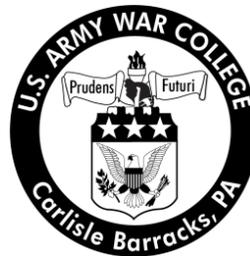


Civilian Research Project USAWC Fellow

The Role of the U.S. Army in Air Sea Battle

by

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United States Army War College
Class of 2013

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Combat operations are concluded in Iraq and reducing in Afghanistan while the United States is shifting focus, forces, and capabilities to the Asia Pacific region. This paper explores what the rebalance to the Pacific theater means for the Army. Beginning with a review of current Army missions, the role of the Army in Air Sea Battle is explored and concludes with resource modernization recommendations.

The Role of the U.S. Army in Air Sea Battle

As the Land power service of the United States, the U.S. Army will remain relevant to the nation as the U.S. transitions to an Asian focus under our new national security strategy. The military contribution to this new national security strategy is currently termed “Air Sea Battle,” which describes how the military could approach a future conflict against a foe or foes with anti-access/area-denial (A2/AD) capabilities. Air Sea Battle as currently defined does not assign a role to the Army. Nevertheless, as this paper argues, the Army must be assigned a significant role for this new strategy to be maximally effective. Given its capabilities, the Army’s main contributions will be to shape the pre-conflict environment and project forces forward to thwart anti-access or area denial threat capabilities or both, and to secure our vital interests while minimizing the sea-basing and support requirements from the Navy. This paper is structured as follows. The first section provides a brief background of Air Sea Battle, in the context of the recent Asia rebalance. The second section explores what the Army’s role should be and what an operationalized ASB might look like. This specific section concludes with recommendations on what future Army requirements are needed across the range of operations for the Army to perform its missions in this largest and most diverse geographic area of operation in the world.

Background

In January 2012, the President announced that our national security strategy would shift focus and rebalance diplomatic, informational, military and economic elements of national power to the Asia-Pacific region. The military contribution to this new national security strategy is termed “Air Sea Battle.” Air Sea Battle is an

operational level approach or doctrine (not a strategy) and describes a way for how the military might approach a future conflict against a foe with anti-access and area-denial capabilities.

As a concept, Air Sea Battle is not new. In one form or another, it has been around as a concept for ten to twenty years. It is a product driven by the critical assessment that China's rapid rise in military capability, especially in the cyber, space, and missile arenas is directed against the United States. Through the 1990s there were intelligence reports of a large buildup in military capability, but it was not enough for senior leaders in either Clinton Administration to justify a change in strategy or resourcing. Then, in 2000, reports from a PLA defector claimed that the US was indeed the target of the military buildup in China¹. These reports spurred the Department of Defense in the new Bush Administration to begin work on a Pacific oriented strategy but these strategic goals were not realized due to the terrorist attacks on September 11th, 2001. The unclassified intent of the current version of Air Sea Battle is vague in describing against whom it is designed. Air Sea Battle is, instead, devised to improve force integration across the services in all five warfighting domains (air, land, sea, space, and cyberspace) in order to provide Combatant Commanders with the capabilities needed to deter and, if necessary, defeat any adversary employing sophisticated anti-access/area-denial capabilities.² Air Sea Battle is a concept that seeks to ensure joint forces will possess the ability to project force as required to preserve and defend U.S. interests anywhere in the world.

Air Sea Battle concepts, while still in development, are driven by a scenario where an enemy possessing an array of anti-access, area-denial means attacks the US

or its vital interests first. The key result of the attack is that our ability to respond is limited, thereby gaining the enemy strategic initiative for a time. The enemy would first blind U.S. command (cyber and space) capabilities and then strike forward positions with missiles or directed-energy weapons to make them untenable (Guam, Japan, South Korea, aircraft carriers, etc.). The enemy would then conduct offensive operations to achieve their objective before establishing a defense to prepare for a U.S. counterattack. The enemy would conduct a defense in depth using the vast size of the Pacific Ocean to its advantage as part of their defense against the U.S.

The 2010 *Joint Operating Environment* envisions a future characterized by uncertainty, complexity, and rapid change that includes increasingly capable state and non-state actors. Three trends or enemy capabilities that will challenge US access across the globe include the improvement and proliferation of anti-access/access-denial weapons (including WMD), the change (reduction) of U.S. overseas forces (lack of a forward positioned capability), and the emergence of space and cyberspace domains as increasingly important and contested domains that affect the land domain.³ Other sources are more specific in characterizing the future environment as one that includes increases in the number of conflicts due to the perceived demise (relative or otherwise) of the US, the rise of new regional powers (not just China, but Brazil, India, and Turkey), a reduced appetite for international action to stop belligerence or the reduced cost of using proxy's to fight (Iran's use of Hamas and Hezbollah) to achieve political ends among other causal factors.⁴

Air Sea Battle must be an operational approach with utility in all theaters because of the chaotic, uncertain and complex future environment. Air Sea Battle must

be agile enough to meet multiple threats so that its limitations do not put the United States at an untenable comparative disadvantage. This will allow the US to minimize our capability gaps across theaters in a fiscally restricted era when the nation cannot afford a force structure that can meet every possible threat. Put another way, the Army needs to be agile enough to accomplish its mission either in high-intensity, hybrid, or counterinsurgency situations anywhere in the world. The US Army needs to retain both our high-intensity warfighting and hard-earned counterinsurgency expertise as future conflict is likely to include characteristics of both.

