹⁰

¹⁰⁴ Ibid.

¹⁰⁵ Ibid. The Adaption cycle is also referred to as ASDA – Act Sense Decide Adapt.

¹⁰⁶ Justin Kelly and Mike Brennan, "OODA Versus ASDA: Metaphors at War," *Australian Army Journal* 6, no. 3 (2009) 39-53.

¹⁰⁷ Ryan, A. "Science of Adaptation," *The Australian Army Journal* 6, no. 3 (2009), 72.

¹⁰⁸ Ibid.

¹⁰⁹ J. Thomas, "Adaptive Campaigning: Is it Adaptive enough?" *Australian Army Journal* 7, no. 1 (2010), 88.

¹¹⁰ Kelly and Brennan, "OODA Versus ASDA," 49.

To be useful, the adaption cycle must be transformed into a executable idea. Distributed Maneuver aims to do this by integrating tactics with the adaption cycle.

Distributed Maneuver

Distributed Maneuver begins with the premise that increases in weapon lethality affords a defender the chance to develop an effective defensive system beneath the detection threshold of an adversary's Intelligence Surveillance and Reconnaissance (ISR) system. The Hezbollah defense of Lebanon in 2006 is an example of such a defensive system.¹¹¹ To defeat this defensive system an attacker must first learn about it. Learning occurs through prompting and observing a defensive response. Kelly and Brennan, who conceptualized Distributed Maneuver, suggest there are two extant ways to do this.

The first of these is the Marine Corps concept of distributed operations. Distributed operations derive from the previously described concept of infestation, in which small teams use precision fires to reduce components of an adversary's defensive system. Kelly and Brennan claim that the length of the 'kill chains' or sensor shooter link in distributed operations makes it slow relative to the defenders adaption cycle. If the defensive system can adapt to compensate for the loss of a strong point or capability then the purpose of fires becomes simply to impose attrition on the enemy. Conversely, Distributed Maneuver is about learning and adapting faster than the defensive system.

Kelly and Brennan state that "learning fuels adaptation. To begin the process of learning and pierce the veil of uncertainty that lies between the protagonists, a gambit must be made—sufficient energy must be injected into the system to force it to respond."¹¹² If this idea is accepted, Kelly and Brennan argue that small dismantled teams are unlikely to produce the requisite energy to force a response from the

¹¹¹ "The Hezbollah defensive system occupied 900 square kilometers of terrain. This terrain was intimately known by the Israeli Defense Force and comprehensively over watched by unmanned aerial vehicles, remote cameras, aerial reconnaissance, human intelligence, and signals intelligence for the six years prior to the war." Despite this, the Israeli Defense Force remained largely ignorant of the characteristics of the defensive system. Ibid., 25.

¹¹² Ibid., 45.

defensive system.¹¹³ Said another way, a small dismounted team may not meet the “response threshold” of the defensive system.¹¹⁴

Distributed maneuver posits that groups of small combined arms teams can interact with the defensive system without risking the destruction of the force as a whole. These teams, linked to highly responsive beyond line of sight fires, destroy or suppress components of the defensive system, not to reduce the resources available to the adversary, but prompt defensive adaption that allows the attacker to learn more. “Repeated cycles of probe, sense, respond, transfer the cognitive burden to the defender and progressively cripple the defenses capacity for timely adaption.”¹¹⁵

The second option described is the “M1 suck it and see gambit.”¹¹⁶ An attacker using this technique acknowledges that they will be engaged as they learn about the system. Therefore, a well-protected system, like the M1A1Abrams main battle tank, is required to allow learning in contact. Despite Kelly and Brennan’s preference, this option seems more insulated against friction and the unknown. Further, an amphibious force seeking requisite variety would possess the capacity for both forms of action.

Section one of this monograph characterized Operational Maneuver from the Sea as an operational concept that provided a governing logic between the aspirations of strategy and the practicalities of tactics. Section two outlined contemporary Australian strategy, defined the tactical possibilities of the proposed Australian Amphibious force and explored the theory that underpinned the operating concept of the Australian Army. The task ahead is twofold. First, to test Operational Maneuver from the Sea for suitability as the governing logic between Australia’s strategic aspirations and the tactical possibilities of the proposed Australian amphibious force. Second, to use the understanding gained from the conceptual

¹¹³ Ibid.

¹¹⁴ Kelly and Brennan cite the example of a British reconnaissance troop leader who, during operation GOODWOOD, drove his scout vehicle through a village without being engaged by German forces. Unfortunately, the following battle group met the response threshold for the German defensive system and sustained catastrophic losses.

