

Strategy Research Project

Land Force Roles in the Western Pacific: Anti-Access/Area Denial

by

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Abstract

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The evolving Anti-Access/Area Denial (A2/AD) environment facing U.S. military power is a rational evolution of the characteristics of war. A2/AD strategies are designed to deny the U.S. and its allies permissive access and operating environments to project military power. China is developing A2/AD capabilities intended to deny opponents the ability to interfere with its own regional power projection. Future conflict with China would likely be limited war characterized by mutual denial of the global commons in maritime, space and cyber and domains and the mutual ability to strike and inflict hurt. Land forces with counter-A2/AD capabilities can exert power across all conflict domains asymmetric to China's evolving platform-focused A2/AD threats to strategic effect and can serve as a powerful component of the military support to U.S. strategy in this region.

Land Force Roles in the Western Pacific: Anti-Access/Area Denial

The traffic between ideas and behaviour in strategic affairs is continuous, hence my preference for the idea that context is more about ‘that which weaves together’ than ‘that which surrounds.’

—Colin S. Gray¹

The emerging Anti-Access/Area Denial (A2/AD) environment increasingly challenges the power projection capabilities of the United States and its allies who have become accustomed to relatively permissive strategic and operational access to areas of potential or actual conflict. China is fielding A2/AD capabilities in the Western Pacific which target U.S. power projection platforms and fixed forward facilities as a rational response to the U.S. military successes of the last three decades, exploiting largely uncontested power projection. Recognition of the consequences of this emerging A2/AD environment on the instruments of U.S. military power and adjustment of future U.S. military strategies and supporting force capabilities is thus the next logical step in Professor Colin Gray’s continuous “traffic between ideas and behaviour.” What “weaves between” are the capabilities and characteristics of land forces which can exert significant power in *all* conflict domains; land, sea, air, cyber and space. In the strategically important Western Pacific, land forces offer capabilities understated in the current Air-Sea Battle concept which are asymmetric to the emerging Chinese A2/AD threats and which can empower the U.S. regional military capabilities to strategic effect.

The Western Pacific Strategic Anti-Access/Area Denial Challenge

A2/AD combines two military concepts. The U.S. Department of Defense defines Anti-Access as threats to strategic and operational power projection *into* a theater and Area Denial as the threats against friendly movement and maneuver *within* a theater.² Today, deploying U.S. forces generally expect to face tactical level Area-Denial threats

such as Improvised Explosive Devices and the range of Area Denial capabilities expected to challenge U.S. forces in the future is expected to significantly grow.³ Not since the WWII German U-boat and Japanese naval campaigns against Allied forces across the world's oceans has the United States and its allies operated against a significant Anti-Access capability to impede strategic and operational power projection and to threaten the sanctuaries from which U.S. and allied forces have operated.⁴

The emerging Western Pacific A2/AD security environment directly threatens U.S. use of the regional commons in commerce and military power projection on a scale not seen since that WWII Axis threat. The specific Chinese A2/AD capabilities being developed are explicitly designed to counter the platform-dependent U.S. sea and air power projection capabilities employed in the Western Pacific maritime environment. Seeking to neutralize these emerging threats specific to essential U.S. military capabilities, the U.S. has responded with a Joint Operational Access Concept (JOAC)⁵ which, in its application to the Western Pacific maritime environment, has been further refined conceptually as Air-Sea Battle (ASB).⁶ Without new joint force capabilities asymmetric to the developing Chinese A2/AD threats, ASB currently sets conditions for future potential regional conflict characterized by mutual denial of the maritime, air, space and the cyber commons and protracted reciprocal platform and facilities attrition in a loss economy unfavorable to the United States and its allies. Land forces offer the means to empower ASB asymmetrically to Chinese A2/AD strategy in order to alter this unfavorable attrition scenario, send clear strategic signals and reduce strategic risk to U.S. regional deterrence.

China-U.S. Strategic Interests

The United States' hard and soft power depends on access to the global commons in the maritime, air, space and cyber domains, both as an end and as a way to secure other vital interests. These interests include continued economic prosperity based on global trade, and the U.S. power projection capabilities required to protect national interests around the world. In the Western Pacific, freedom of navigation on the global commons supports approximately \$1.2 trillion of annual U.S. trade and a total of \$5.3 trillion in annual global maritime economic activity.⁷ Consistent with the core U.S. national interests of seeking security of U.S. citizens, allies and partners and achieving prosperity,⁸ the U.S. therefore considers Western Pacific regional stability and access to the commons as “enduring” regional interests.⁹

The intensity of U.S. interests in the Western Pacific has been underscored for decades by our regional commitment of military power and continuous forward military presence. Many of our Western Pacific partners rely on the U.S. as a guarantor of regional safety and stability, a guarantee underwritten for years in Korea by landpower¹⁰ but elsewhere across the Asia Pacific region primarily by sea and air power.¹¹ The U.S.-led Western Pacific security environment has enabled strong growth of regional economies in the relative absence of conflict which can be characterized as evidence of a successful long-term alignment of the U.S. and regional interests. For decades this environment remained largely unchallenged, but the dynamic economic growth of China is altering strategic power relationships and leading to an emerging clash of U.S. and Chinese regional interests.¹²