The current geo-political setting in the Asia-Pacific

What threats exist in the Asia Pacific in this chaotic future that Air Sea Battle will be used to thwart? Threats or possible friction points in the Pacific fall into three groups: nuclear proliferation, sovereignty over disputed terrain, and resource competition. They include high-intensity ground combat with North Korea or the collapse of the North Korean regime, or conflict with China over sovereignty issues involving islands around their periphery or the waters of the South or East China Seas; India and Pakistan's dispute over Jammu and Kashmir; or an Indian or Chinese fight over resources in the South China Sea or Bay of Bengal areas. All of these potential conflict areas are significant as they involve one or more nations that have nuclear weapons. China and North Korea stand out as being the most likely sources of conflict with the U.S. that Air Sea Battle is designed to meet. Despite some claims to the contrary, China and North Korea present the greatest challenges for U.S. freedom of action in the Pacific and are largely the reason behind the development of Air Sea Battle as an employment doctrine.

North Korea poses a very serious problem for the United States and its security interests in the Pacific. North Korea continues to be the most unpredictable and unstable regime in the region and is a great, if not the greatest, nuclear threat to the United States and its allies. The nuclear threat that North Korea poses is not just from the potential use of its own arsenal of weapons and missiles but also from its continued efforts to sell, share, and proliferate nuclear technology and materiel to other nations not allied with the United States. Its partially successful satellite / missile launch in December 2012, its successful nuclear bomb test in February 2013, and its continued bellicosity over the last several months indicate that North Korea is still pursuing intercontinental ballistic missile capabilities able to strike the U.S. territory and U.S. forces positioned in Japan and Guam. North Korea's recent leadership change is a complicating factor affecting outside perception of the regime's stability and predictability. It is unclear currently whether North Korea's recent combative behavior is indicative of President Kim Jong-Un's leadership style or behavior designed to conceal internal conflicts between the new young leader and the military or other top national party leaders as he solidifies his rule.

Complicating matters further on the Korean peninsula is the transfer of operational command in 2015 to South Korea. In accordance with the joint agreement, the South Koreans will assume operational command of all South Korean military forces in both peace and wartime in 2015. The transfer of command is an indication of increased South Korean military operational capability.

The transfer of command may also be viewed by the North Koreans as an opportunity to act provocatively. They may view it as a lessening of capability (e.g. the

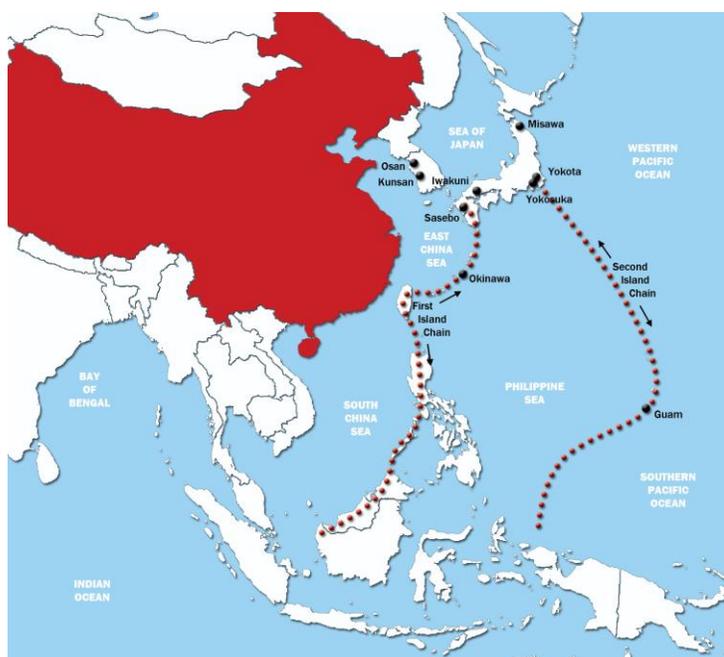
US is moved to a more enabling role) and North Korea may decide to act aggressively to test South Korean capability, demonstrate their own power, or to negate the powerful psychological effects an independent South Korean military will have on the minds of Koreans north of the demilitarized zone.⁵

China is a nation that defies assessment as either purely an ally or an enemy. The United States must place more emphasis on their capabilities versus their stated intentions when assessing China. China should, therefore, be assessed as a threat.

China's impressive economic development over the last ten to twenty years has enabled China to become an economic powerhouse and invest its resources abroad. China has expanded its largely positive economic relationship with the United States and with most nations of the Western Pacific as well as with other nations across the globe in Europe, Latin America and Africa. Their geometric growth requires substantial resources. The Chinese have engaged multiple nations for the resources required to maintain their growth and are partially building a military capacity to protect their access to them.

However, China has also heavily invested resources in its military over the last ten to twenty years for offensive, force projection capabilities as well. Modern capabilities such as aircraft carriers, stealth aircraft, anti-satellite weapons and hypersonic missiles are offensive capabilities designed to project power and penetrate defenses as opposed to defending borders from external threats. According to the U.S. Economic and Security Review Commission, "it appears that they are investing in a military with capabilities to be employed beyond retaining Taiwan."⁶ While not stated publicly, these offensive capabilities could be used to reinforce or seize territorial

sovereignty or economic resource claims in the South China Sea or the Pacific Ocean as far as the 2nd Island chain.⁷



China over the last few years has employed coercive diplomacy and acted belligerently in both the East and South China Seas. Diplomatic actions in the UN claiming sovereignty over the majority of the South China Sea beyond internationally recognized waters, declaring to place PLA troops in areas nominally governed by China (e.g. Spratly or Paracel island chains), and naval actions against both Philippine and Japanese ships are a few examples of recent bellicose Chinese behavior.