¹¹⁵ Ibid., 33

¹¹⁵ Ibid.

¹¹⁶ Ibid.

examination of Operational Maneuver from the Sea to explore ideas for an Australian amphibious concept.

Towards an Operational Concept for Australian Amphibious Forces

Operational Maneuver from the Sea Denied

Operational Maneuver from the Sea is not suitable as an operational concept for the Australian Defence Force for three reasons. First, the strategic theories served by Operational Maneuver from the Sea have fundamentally different logics to Australian strategic theory. Joint Vision 2010, the strategy served by Operational Maneuver from the Sea posits that war is more controllable and less political than Clausewitz would have us believe. Conversely, Australian strategy is underpinned by an understanding of the dynamic and uncontrollable nature of war expounded by Clausewitz. Further, domain strategies served by Operational Maneuver from the Sea and Australian domain strategy are fundamentally different. United States Navy and Marine Corps domain strategy posits control in the littoral can be a decisive factor in an overall strategic success. Australian strategy posits that sea and air control denies an adversary the ability to contest control of Australia's continental land mass. Littoral control or land control in the littoral may be required to enable sea and air control, but in the defense of Australia, sea and air control is decisive.

Second, the tactical possibilities of the Australian amphibious forces are fundamentally different in size and nature to that of the United States Marine Corps. Operational Maneuver from the Sea, focused on assaulting inland objectives from ships over the horizon, was intentionally dependent on developing technologies like the Osprey tilt rotor Helicopter and the Expeditionary Fighting Vehicle. Australia, lacking these capabilities, is more keenly constrained by geography and oceanography.

Third, Operational Maneuver from the Sea derives from the theory of John Boyd. The operating concept for the Australian Army shares similarities with Boyd's theory in its understanding of complex

adaptive systems. However, Adaptive Campaigning seeks to adapt faster than an opposing system not collapse it as Boyd's theory does. Whilst there is considerable overlap between the theories it would be incongruent for the Army to adopt an operational concept based on a theory that diverges from its primary theory of operation.

Conveniently, these points of difference also outline the shape of any operational concept for Australian amphibious forces. To briefly recap; first, the concept must provide a governing logic between the strategic aspirations of the White Paper 2030 and the tactical possibilities of the amphibious force. Second, the theory that underlines the operating concept of the Australian Army should also underpin the amphibious concept. To phrase these requirements as a question, it asks what should the amphibious force do, within the theoretical construct of Adaptive Campaigning and its practical limitations, so it can best serve Australian strategy? The final section of this monograph tackles this question by first analyzing the relevant components of Australian strategy in greater detail; second, envisioning how an adversary might act to defeat this strategy; and third, describing how the amphibious force might serve the strategy in this context.

Amphibious forces and Political Influence in the Inner Arc

Strategy, Colin S. Gray writes, "is the use of force or the threat of force for the ends of policy."¹¹⁷ Unfortunately, this definition does not describe what good strategy does. Good strategy, according to Dolman, "leads to a strong probability of a recurring advantage over an adversary or adversaries."¹¹⁸ Australian strategy aims to maintain a geographic position of advantage in the inner arc.¹¹⁹ This aim

¹¹⁷ Gray, *Modern Strategy*, 17.

¹¹⁸ Everett C. Dolman, *Pure Strategy: Power and Principle in the Space and Information Age*, 12.

¹¹⁹ These are: "contributing to stability and Security in the South Pacific and East Timor and contributing to military contingencies in the Asia Pacific region." Australian Government - Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*. The inner arc is officially defined as the chain of islands from Indonesia in the west through Papua New Guinea to the Solomon's and the Southwest Pacific. Commonwealth of Australia, *Defence Review 2000 - Our Future Defence Force: A Public Discussion Paper*, Department of Defence (Canberra, 2000), 17.

directly contributes to defeating attacks on the Australian mainland and contributing to the security of the South West Pacific.

Despite the fact that the last 20 years have educated most strategists in the finer points of the employment of US military power in defense of her interests, another nation or group may one day decide to conduct a major military action to seize a land mass in the inner arc and directly threaten Australia's interests.¹²⁰ This is an unlikely event, but not one to ignore. As Colin Gray states:

There are occasions, fortunately rare for most communities, when war is judged the least bad of a short list of unattractive policy options. Some dangerous ideas, possibly inhabiting disturbed personalities, cannot usefully be met strictly with the soft power of better ideas; instead their authors and carriers need to meet the 'hard power' of the iron fist. Would that this were not so, but such is the real historical context that assuredly will generate a great deal of future warfare.¹²¹

Alternatively, adversaries may pursue an approach designed to offset the United State's dominance of regular warfare by conducting actions such that they gain the use of the geography without invoking a response from the United States. The strategic purpose of the Australian military in either situation is to establish security conditions that allow other means to maintain or establish a political environment aligned with Australia's interest.