Evidence suggests Chinese strategic interests in the Western Pacific are evolving and diverging from those which have characterized the U.S.-led regional

security environment. China's meteoric economic rise of the last two decades has fueled Chinese aspirations to assume a larger role in regional and world affairs as well as growing requirements for strategic resources. China's changing interests and strategies are reflected in China's growing assertiveness in pursuit of territorial sovereignty claims in the Western Pacific and South China Sea.¹³ Admiral Samuel Locklear, Commander, U.S. Pacific Command observed in a statement before the House Armed Services Committee hearing on U.S. Pacific Command posture on 5 March 2013:

China's strong rhetoric about the indisputable nature of its claims, combined with active patrolling by civil and military ships and aircraft in the air and waters surrounding Scarborough Reef and the Senkakus Islands, has raised tensions with the Republic of the Philippines and Japan respectively.¹⁴

Finally, despite overall evidence of easing in diplomatic relations between Taiwan and China in recent years, China continues to build and deploy considerable military capabilities specifically designed and located to enable military actions against Taiwan and to present a deterrent to U.S. or any other forces that may attempt to intervene in a potential China-Taiwan conflict.¹⁵

A potential future consequence of increased Chinese assertiveness is regional conflict as the U.S. and China pursue their diverging regional goals employing all strategic resources, including military power.¹⁶ Such a conflict would be difficult to limit given the political stakes. The highest Chinese government interest is the survival of the ruling Communist party and, as recently communicated in key Party documents, the Chinese government sees its most pressing existential threats not from foreign armed forces but from potentially internally destabilizing influences such as constitutional democratic concepts and values.¹⁷ This concern for internal stability and vulnerability to

western liberal democratic values increases the risk associated with any conflict underwritten by the credibility of the Chinese Communist Party leadership.

A2/AD as a Strategic Logic

While analysts stress that conflict between the U.S. and China is neither certain nor currently even likely,¹⁸ they also emphasize the importance of sustaining credible regional deterrence while clearly signaling U.S. strategic intent.¹⁹ However China's A2/AD strategy specifically targets the U.S. regional power projection and strike capabilities underpinning regional deterrence.²⁰ The Chinese A2/AD effort has not been designed to support quite the same strategic ends as most of the A2/AD capabilities that U.S. forces have previously faced in other regions, such as the Integrated Air Defenses of adversaries like Iraq and Serbia. The objective of Chinese A2/AD is not only to deter or defeat an adversary's power projection and strikes against Chinese territories, but to *set conditions for successful Chinese power projection* should it decide to forcibly settle territorial disputes or seize strategic resources. More explicitly, Chinese A2/AD is designed to defeat U.S. attempts to deny China use of the sea.²¹ This Chinese A2/AD strategy fully supports growing Chinese regional assertiveness in pursuing territorial and strategic resource interests.

China's A2/AD strategy is increasing U.S. strategic risk due to the successful erosion of actual or perceived credibility of U.S. regional deterrence. As defense policy analyst Andrew F. Krepinevich, Jr. writes in *Foreign Affairs*, a tipping balance of military power in Asia "would increase the danger that China might be encouraged to resolve outstanding regional security issues through coercion, if not aggression."²² But the concept of *risk* contains two distinct components, the "probability and severity of loss linked to hazards."²³ Even as the probability of Western Pacific conflict grows due to the

shifting relative U.S. and China regional military capabilities, the potential consequences of a China-U.S. clash in the Western Pacific are also growing. Rising Chinese nationalism exploited by China's leadership to deflect domestic criticism may frame an unfavorable outcome to a Chinese military confrontation as an existential threat to the Communist Party thereby reducing the possibilities for conflict limitation and diplomatic settlement.²⁴

A2/AD Targets: Strike and Power Projection Platforms

The emerging Chinese A2/AD threat is represented by technologically-advanced integrated anti-aircraft systems, precision anti-ship missile, cruise missile systems and rockets arrayed against U.S. and allied air platforms, ships and regional U.S. and allied fixed facilities. China does not in the foreseeable future seek to array blue water naval forces directly against U.S. maritime strength. Nor does China yet have the capability to directly and broadly contest control of the skies of the Western Pacific with air forces although it is increasingly capable of doing so closer to its shores.²⁵ Rather, China's A2/AD threat leverages the strength of its industrial base and growing technological skill to create asymmetric advantages over U.S. regional forces.

The Chinese A2/AD threat exploits two dimensions of asymmetry. The first is an asymmetry presented by inexpensive unmanned precision-guided munitions employed against fixed forward bases and manned platforms, many of which are crewed by or transporting large numbers of personnel. Although the relative cost of combat systems in an attrition environment is not a negligible consideration, the imbalanced *human* stake at risk represented by extensively trained pilots, sailors and transported combat personnel is a far more significant consideration.²⁶ The second dimension of asymmetry is the relative differential in time required for combatants to replenish combat

capabilities, with China enjoying obvious significant advantages due to geography for regeneration of regional combat capabilities across *all* of the conflict domains.²⁷ Even if one assumes low probabilities of Chinese single round hit and kill, there exists a theoretically sufficient number of Chinese precision munitions and launch capabilities exploiting these two dimensions of asymmetry which may present an extremely unfavorable loss-exchange economy for U.S. forces in a regional conflict in which the U.S. relies primarily on manned air and sea platforms.