China is a communist nation and, while they have a state run ‘market economy,’ they have not embraced the liberal economic policies of the democracies across the globe nor have they fully embraced the international bodies and organizations that regulate and enforce the current global economic structure.

Finally, contributing to the overall assessment that China is a threat is its participation in the proliferation of missile technologies and other military hardware to

nations that are not aligned with U.S. interests (e.g. Iran, Pakistan, Venezuela, and Brazil).

In the final analysis the United States should categorize China as a possible and not likely threat nation on which the US National Security Strategy should be partially focused. Likewise, the operational doctrine and capabilities of Air Sea Battle should be developed with the threat capabilities China possesses for use against the U.S. in mind. China should be the focus of our capability development not just because they continue to behave belligerently but also because they are the most advanced country at developing and fielding capabilities that will limit or deny U.S. access to certain areas (especially in the Western Pacific but also elsewhere as their capability grows or is sold). In the near future they could impact our operational ability in the West Pacific region, or project power out to the 1st or 2nd Island chain as they gain reliable power-projection capabilities. However, the U.S. National Security Strategy towards China and our approach to dealing with the very real threats China poses should be done in a nuanced manner. The U.S.'s China strategy and resourcing it should be done in a manner that does not make war with China a foregone conclusion. It should be accomplished in a way that incentivizes cooperation over competition. The strategy should leave open the possibility for China and the United States to peacefully co-exist should China choose that route without risking U.S. vital national interests.

The Army's Current Mission and Role

Air Sea Battle requires further development as an operational approach because it does not span the full range of military operations or spectrum of conflict. The initial

Air Sea Battle concept focused on major combat operations and omitted the development of Air Sea Battle's contributions for earlier phases (e.g. shaping the environment) or post combat (e.g. return of civilian government) operations.

The Air Sea Battle concept did not initially include the Army but to succeed the US will need the Army's expertise in the region that it has garnered over the last 100 years. The Pacific "Century" is not just beginning now from the US Army's perspective, it began in 1898 with U.S. Army operations in the Philippines during the Spanish American War. Army operations in the Philippine's from 1899 - 1902 marked the beginning of US Army engagement, influence and involvement in this strategic region and all three of those key roles continued throughout the last century and continue today. In World War II the U.S. Army conducted more amphibious landings than the U.S. Marine Corps and by the end of the war had more Soldiers in theater than the Marines. Of the 181 campaign streamers on the Army's flag, 64 of them occurred in the Pacific.⁸ Today there are over 70,000 Soldiers that operate daily in the Pacific theater. There are numerous multi-level exercises, exchanges, and training with multiple partners across the Pacific. The area is home to seven of the ten largest Armies in the world⁹ and 21 of the 27 largest Pacific-based militaries are led by Landpower commanders.¹⁰ These numbers highlight the point that the Pacific theater is not just a naval one, but one where Landpower forces have a critical and influential role to perform.

The Army has specific roles and missions its Soldiers must be ready to execute to attain the objectives outlined in both our *National Security Strategy, and Defense*

Planning Guidance. These missions as they are outlined in the 2013 *Army Strategic*

Planning Guidance are:¹¹

- 1) Counterterrorism and Irregular warfare
- 2) Deter and defeat aggression
- 3) Counter Weapons of Mass Destruction
- 4) Defend the Homeland and Provide Support to Civil Authorities
- 5) Project power despite Anti Access / Area Denial Challenges
- 6) Operate effectively in Cyberspace
- 7) Operate Effectively in Space
- 8) Maintain a safe, secure and effective Nuclear Deterrent
- 9) Provide a Stabilizing presence
- 10) Conduct stability and counterinsurgency operations
- 11) Conduct Humanitarian Assistance, Disaster Relief and other operations.

All of these missions except defending the Homeland and maintaining a nuclear deterrent could *possibly* be performed by Army forces in the Pacific. However, *likely* missions (based on our current strategy and present threats) and those that would require the Army to allocate force structure to the Pacific Area of Operations can be reduced to four missions. Counter Terrorism, Irregular warfare, Stability operations, and Counterinsurgency operations are not likely given the current domestic political climate and the nature of threats in the Pacific. Counter Weapons of Mass Destruction (WMD), Space, Cyberspace, and Nuclear Deterrence are global missions.

The four remaining missions are:

- 1) Deter and defeat aggression
- 2) Project power despite Anti Access / Area Denial Challenges
- 3) Provide a Stabilizing presence
- 4) Conduct Humanitarian Assistance, Disaster Relief and other operations

Deterring or defeating aggression in the Pacific most aptly refers to assisting primarily South Korea repel an attack by North Korea (though both Japan and Australia could also become involved due to North Korea's ballistic missile capability). This major high-intensity combat operation (MCO) would require the bulk of the Army to perform this mission and employ all capabilities the Army brings to the Joint Force.

Projecting Power despite A2 / AD challenges is a mission that at first glance does not appear to be a Pacific mission that would necessitate Army forces. An example of this type of mission without Army involvement would be when President Clinton ordered a Carrier Battle Group into the Taiwan Strait to reinforce our commitment to a free Taiwan in the mid-1990's and protest recent missile tests into the Taiwan Strait by China. That type of commitment of forces or action is no longer as optimal as it was before due to large increases in the numbers and types of missiles that China now wields across the strait and which are oriented at Taiwan and the strait. Additionally, the range of modern missiles makes most of the South China Sea, East China Sea, and the Straits of Malacca increasingly vulnerable chokepoints where global commerce or U.S. Naval Power, or both, could be interdicted or blocked if an aggressor chose to do so. The Chinese DF-21 Ballistic Anti-Ship missile has a range of approximately 1500nm that for the first time can interdict ships out in the open ocean, which is to say in international waters.¹² The large increase in the numbers and capabilities of Chinese missiles will require ground based missile defenses from the Army at many locations simultaneously if a future mission is directed to maintain access and freedom of navigation without over-exposing our naval forces to hostile fire.