Australia's *Future Joint Operating Concept* describes two concepts that seek to maintain or establish this favorable political environment. The first of these is control, which consists of operations conducted to deny or defeat an adversary. The second is influence, which applies to activities that shape the adversary and environment in ways favorable to Australia's interest.¹²² Australian Army doctrine is also explicit that the military has a role in maintaining political influence in the inner arc. Adaptive Campaigning states, "war is a form of armed politics, and politics is about influencing and controlling people and perceptions; influencing people and their perceptions is fundamentally a human activity that requires personal contact, proximity and an enduring presence. The Land Force's unique ability to be

¹²⁰ Colin S. Gray, *Another Bloody Century: Future Warfare* (London: Phoenix, 2006), 53.

¹²¹ *Ibid.*, 60.

¹²² Australian Defence Force, *Future Joint Operating Concept 2030* (Canberra: Commonwealth of Australia, 2011), 10.

persistent, pervasive, and proportionate is fundamental to success.”¹²³ Problematically, only the land force has the requisite persistence and presence to contribute this capability; it cannot be a competency of a small, logistically constrained amphibious force. What then should the amphibious force do to be influential given it lacks persistence and pervasiveness?

Conflict and Confrontation

General Rupert Smith illuminates a number of junctures between conflict and confrontation when a smaller force may be disproportionately influential. He contends that war consists of a continual state of confrontation in which conflicts occur, specifically:

The confrontation results from two or more groups pursuing different outcomes in the same circumstances. Confrontations are resolved when the parties involved modify their intentions. Politics resolves confrontations. When politics cannot or will not resolve the confrontation then one or many sides may use military force to compel or coerce the other actors; this is conflict. Firepower is the currency of conflict and information is the currency of confrontation. Militaries act in conflict to support the resolution of the confrontation by non military means.¹²⁴

Smith is not suggesting that militaries can do anything other than support the resolution of conflicts by other means. He also acknowledges that the military must maintain the status of the conflict such that the other means can operate for as long as they need to resolve the confrontation. A case in point is North Korea where militaries have maintained the conflict in a state of cease-fire for over 60 years, while other means continue to attempt to resolve the confrontation. Again, such an enduring task must be the domain of the land force. Both *Adaptive Campaigning* and the *Future Joint Operating Concept* explicitly support Smith. In these documents, references to nation building are conspicuous by their absence and the military tasks within the lines of operation establish or maintain conditions that might allow the resolution of the confrontation by other means.

Thus far, this section may seem to have strayed from the realm of an operational concept for Australian amphibious forces. After all, politics exist on land, and the point has already been made that

¹²³ Head Modernisation and Strategic Planning - Army, *Army's Future Land Operating Concept*, 6.

¹²⁴ Rupert Smith, “Epilogue” in *The Evolution of Operational Art: From Napoleon to the Present* (Oxford: Oxford University Press, 2011) edited by John Andreas Olsen and Martin Van Creveld, 233.

enduring operations on land is the domain of the land force. The question of how the strengths of an amphibious force are brought to bear in this context remains unanswered. The following paragraphs seek to address this question by outlining the tactical actions the amphibious force conducts in support of maintaining a favorable political influence in the inner arc. The analysis characterizes these actions as either contributing to influence, prior to the advent of conflict, or control once conflict is underway.

Although amphibious forces are unlikely to be successful in influencing polities they may have some success in influencing a politically organized body of people under a single government.¹²⁵ Governments generally exercise rational decision making and recognize the dynamics between actions and consequences. One of the qualities of “naval power in this interchange is that it can provide the presence that expresses national concern without potentially threatening an adversary.”¹²⁶ When a naval force can project power on land it can quickly occupy strategic junctures in a physical, humanitarian, or informational way. It also has the capacity to scale its influence without making an irretrievable commitment.