Providing a stable presence and conducting humanitarian assistance or disaster relief are missions that the Army has done well in the past and will continue to perform capably. These missions have the added benefit of improving the image of the United States around the globe. They also leverage robust, but often unadvertised, Army capabilities and expertise in logistics. The most likely stability mission requiring Army forces would be the internal collapse of North Korea. Operations to separate warring factions or protect ethnic minorities in other countries, for example, Muslims in Thailand or the Aceh in Indonesia, is plausible as well. These missions would be best addressed by members of other multi-lateral organizations such as the United Nations (UN) or Association of South East Asian Nations (ASEAN), for a myriad of political, religious and regional reasons. The Australian-led, UN-mandated intervention in East Timor in September 1999 is an example of an operation where regional leadership was a better solution than a unilateral one led by the United States.

Humanitarian or disaster-relief operations could occur anywhere in the Pacific but especially in those littoral areas that continue to be at risk from tsunami's and earthquakes. Operation TOMODACHI or 'Friend', the named operation to assist Japan after the March 2011 earthquake, tsunami, Fukushima nuclear plant triple-disaster is the most recent example of Army Forces conducting this type of operation. The Army provided rotary wing airlift, disaster assessment and logistic professionals, and emergency supplies. While the force commitment was relatively small, the gains made in Japanese goodwill were large, positively affecting Japanese perceptions of U.S. military facilitated the approval of changes in U.S. military disposition in Japan.

After analyzing the missions, the Army began studying what capabilities it will need to perform those missions today and in the future. While the Army is still developing critical Air Sea Battle capability concepts to accomplish these missions, some required capabilities have already been outlined in both the *Joint Operational Access Concept* and the *Gaining and Maintaining Access Concept* published in 2012.

According to the *Gaining and Maintain Access Concept*, Army forces will operate in non-contiguous, austere environments with contested air, space, and cyberspace for limited periods of time. To operate effectively under these conditions, the Army will require capabilities to conduct combined-arms forcible-entry operations, defend ports and airfields, receive follow on forces and then conduct offensive operations, all while balancing both maneuver and protection abilities.¹³ An illustration of this type of operation would be deploying Army forces from Alaska, Hawaii, Taiwan, Okinawa or Guam to conduct forced-entry operations and seize outer islands along those two island chains so as to deter aggression or block an enemy force from occupying. They could also deploy from Singapore, Australia or Thailand to secure key terrain (e.g. the Straits of Malacca or islands in the South China Sea or Bay of Bengal). Deployments in these two examples would work to ensure that the areas remain open to navigation and commerce. In each, Army forces would be deployed to a hub and then transported out to defensive positions to deny or repulse enemy occupation.

How the Army's role should and could evolve

To be a complete operational approach, Air Sea Battle must be effective across the entire range of military operations. However, early definitions and examples of Air Sea Battle were incomplete and did not address the lower range of operations. Beginning with military engagement, and, security cooperation, through contingencies and crises, to deterrence, major operations and campaigns, the Army will resource requirements across the entire spectrum.¹⁴ The Army is exploring new capabilities as expressed in the operational access concepts published to date. It is also developing other, classified capabilities not addressed in this paper for Air Sea Battle. A combination of both will be required but what follows are unclassified recommendations based on open source information. The following recommendations with regard to resourcing are grouped into two categories. The first group assists the Army in all its missions across the range of operations, but focuses on partnership in the early stages of conflict at the strategic level. The second group focuses on resources primarily for major operations and campaigns at the operational level.

Resource recommendations for the first group fall primarily into the deterring and shaping phases for planning and on the lower end of the range of military operations. They will continue through major operations and will be important in stabilizing the area and for the return to civilian control phases.¹⁵ They include increased partnering and expanded and forward command capacity.

US Army efforts to shape the environment are focused on expanding and improving command and control capabilities and partner relationships through a multi-component, expanded, and multi-tiered partnership program using units assigned or allocated to Pacific Command. The three primary partnership programs are the Army's

Regionally Aligned Forces, US Army Pacific's (USARPAC) Regional Partnership Program and the US Army National Guard's State Partnership Program (SPP). The Army is no stranger to the Pacific, and it will use that history of engagement, positive reputation and forward presence generated by these three programs to shape the environment positively. Establishing and building new relationships (Burma) and buttressing older ones (Australia) will be decisive in establishing the conditions, treaties, over-flight rights, access and bases for the US forces to successfully conduct operations in any area of the Pacific.

Regionally Aligned Forces is the Chief of Staff of the Army's vision for providing combatant commanders with versatile, responsive, and consistently available Army forces. Regionally Aligned Forces will deploy to support operational missions, bilateral and multilateral military exercises, and theater security cooperation activities.

Under the Army's Regional Aligned Forces plan, US 1st Corps and brigades from across the Army will be aligned to Pacific Command and assigned for operational deployments for training, engagement, and partnership training in the Pacific for a two year period¹⁶. Alignment is ongoing and will be completed by the end of 2016. The program will demonstrate that the Army is regionally engaged, globally responsive, and contributes to our National Security Strategy by improving the global security environment through increased partner capacity.¹⁷ It will enable a successful Air Sea Battle operation in that our partners will be increasingly able to provide forces for a contingency with the US and likely result in a nation providing bases, rights, and permissions necessary to ensure access in the region.