The presence of an amphibious force, or the strength it can impart to other groups by its presence or direct involvement in the training and support of other armed forces has the potential to alter the strategic calculations of groups of protagonists and prevent conflict from becoming a viable policy choice in confrontation. An incidental effect of using amphibious forces to participate in regional engagement is that the force familiarizes itself with the operating environment that will enhance its effectiveness in the case of an intervention. In short, an amphibious force provides a rapidly deployable, scalable, and reversible instrument for influencing governments and other adversary groups.

Confrontation is not mutually exclusive of conflict, the transition or coexistence of the two may present either a threat to Australian interests or an opportunity and clouds the boundary between control

¹²⁵ A government should not be taken to mean the government of state. In this case it means the leadership of a group of politically organized people. Theodore Roosevelt deterred conflict with maritime forces at both Venezuela and Panama in the early 1900's. Numerous other examples abound including Lebanon and Jordan in 1958 and the Shanghai Blockade of 1949. Henry J. Hendrix, *Theodore Roosevelt's Naval Diplomacy: The U.S. Navy and the Birth of the American Century* (Annapolis, Md.: Naval Institute Press, 2009), 230.

¹²⁶ Gray, *Modern Strategy*, 220.

and influence. Celestino Perez, mining the political theory of William Connolly suggests exploiting these transition points:

The military should look to occupy “strategic junctures where significant possibilities of change are underway.” Opportunities and threats will manifest themselves in “social movements with a potential to invent new rights or promote new identities, or protean forces that arise from regime collapses, the effects of rapid climate change or practices of humiliation that issue in a riot or civil war.”¹²⁷

These junctures may be fleeting. Those groups who are geographically present will have an immediate opportunity to exploit them to their own political ends. The likelihood of conflict may increase because the new context may grant the use of force a utility it did not previously have. To change the nature of the dialogue in the confrontation, a belligerent may employ an armed force to seize geographically or politically significant terrain and threaten populaces. The advantage of a force, like an amphibious group, that can deploy quickly to these junctures and provide either control or influence is immediately apparent.

The importance of time further increases in magnitude when unexpected events such as environmental or humanitarian disasters precipitate possible political change and threaten human catastrophe. In these circumstances, the amphibious force can affect control by mitigating the effects of the disaster to preserve the status quo through the provision of basic services and security conditions, such that the force has no utility for groups seeking political change. In the event that the amphibious force does not have the combat power to affect control across the area of operations, its role is to provide the degree of control required to ‘hold the door open.’ ‘Holding the door open,’ denies an adversary the opportunity to employ conflict to decisively resolve a confrontation or weaken Australia’s ability to intervene in the conflict.

Three broad options are available to an adversary to reduce the effectiveness or likelihood of Australian intervention and allow the use of conflict to resolve a confrontation to its own ends. First, a group might seize or deny a geographic point of entry or other point of key terrain, for example a

¹²⁷ Celestino Perez, “The Soldier as Lethal Warrior and Cooperative Political Agent: On the Soldier’s Ethical and Political Obligations Toward the Indigenous Other,” *Armed Forces and Society* (2011), 19; William Connolly, “‘Method, Problem, Faith’” in *Problems and Methods in the Study of Politics*, edited by Ian Shapiro, Rogers Smith, and Tarek E. Masoud (Cambridge: Cambridge University Press, 2004), 344.

maritime chokepoint, airport, or port in order to forestall the deployment of an intervention force. Second, a group might seize or threaten citizens in order to preclude action until Australia could assure their safety. Third, an adversary group might conduct its military actions in ways designed to deny Australia the ability to generate a mandate for intervention.¹²⁸ Examples of the last approach include operating clandestinely amongst the populace, conducting actions to reduce Australia's political credibility, operating within terrain of cultural or religious significance, or camouflaging the true nature of its military operations.

In the first two approaches outlined above, time may be imperative and only an amphibious force can deploy quickly enough with enough combat weight to hold the door open by seizing a point of entry or protecting non-combatants. The amphibious force maintains this status for as long as it takes to develop a mandate for intervention and concentrate and deploy a Joint Force that has the requisite combat power to end the conflict and establish the conditions required to allow other means to resolve the confrontation.

In the third approach, time may not be as critical but conversely the Australian government may need more time to develop a mandate for intervention. The offshore presence of a capable amphibious force in this case may be sufficient to return the conflict to confrontation or forestall the adversary's actions. In the event that it is not, the amphibious force is a critical complement to and supporter of special operations. Just as an adversary may seek to operate below the intervention threshold, Special Forces supported by raiding amphibious forces can operate below the threshold of what the international community perceives as an intervention. Such a force operating below the intervention threshold would allow the political dialogue required to develop a mandate without ceding catastrophic disadvantages to the adversary.

¹²⁸ A mandate reflects an international consensus on the relative validity of the political propositions being supported by the application of violence. The time taken to allow political discourse to establish a mandate will impact on all elements of conflict resolution. The land force must be prepared for entry conditions to adversely deteriorate during this time. Head Modernisation and Strategic Planning - Army, *Army's Future Land Operating Concept*, 27.

“Holding the door open” serves an additional purpose of informing the employment of the intervening force. An amphibious force permits a scaled and largely reversible interaction with the land, sea, air, and cyberspace systems of an adversary within the conflict. It also interacts with the diplomatic and political system that comprises the confrontation. This system may contain the parties involved in the conflict as well as other groups or states with interests in the confrontation but no active role in the conflict. These interactions will lead to tactical, operational, and strategic learning.

Requisite Variety Within the Australian Amphibious Force

The variety of the amphibious force is critical to the ability to intervene, hold the door open and learn about the adversary’s system. The amphibious force should be able to simultaneously or sequentially conduct joint land combat, population protection, information actions, population support, and indigenous capacity building. The proceeding survey of tactical possibilities of amphibious forces revealed three critical factors. First, in general, amphibious assaults are likely to succeed, however, amphibious assault has been infrequently conducted during the last 20 years. Second, sea basing by and large needs to be integrated with other sustainment means, and the ability to ‘seamlessly’ transition from sea to land is dependent on a number of variables. Third, distributed maneuver requires the ability to effect task organization changes in response to what is learned about the defensive system.

Kelly and Brennan also highlight that distributed maneuver requires a refined and synchronized force.¹²⁹ What should the force do in the event that the time is not available to develop this capability? It may be prudent to maintain the ability to employ the less refined option for learning about defensive systems, the ‘M1 suck it and see gambit.’ Further, tanks, because of the nature of their signature, invariably force responses from an adversary’s operational and strategic systems as well as their tactical system. They do this at relatively low tactical risk to themselves. Given this, the amphibious force should possess an integrated tank capability, a requirement that has obvious logistic considerations.

¹²⁹ Kelly and Brennan, “OODA Versus ASDA,” 33.

In combination, these factors increase the need for a variety of tactical tools across the battlefield operation systems and the ability to transition between them depending on how the adversary and the environment choose to play. No one tactical idea or capability can be king. Expanding this idea further, the Army will improve its operational adaptability by increasing the type of units versed in amphibious operations.¹³⁰ Whilst the infantry battle group with supporting arms might be the building block of Army's amphibious capability, it would be useful to grant a degree of experience and knowledge in amphibious operations to a mechanized battle group supported by a tank squadron and a task organized humanitarian response group.¹³¹

For these organizations, the crux of being amphibious is what they do at the sea to land transitions. These transitions underpin the effectiveness of land force. It is easy to consider these transitions as the purely physical movement of forces and logistics. This is but one component of the transition. Interventions will place a high premium on intelligence, non line of sight fires, electronic effects, and command and control between the disembarked force and the operational headquarters. The amphibious force must focus on how these functions negotiate the sea to land transitions. Large scale training packages can quickly develop platoon and company level amphibious skills; the transition managers cannot be developed in the same way.

The Falklands conflict provides a relatively concise example of the "strategic junctures" at which an amphibious force could intervene to forestall a confrontation from becoming a conflict or prevent an adversary using conflict to decisively resolve a confrontation. The confrontation between Great Britain and Argentina regarding the Falklands islands began in 1833 when British soldiers occupied the islands by force and expelled the Argentine settlers.¹³² From that point until 1965, Britain ignored Argentina's

¹³⁰ A recent example of this variety in an amphibious force is found in the British Amphibious Ready groups operations in Sierra Leone in 2000. Royal marines concurrently conducted Riverine Patrols, Helicopter insertions, security force assistance and non-combat evacuation. Will Fowler, *Operation Barras: The SAS Rescue Mission, Sierra Leone, 2000* (London: Weidenfeld & Nicolson, 2004), 92.

¹³¹ Australian Armor units are organized along British lines. Thus, a squadron is a company-sized organization.