USARPAC's Regional Partnership Program increases partnership activities, associations, training, and operations above historical rates to accomplish the Pacific Command's Theater Campaign Plan objectives with a more holistic approach than has been done in the past. The Regional Partnership Program will expand the current partnership model to new nations and leverage not only subordinate units already located in the Pacific, but key leaders and units from the continental U.S. (these could be the same units aligned under Regional Alignment). The RPP is seeking new opportunities to expand to other nations heretofore not involved with US forces in any bi-lateral relationship (e.g. Burma). It adds levels of engagement (five) and expands the size and scope of operations where appropriate (e.g. Australian bi-lateral exercises from company to brigade level over the next five years) – New Zealand, Thailand and Indonesia are other possible candidates.¹⁸ Training exercises and exchanges focus on activities between common unit functions (logistics, transportation, etc.) and mission command for humanitarian assistance, and a leadership capability for unforeseen contingencies led ably not by the US but by our Pacific Partners¹⁹. Increasing the size, frequency, and number of partnership exchanges and the mission command capacity of our Pacific Army forces will provide the Army additional opportunities to cultivate the relationships necessary to execute operation in the Pacific in the future.

The current State Partnership Program (SPP) is the Army National Guard's 65-nation, partnership capacity-building capability that combatant commanders and U.S. ambassadors leverage through formal partnerships between U.S. states and foreign countries.²⁰ The SPP supports U.S. national interests and security cooperation goals by engaging partner nations via military, socio-political and economic conduits at the local,

state and national level. The SPP currently has six programs with Pacific countries (Mongolia, Indonesia, Philippines, Cambodia, Bangladesh, and Thailand) but is seeking new opportunities to expand to other nations. With all three programs expanding over the near term the U.S. Army will improve relationships with more nations in the Pacific to reassure our allies, gain access to required infrastructure in the event of a conflict, and help to develop capacity of partner nations.

Expanding partnership to achieve strategic ends is conceptually sound; but however, it is a difficult thing to do in practice. The U.S. expansion of Partnership programs into the Pacific will be challenged by a mismatch of goals, and resourcing.

Goal mismatch refers to the tension between desired U.S. outcomes and what a nation may be willing to tolerate in a partner relationship. A way to think about regionally aligning forces is to align each assigned brigade combat team to a nation in the Pacific, design training exercises, Soldier exchange programs and leader engagements and then execute those programs.

A better way to align partnered forces is to use a nuanced approach with the primary consideration being the desires of the host nation. The U.S. will tailor available Army forces to meet the needs and desires of the partner nations. While the U.S. may believe a specific type of unit is best suited to partner with a nation, and may even assign that unit type to support partnership there, the partner nation should still have the final vote. Not every nation will want combat formations training in their country. Some nations may prefer medical, engineer, transportation or sustainment unit exchanges. Regardless, the U.S. Army has the capacity to provide a multitude of unit types as

partnering forces to meet partner nation goals while still accomplishing U.S. strategic objectives.

An additional challenge the U.S. Army will have is resourcing. An expanded partnership program in an era of reduced defense budgets and fiscal restraint will be difficult to resource on two counts. The necessary cultural and language training required to create culturally astute units is expensive. The U.S. Army is still examining how to expand this training requirement in a cost efficient manner. An option is to forego the language training requirement with conventional forces focusing instead on how to use interpreters effectively. A related problem the U.S. Army must solve is how to express this cultural capability to Congress to justify the expense. The U.S. Army's Training and Doctrine Command (TRADOC) is developing a concept called the "Human Domain" that could be used to articulate the justification to Congress persuasively. It will allow the U.S. Army to portray the individual Soldier as a "system" up against weapons systems to better conceptually compete for resources. This concept is still in draft and it remains to be seen if the Human Domain will provide senior U.S. Army leaders a resourcing advantage.

Mission command relates directly to resourcing. Increased mission command will be achieved by the expansion of USARPAC Command to a four-star headquarters. The expansion will enable the region to have a joint land force command capability to coordinate and synchronize land based operations and support to multiple sub-regions.²¹ However, consideration should be made to deploy this headquarters forward from Hawaii to Australia or Japan in order to signal sustained commitment to our allies and provide deployable already forward mission command if the Combined Forces

Command position in Korea is not needed after 2015 when South Korean will assume wartime operational control of all its forces.

In an Air Sea Battle operational environment, other resources beyond those involved in shaping the environment through partnership are required. These resources are needed to maintain our deterrent credibility should partnerships collapse or if those partnerships do not produce an outcome that is not aligned with U.S. interests. Many nations in the Pacific have military partnerships with the U.S. Many of them also have a desire for more interoperable capabilities but stand to suffer economically if they offer materiel assistance to the US in an operation either against China itself or its interests that requires the commitment of military resources. The Army ought to look at the following capabilities for Air Sea Battle in the spirit of what the “Big 5” was to Air Land Battle in the 1970s and 1980s. These five resource recommendations include: expanded ballistic missile defense, mobile tactical unmanned aerial system (UAS)-provided networks, hypersonic troop transport, three dimensional (3-D) printing, and varied fuel capacity.