¹³² Rubén O. Moro, *The History of the South Atlantic Conflict: The War for the Malvinas* (New York: Praeger, 1989), 3.

claims to be the rightful owners of the islands. In 1964, Argentina participated in the United Nations Special Commission on Decolonization and had its claim to the sovereignty of South Georgia, the South Sandwich Islands and the Falkland Islands formally recognized. The confrontation took a sharp turn towards conflict on 2 March 1982, when following talks in New York, Argentina communicated to Britain that it “reserved the right to terminate the process of negotiation and freely elect whatever path may serve her interests.”¹³³

On 1 April 1982 Argentina occupied the Falkland Islands. The logic of the Argentinean military action was to use the occupation of the island to force the negotiation of the issue through the United Nations. By occupying the islands ‘bloodlessly,’ Argentina hoped to deny Britain the mandate required to reoccupy the islands by force. The timing of the occupation was also significant because it denied Britain the time to enhance their naval presence in the region as a deterrent, and was likely to constrain British options for a military response because of the nature of the winter weather in the South Atlantic.¹³⁴ Argentina assumed that the more time that elapsed after the occupation, the more likely they were to realize a negotiated settlement.

British logic was diametrically opposed to this and immediately following the invasion, the domestic and international mandate for intervention was high. The quicker Britain could act the more likely they were to enjoy public support and avoid the effects of a South Atlantic winter. This brief recast of the events leading up to the conflict illuminates the first ‘strategic juncture’ at which a standing amphibious task force may be useful. This juncture occurred as the confrontation became a conflict between March and April 1982. During this time, civilians from an Argentine civilian salvage company landed on South Georgia. This incident, as trivial as it seems, was the catalyst that set the political process in both countries on a path toward the use of force. Following the incident, Britain was likely to reinforce its naval presence in the area and end negotiations regarding the sovereignty of the island. These actions,

¹³³ Ibid, 8.

¹³⁴ Max Hastings and Simon Jenkins, *Battle for the Falklands*, (New York: Norton, 1983), 125.

if taken, would prevent Argentina from regaining the islands by any means and as such would negatively influence the Argentinean “national reorganization process.”¹³⁵

A standing amphibious group may have acted as a deterrent in this situation. The effectiveness of deterrence is difficult to prove, but it is reasonable to suggest that such an amphibious force, deployed to either the South Atlantic or ready to be deployed to the South Atlantic, would have affected Argentinean calculations regarding the likelihood of their own military action succeeding.¹³⁶ An amphibious force provides a fundamentally different capability than naval power alone. Because of the nature of its weapons system and the cost of damage at sea, a naval force has but a few increments in the use of force. Commanders and political decision makers can quickly find themselves dealing in high stakes ‘shoot’ or ‘don’t shoot’ situations.

The sinking of the Argentinean cruiser the General Belgrano on 2 May 1982, illustrated just this point. As Lawrence Freedman remarked, “the attack provided an important military victory, but turned into a political defeat because the international community put a premium on non escalation and any non defensive action was seen as preemptive.”¹³⁷ In a similar vein, International Force East Timor soldiers stood toe to toe with the Indonesian military and in some instances exchanged fire, without it being politically catastrophic. It is unlikely that the same would be true if the International Naval Force had engaged Indonesian submarines present in the area.¹³⁸ Because of the nature of land operations commanders have the opportunity of declining or accepting engagements and the costs of miscalculations are significantly lower than in naval operations.

A standing amphibious capability also constrains internal political process. The idea that the existence of a standing amphibious force effects internal political process is not immediately obvious, but is observable in the Falklands crisis. Mobilizing amphibious forces to respond to the Falklands was not a

¹³⁵ Moro, *The History of the South Atlantic Conflict: The War for the Malvinas*, 15.

¹³⁶ Hastings and Jenkins, *Battle for the Falklands*, 124.

¹³⁷ Lawrence Freedman. "Reconsiderations: The War of the Falkland Islands, 1982" *Foreign Affairs*, 1 Sept. 1982. <http://www.foreignaffairs.com/articles/36819/lawrence-d-freedman/reconsiderations-the-war-of-the-falkland-islands-1982> (accessed 31 January, 2012).

¹³⁸ David Dickens, "The United Nations in East Timor: Intervention at the Military Operational Level" *Contemporary Southeast Asia* 23, no. 2 (2001), 215.

routine decision for the United Kingdom in March 1982. Britain dispensed with a standing amphibious capability in 1978, thus, the response was not practiced and required a number of non-standard arrangements.¹³⁹ Once the British Ministry of Defence had expended this energy and the task force sailed, decision makers were likely imbued with ‘sunk cost’ bias towards its employment. Had the deployment and redeployment of an amphibious task force been routine, the government’s bias would be less pronounced and a greater political freedom of action would ensue.¹⁴⁰ Similarly, the non-standard deployment of a large task force impelled the Argentine government to a fight or flight decision point with few options in between. Had the deployment of a task force been routine and expected, Argentina might have better understood the pattern of the diplomatic/military exchange and responded according.¹⁴¹

Once the conflict began, that is when Argentina used force to recapture the islands and Britain resolved to use force to remove them if necessary, it is possible to identify a number of junctures where an amphibious task force of battalion size provides a capability to ‘hold the door open.’ In this case holding the door open, required either forestalling Argentine efforts to resolve the conflict, or preserving British freedom to intervene should they choose to do so. These junctures, addressed in subsequent paragraphs, are the recapture of South Georgia and, the seizure of the San Carlos landing site to include the subsequent action to seize Goose Green.

South Georgia, 800 miles from the Falklands, but part of the island group, was strategically irrelevant to the recapture of the Falklands. However, its recapture afforded the British government the opportunity to demonstrate resolve to the Argentine government, reclaim a third of the sovereign territory in question, and show progress to the British populace. As it happened, an adhoc Special Forces group

¹³⁹ Middlebrook, *Operation Corporate: The Falklands War, 1982*, 78.

¹⁴⁰ Moro, *The History of the South Atlantic Conflict: The War for the Malvinas*, 66.

¹⁴¹ This represents an ideal. Domestic Argentinean support for the liberation of the Falkland’s may have precluded a withdrawal. When Haig met with the Argentinean President to broker a peaceful settlement, mobs of anti Thatcher protesters swarmed the streets, President Galtieri himself was reportedly “drinking heavily and only marginally more rational than the mob.” Military leaders within the Government were incapable of forming consensus on what should be done and instead settled for infighting and indecision. Hastings and Jenkins, *Battle for the Falklands*, 124.

overran the 140 Argentine defenders on the island but arguably the task fits well within the remit of a battalion sized amphibious task force.¹⁴²

The seizure of the San Carlo's beachhead established an intermediate support base for logistic and air operations. Proponents of ship to objective maneuver might claim that such a beachhead is no longer required because transportation platforms can transit soldiers directly from ships to their land based objectives. In the case of British operations in the Falklands, it was not possible to do this for three reasons. First, the risk of maintaining supplies on ships was unacceptable given the Argentine air threat to these ships. Second, the weather meant that sea based logistics were not guaranteed and the land force needed to be self-sufficient. Third, there were insufficient rotary wing assets to ferry supplies ship to shore. Only once they had seized a beachhead and stockpiled supplies could the British marshal forces for decisive land operations. An understanding of the environment and adversary, not a preconceived concept, compelled this design for the amphibious operation. Seizure of a beachhead preserved British freedom of action and is a second example of a how a battalion task force can 'hold the door open.' It is worth noting both the constraints and enablers of the task force that seized the San Carlos beachhead because they point to the need for variety in the amphibious group and expertise in transitions between the sea and land.

The task force that landed required a high degree of variety to enable ground combat force operations to secure an inland objective, in this case the settlement of Goose Green and subsequently Stanley. Most historical accounts of the battle of Goose Green focus on the heroic efforts of the 2nd Parachute Battalion to overcome a much larger Argentinean force in appalling conditions. Such accounts generally gloss over the reality that the 2nd Parachute Battalion was borne from the sea and was part of a much larger system of enablers. These enablers: logistics, medical support, fires, air defense, armor,

¹⁴² Ibid.134.

command, and control were caught in unfamiliar circumstances that reduced their effectiveness.¹⁴³ In short, the enablers were not organized for, nor practiced in, amphibious operations.

Those capabilities required to bridge the sea to land transition were the most degraded. Integrated sea-land fires, sea-land air defense systems and command and control ride on communication architecture. In 1982, the British could not reliably establish this architecture despite the relative simplicity of the communication network. In the present day, this system is significantly more complex and will be required to carry the data to support information operations. In view of the British experience, it seems unlikely that a military can quickly create capabilities and personnel to manage and control these transitions. They must be a permanent part of the requisite variety of the amphibious force and practiced at creating an efficient sea-land interface. Without the systems or people to manage the transition of information between sea and land, the land force will not leverage the capabilities of the naval force.

Logistics between the sea and land rides on a transport architecture. In 1982, the British amphibious force had arguably not developed or practiced this architecture.¹⁴⁴ Those that managed this process found that lack of established procedures, weather, paucity of helicopters and simple physical limitations impeded their ability to sustain a disembarked force and provide it the tactical mobility it required.¹⁴⁵ The reach and capability of the ground combat force is dependent on the performance of the enablers and transition of power from the sea to the land. The competence of the ground combat force in amphibious operations quickly becomes irrelevant if it cannot leverage sea power to sustain and support it.