Expanded Ballistic Missile Defense

The Army should develop and expand Ballistic missile defense (BMD) capabilities to counter the proliferation of missile technology and the numbers of systems fielded by state and non-state actors. China and Russia have both developed new anti-ship missiles. They have both cruise and ballistic missile variants that could hit US forces at ranges of up to 1500 kilometers. The BMD capability should have long loiter time, extended range, and hypersonic speed to counter the mobility of the systems

that China and Russia possess and have positioned deep in their country's interior.²² The Army should increase the size and number of air defense units required to man the suite of systems that is envisioned under our current modernization strategy.²³ Finally, the suite of future air-defense systems needs to include an effective shoulder variant ("stinger-like" equivalent for anti- G-RAMMS)²⁴ capability to protect tactical distributed forces that would operate isolated and forward from a defended position (e.g. a seized airhead or port). The Army's modernization plan will convert the current multiple systems into a suite of systems known as the Army Integrated Air and Missile Defense (AIAMD) plan.²⁵ This BMD capability should be a mix of both advanced conventional kinetic missiles mixed with lasers, EMP, microwave and other directed energy (DE) weapons. They would provide the US Army a generational advantage and enable us to penetrate the largely kinetic missile based defenses of a near peer or regional competitor.

Mobile Tactical Airborne Networks

A networked Army operating in isolated, austere pockets will require a redundant, continuous, and resilient information network. Most of the current tactical network systems are ground generated hubs to satellite communications. Army units in the future need to be able to generate their own internet bubbles possibly through persistent UAS borne routers that connect over the horizon in anticipation of a network attack or that the Space domain is temporarily unavailable to those forces. The Army is currently

testing WIN-T Increment 2. It is the latest version of hardware and software that will connect leaders and Soldiers in a brigade with broadband quality connectivity down to company level.²⁶ A combination of this network capability attached to the Airborne Reconnaissance Low (ARL) aircraft or a drone version with the ARL sensor package could provide tactical units with this in-house wireless network capability.

Hypersonic Troop Transport

The 1980s Air Land Battle concept included a requirement for an improved standard utility (UH-60) and attack (AH-64) helicopter with great effect as witnessed in Operation Desert Storm, Operation Iraqi Freedom and continuing through today as they provide the Army with critical battle field capabilities in Afghanistan. The larger cargo helicopter variant (CH-47) needs a similar upgrade in order to provide Army combat aviation with the capability to move troops and equipment over the massive distances in the Pacific. Sea-basing (using Navy aircraft carriers) Army Soldiers and equipment may not always be an option depending on the threat and sea-basing is also likely not to prove sufficiently robust. The Army ought to be able to move itself from a “rear” hub or even a base in CONUS to a forward position by itself. However, the distances involved are tremendous. The distance from Guam to Okinawa is about 1100 nautical miles (nm). If Guam were the hub, neither the CH47 (400 nm range) nor the V-22 Osprey (890nm range) could get Soldiers or equipment forward without aerial refueling. Additionally, it is likely that there will be fewer places for troops to transfer from strategic to tactical lift given the lack of forward presence. Given the distance and landing location limitations the U.S. Army ought to develop a capability that delivers Soldiers

and equipment over the considerable distances in the Pacific that can also land in remote locations. An improved variant of either the CH-47 or V-22 Osprey with a scramjet type of engine is needed and should be considered by the Army's Future Vertical Lift program. A scramjet engine uses air through which it flies to ignite the fuel (it is not weighed down by having to carry oxygen tanks).²⁷ Such an aircraft would be capable of long distance (beyond 1500 nm), and super or hypersonic flight. It should also be refuelable in flight, less vulnerable to missiles, wide enough to carry a vehicle or vehicles and possess vertical takeoff and landing (VTOL) capability for austere environments.

Three Dimensional (3-D) Printing

3-D printing is a new technological development where printers produce three dimensional objects one layer at a time. The printers could, as a forward capability, free units from their logistical tails and reduce unit logistic requirements. Bio-printing, an offshoot of 3d printing produces organic matter, tissue and potentially organs.²⁸ The U.S. Army ought to explore the possibility of 'printing' food. Designing a printer that fabricates not only parts, but also end items and food would free up manpower, reduce logistic-related mission fatalities, and enable small units to be more autonomous and self-sustaining as they remain forward deployed.

Varied Fuel Capacity

The ability to use different fuels to power our vehicles and equipment would reduce our logistic requirements and make our forces even more adaptable and agile.²⁹

Running the Army's Ground Combat Vehicle on solar, compressed natural gas (CNG) as well as traditional military fuels (JP8) would reduce our logistic mission requirements and their vulnerability to enemy interdiction.³⁰ The ability to establish quickly non-standard (host nation) support mechanisms through varied fuel capability contributes to meeting two of three logistic capabilities outlined in the *Joint Operational Access Concept*.³¹ It also contributes to meeting the capability goal of reducing logistical requirements outlined in *Gaining and Maintaining Access*.³²

Air Sea Battle: A scenario

The Air Sea Battle capabilities recommended above would be employed to enable the US Army to accomplish its current set of missions anywhere in the world and especially in the Pacific. Under Air Sea Battle the Army will maintain its responsibilities as the Landpower service for the United States. Despite the Pacific being viewed as an Air/Sea-centric theater, Army forces will provide an increased amount of forces to the Combatant Commander should he need to meet the theater strategic objectives of shaping the environment.

In a conflict with China, the US would require the full range of Air Sea Battle capabilities to win, including the ones recommended here for the Army. Pre-conflict partnership programs would have standard goals of assisting in the obtaining of over-flight, access and resource rights as in other theaters. The difference in a Western Pacific theater is that there is little depth in these capabilities and a failure to achieve partnership goals will make follow-on phases of military operations more difficult than the ones the US currently conducts in Afghanistan; they might even become untenable.