¹⁴³ Ibid., 277.

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

Conclusion

Section one of this monograph explored Operational Maneuver from the Sea in its context. This determined that Operational Maneuver from the sea was an operational logic that attempted to fuse three forms of strategic theory to the tactical realities of amphibious operations in the mid 1990's. First, a form of theory that described the perceived character of war in a given period, explicitly defined at the time by Joint Vision 2010; second, a domain centric strategic theory, in the form of a maritime strategy and; third, a strategic theory that argued for the importance of littoral operations in conflict as a whole. The post cold war operating environment and the projected capabilities of tilt rotor helicopters, Land Cushion Air Craft, and Expeditionary Fighting Vehicles defined the tactical possibilities of the time. A simplified version of the theory of John Boyd was the foundation of how these capabilities could be employed to collapse the system of adversaries in pursuit of the strategies outlined.

Section two outlined contemporary Australian strategy, defined the tactical possibilities of the proposed Australian amphibious force and explored the theory that underpinned the operating concept of the Australian Army. Australian strategy was in the first form of strategic theory aligned with Clausewitz's ideas regarding the dynamic and political nature of war. Second, like the United States, Australia advocated a maritime strategy. However, the logic of its domain strategy was different in that it argued not for the overall importance of the littoral but for the importance of control of the sea and air approaches to the mainland. The tactical possibilities of the proposed Australian amphibious force were not manifest in emerging technologies but explained through an analysis of the tactical operations that might be feasible with such a force. The theory of the Australian Army is closely related to Boyd's theory but centers on an adaption cycle rather than Boyd's OODA loop.

Section three tested Operational Maneuver from the Sea for suitability as the governing logic between Australia's strategic aspirations and the tactical possibilities of the proposed Australian amphibious force. This monograph contends that Operational Maneuver from the Sea is not suitable as an operational concept for the Australian Defense Force for three reasons. First, the strategic theories served

by Operational Maneuver from the Sea have fundamentally different logics to Australian strategic theory. Second, the tactical possibilities of the Australian amphibious forces are fundamentally different in size and nature to that of the United States Marine Corps. Third, Operational Maneuver from the Sea derives from the theory of John Boyd. The operating concept for the Australian Army shares similarities with Boyd's theory in its understanding of complex adaptive systems. However, Adaptive Campaigning seeks to adapt faster than an opposing system, not collapse an opposing system as Boyd's theory does.

Finally, section three asked, what should Australian amphibious forces do, within the theory of Adaptive Campaigning and its practical limitations, so it can best serve Australian strategy? At this point, it is appropriate to recall the rationale for Operational Maneuver for the Sea and the question for all maritime strategists, which is, how to project sea power on land? Operational Maneuver from the Sea suggested that sea forces attack selected land based objectives directly and in doing so collapse an adversaries system. Nothing so grand appears feasible in the Australian context. However, in any confrontation or conflict there are points in space and time where military force may have an increased utility. In the Asia Pacific region, these points lie within the operational reach of an amphibious battalion task force and very few other force combinations.

An analysis of the Falklands campaign in 1982 highlighted the utility of a standing amphibious force in acting at these junctures. Such action requires that the commanders and staff of the amphibious force have an acute sense of the strategic situation, in particular the interplay between the conflict and the confrontation. For the force to be effective at these junctures, it needs a wide variety of tactical tools and enablers versed in amphibious operations. The Falklands also illustrated that tactical capabilities of the force, the enemy, weather, and terrain should be the primary determinants in the design of amphibious operations. The amphibious force should employ its tactical tools based on what it learns from the interaction with the adversary's system and the environment. The greater its requisite variety, the greater its options will be. The ability to learn and respond efficiently and effectively in what are likely to be time constrained situations hinges on the amphibious forces ability to manage the transition of physical forces, information, command and control, sustainment, and fire support between the sea and land. The

transition managers and systems across a breadth of capabilities are the hub of converting sea power to land power at the strategic junctures where the Australian amphibious force, despite its size, has tremendous utility. This analysis should also serve as a gentle reminder that operational concepts derive from specific strategic, theoretical, technological, social, and historical contexts. Transferring concepts between contexts carries a modicum of risk. Australia can avoid this risk by generating operational concepts from an understanding of its own strategy, theory, and tactical possibilities.

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