In the final analysis, Sea-basing of major operations is not tenable over the long run as it commits the US Navy to support Landpower operations long term.

Operations against the Chinese would not likely include placing forces on mainland China in a forced-entry operation. It would more likely be a deliberate positioning of forces on terrain inside Chinese perceived exclusive economic zones (EEZs) or 'core interest' areas. These force placements would be very provocative from the Chinese perspective despite their defensive role in protecting the sovereign claims of U.S. allies or maintenance of access rights for all (e.g. straits of Malacca or Luzon). Hypersonic tactical troop transports with extended range would enable the US to place troops directly into position without intermediate staging bases (ISBs) or exposing naval sea-basing forces to missile attacks. Multi-fuel powered vehicles would provide mobility in austere locations. The BMD capability would protect our tactical forward temporary positions while they maintain connectivity with UAS-borne network connections.

Operations in North Korea could occur in response to our treaty obligations with South Korea (e.g. a North Korean attack on South Korea) or to assist South Korea with the stabilization in the event of a failed DPRK regime. Both scenarios would employ the full suite of Air Sea Battle capabilities. There would be special emphasis placed on ballistic missile defense capabilities due to North Korea's nuclear and ballistic missile capability. BMD focus in a Korean Peninsula scenario would be Guam, Japan and the western CONUS. Air Sea Battle Army capabilities (hypersonic troop transport and UAS-borne connectivity) would allow SOF and CBRNE forces the ability to reach sensitive sites to secure nuclear capabilities. Sites such as the reactor at Yongbyon and the rocket launching facility near Chosin on the Western coast would be prime targets for

the employment of stealthy (low observable) hypersonic troop transports to secure the weapons at those sites. These aircraft would be launched either from CONUS or from beyond the missile range of North Korea and China in the region. The other capabilities would be needed because it is likely our support of South Korea in deterring a North Korean attack would involve China. China would seek to limit South Korean advances up the peninsula in a general war or occupy North Korea in order to prevent consolidation by a South Korean government if the country were to collapse from within.

Challenges to Implementing Air Sea Battle

There are more than a few challenges that may derail the United States' rebalance to the Pacific and the implementation of Air Sea Battle as an operational approach to warfighting. The largest challenges working against Air Sea Battle are the US economy, our allies' actions in the Pacific, and other threats in other theaters.

Domestic economic policy will affect the feasibility of resourcing Air Sea Battle capabilities. The United States is engaged in a great debate about what the nation will resource militarily after withdrawing from Iraq in 2011 and significantly reducing our force strength in Afghanistan through 2014. A larger resourcing debate is occurring concurrently with our defense expenditures about debt, the budget, and entitlement funding. The outcome of this larger resourcing debate will shape the nations' future ability to fund identified Air Sea Battle capabilities. The lack of a budget, continuing to operate under Continuing Resolutions, and the national debt all serve as significant obstacles to the long term fiscal health of the nation, and relatedly to resourcing Air Sea Battle capabilities and maintaining military readiness more generally. Reduction of the

defense budget to a level commensurate with other post-conflict periods in our history (e.g. 1973 or 1991) when the US was not engaged in a conflict is not realistic. It is not possible given our likely post-2014 Afghanistan commitments and that our own assessments about the future lean toward more chaos and conflict and not less.³³

Continued threats to US interests in the Middle East, the proliferation of missile technology, and China's mounting defense spending on advanced capabilities all drive the US to resource our national security at a level higher than what is commensurate with a peace-time military posture. It also likely means that there will be no peace dividend during the coming post-conflict era. A strong U.S. economy is the basis upon which the United States should construct any national security strategy including one formed around Air Sea Battle. It is the first and best deterrent against any aggressor or peer competitor which the US may come into conflict³⁴ and it will enable the United States to fully resource the capabilities needed for Air Sea Battle. The United States must repair its economy and prioritize resources accordingly to be able to afford the commitments and equipment required by an Air Sea Battle Anti-access / anti-denial approach. Secretary of Defense Hagel's current review of the Defense strategy given our current fiscal climate is ongoing and may possibly result in a change to our strategy simply because the U.S. will not have the means to fund it. If the US does not have a sound economy a rebalance to the Pacific will be unaffordable and hence ineffective and dangerous for the United States³⁵.

Our allies in the Pacific are a factor affecting Air Sea Battle development and one that the United States will never have complete control over. Though we can alter the incentives they face by means of smart diplomacy, what they elect to do, independent of

U.S. strategy and interests, is ultimately up to them. Their actions could draw the United States into a conflict with China on unfavorable terms or before Air Sea Battle capabilities are fully fielded. Bilateral treaties with Japan, Taiwan and the Philippines could all be invoked as after all, they each have current and ongoing territorial disputes with China. Japan and China's actions' regarding ownership of the Senkaku / Diaoyu islands is particularly combustible. It is easy (and likely) to say that the United States would not go to war for uninhabited islands. However, it is not clear where the 'red line' is in US foreign policy on living up to the terms of our treaties with other nations and whether the other treaty signatory acknowledges the same red lines or views them the same way. In the case of the Senkaku islands, it is not clear how far the Japanese are willing to press their national claims with regard to these islands. Clearly more than just the possession of small islands is at stake. Not knowing where the Japanese or Chinese policy limits are on this issue will make US involvement in the Asia Pacific problematic at best.

Finally, External developments could also impinge on future U.S. strategy and tactics. Iran or another state or non-state actor in the Middle East could act in a manner that forces the US to delay pursuing the resourcing of a rebalance to the Asia Pacific region or the development of Air Sea Battle capabilities. Iran or Al Qaeda and its proxies could create limited duration bubbles of instability and even anti-access areas across the region. Vulnerable areas in the Middle East that will compete for Air Sea Battle resources cluster around enemy interdiction in the Strait of Hormuz, the Red Sea region, or our naval facilities in Bahrain.

Conclusion

“The post-Iraq and Afghanistan landscape is unlike previous post-war periods, the threats to our security and our global interests are not receding The fact is today we still confront these threats in the world, threats that are more complex, more dispersed, and in many ways, more dangerous.”³⁶ – Secretary of Defense Leon Panetta

The Army’s role in the Pacific is honorable, long and distinguished. An operational approach formed around Air Sea Battle will require a significant commitment by the Army to be credible. Air Sea Battle in particular represents several opportunities for the Army to grow capabilities in different areas across the range of operations in all five operational domains. Increased partnership, forward command and regionally aligned forces will provide a stabilizing presence, shaping the theater while deterring aggression. Increased ballistic missile defense capabilities along with ultrasonic troop transport will allow us to protect US and allied forward positioned forces and provide a deep-penetration capacity to position forces when and where needed and eliminate interior based missile threats. Redundant and mobile networks, 3-d printing and alternate fuels will play a crucial role in major combat operations via streamlined information and logistics but will also be useful capabilities in assisting with disaster relief in building relationships and capable partners in the region. These capabilities will not solve all operational obstacles that a shift to the Pacific raises. They will however, enhance US operational abilities and effectiveness in all theaters enough so that the US Army can accomplish its missions under the current national security strategy even in an era of fiscal retraction and limited defense dollars.

Endnotes

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⁵ James Minnich, "The Year 2012: South Korea's Resumption of Wartime Operational Control", *Military Review Magazine* (May-June, 2011), 4.

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⁷ Jan van Tol, Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, *Air Sea Battle as a Point of Departure Concept*, Center for Strategic and Budgetary Analysis, (Washington, DC, May 18, 2010) 31.

⁸ Wiercinski, Francis J, "Partnering in the Pacific Theater: Assuring Security and Stability through Strong Army Partnerships", United States Army Pacific Theater Engagement Strategy White Paper, (Fort Shafter, HI, 26 April 2012), 1.

⁹ They are China (2.3M), India (1.4M), Russia (1M), DPRK (900K), ROK (560K), US (550K), Myanmar/Burma (406K) with Iran (320K), Pakistan (617K), and Iraq (450K) completing the top 10 largest militaries

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¹¹ Secretary of the Army John M. McHugh and General Raymond Odierno, *2013 Army Strategic Planning Guidance*, (Washington, D.C: U.S. Department of the Army, April 19, 2012), 16. They include: 1) Counterterrorism and Irregular warfare, 2) Deter and defeat aggression; 3) Counter Weapons of Mass Destruction, 4) Defend the Homeland and Provide Support to Civil Authorities, 5) Project power despite Anti Access / Area Denial Challenges; 6) Operate effectively in Cyberspace, 7) Operate Effectively in Space, 8) Maintain a safe, secure and effective Nuclear Deterrent, 9) Provide a Stabilizing presence, 10) Conduct stability and counterinsurgency operations, 11) Conduct Humanitarian Assistance, Disaster Relief and other operations.

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¹³ U.S. Army Capabilities Integration Center, *Gaining and Maintaining Access: An Army-Marine Corps Concept* (Fort Eustis, VA: U.S. Army Capabilities Integration Center, March, 2012), 12-15.

¹⁴ U.S. Joint Chiefs of Staff, “Joint Publication 3-0: Joint Operations” (Suffolk, VA Joint Forces Command, 11 August, 2011), 5.

¹⁵ U.S. Joint Chiefs of Staff, “Joint Publication 5-0: Joint Operational Planning” (Suffolk, VA Joint Forces Command, 11 August, 2011), 117

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¹⁷ Ibid, page 1.

¹⁸ Ibid, page 2.

¹⁹ James O. Robinson, “*Partnering in the Pacific Theater: Assuring Security and Stability through Strong Army Partnerships*”, United States Army Pacific Theater Engagement Strategy White Paper, (Fort Shafter, HI, 26 April 2012), 8.

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²⁷ Kevin Bonsor, “How Hypersonic Planes Work” <http://science.howstuffworks.com/transport/flight/modern/hypersonic-plane1.htm> (accessed January 14, 2013).

²⁸ The Washington Post, “How Bio printing Works”, 9 May, 2011 from the *Washington Post*, <http://www.washingtonpost.com/wp-srv/special/science/how-bioprinting-works/> (accessed December 18, 2012).

²⁹ A parallel idea for increased, low level, capacity to produce or purify water at the Soldier level would further reduce the logistical requirements. In an opposed area, it would make our Soldiers and Marines more agile, save lives and resources to perform other missions that would otherwise have been dedicated to bulk fuel and water delivery.

³⁰ U.S. Department of the Army, 2013 Army Modernization Strategy (Washington, DC: U.S. Department of the Army, G8, May 16, 2013), 42.

³¹ U.S. Joint Chiefs of Staff, “Joint Operational Access Concept” (Suffolk, VA Joint Forces Command, 17 January, 2012), 37.

³² U.S. Army Capabilities Integration Center, *Gaining and Maintaining Access: An Army-Marine Corps Concept* (Fort Eustis, VA: U.S. Army Capabilities Integration Center, March, 2012), 16.

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