The Chinese A2/AD threat exploits additional U.S. regional challenges due to geography and force array. In the air domain, the U.S. Air Force (USAF) is increasingly challenged to sustain “intense” operations from bases located 1500-2000 nautical miles (nm) or further from Western Pacific target locations but also faces increased threats from missile attack at fixed bases located closer to regional targets.²⁸ This challenges USAF air cover to Navy and Marine forces operating close to a Chinese mainland-based A2/AD threat. Navy ships and Marine forces afloat must maneuver relatively close to regional targets to conduct strikes and project forces making them vulnerable to Chinese missiles, submarines and air forces operating at much shorter ranges than their USAF air cover. This leads Andrew Krepinevich to describe U.S. systems as “the Pentagon’s wasting assets,” costly, technologically-advanced U.S. platforms, ships and aircraft losing their relative combat advantage to far less expensive, increasingly sophisticated and numerous precision threat munitions.²⁹

China’s A2/AD threat also exploits a key component of U.S. diplomatic strategy: military presence. During peacetime navy and marine forces operate forward to maintain a regional presence in the commons. In the event of conflict they plan to

transition from these forward locations to strike and force projection missions. This forward deployment of U.S. forces presents an opportunity for China to initiate a surprise first strike against ships and fixed regional bases. The goal of such a strike would be to inflict sufficient *hurt*⁶⁰ against regional U.S. and allied military capabilities to compel a favorable resolution of a limited conflict in China's favor before the U.S. regroupes within and reinforces from outside of the region.³¹

A2/AD Risk across the Span of Commons

China is also rapidly developing and acquiring the capabilities to deny U.S. and allied forces use of cyber and space domains. These include sophisticated capabilities to attack satellites and wide-area networks in order to degrade U.S. and allied command, control, and reconnaissance systems. China has demonstrated the ability to attack satellites in orbit and emphasizes the importance of information and intelligence-gathering systems to U.S. military doctrine and strategy. As Naval Academy Security Studies Professor and adjunct RAND Corporation fellow David Gompert concludes in a 2013 study "the PLA's interest in both cyberwarfare and anti-satellite warfare is driven by the belief that its best and perhaps only chance of prevailing against U.S. forces is to attack U.S. space-based and other command, control, and communications networks, which are relatively vulnerable."³² Chinese cyber and space A2/AD threats to U.S. information networks and intelligence gathering and dissemination systems represent *domain asymmetry* since U.S. forces afloat and in the air rely on rapid and reliable collection and distributed wireless transmission, over long distance, of intelligence, targeting data and other command and control information.³³ Taken in the aggregate, China's A2/AD threat spans the regional commons through sea, air, cyber and space domains.

The Conceptual Response to A2/AD

Colin Gray's "traffic between ideas and behavior" is a continuum of action and reaction. Clausewitz notes that war "is not the action of a living force upon a lifeless mass...but always the collision of two living forces."³⁴ The same is true of planning for war and credible deterrence to the same. U.S. military strategists are actively grappling with the A2/AD threat and are developing concepts applicable to U.S. and allied forces world-wide as well as an apparent application of these concepts to the Western Pacific. The U.S. strategic response to China's "Anti-Access/Area Denial (A2/AD)" threat will send important signals that can alter the risk of future regional conflict. As Army War College Security Studies Institute Professor John R. Deni writes in *Parameters*, "the greatest challenge facing the United States today with regard to rebalancing in the Pacific is to avoid provoking an escalation."³⁵ Some analysts recommend that the U.S. should signal a "strategically defensive employment posture" for our regional capabilities. These authors argue that by arraying increasingly more effective deep strike capabilities enabling "significant strategic disruption" to the Chinese mainland, the U.S. may actually transmit destabilizing strategic signals enabling, rather than preventing, conflict escalation, thereby undermining U.S. strategic goals.³⁶ The U.S. response to the Chinese A2/AD strategy must provide for credible deterrence *and* clear strategic signaling.

JOAC and ASB

The U.S. conceptual response to the emerging global A2/AD threat is called the Joint Operational Access Concept (JOAC) which applies to all U.S. and allied forces facing growing A2/AD threats globally, not only in the Western Pacific. The two ideas central to Joint Operational Access describe temporal priorities. The first is to set

favorable pre-hostility conditions for force projection. The second is to prosecute joint combat operations across all domains, ground, air, maritime, space and cyber in such a way as to achieve a “cross domain synergy” that opens windows of relative advantage in one or more of these domains long enough for joint forces to project decisive power. Importantly, the JOAC jettisons assumptions of a permissive force projection environment and assumes a hostile A2/AD environment for strategic and operational force deployment and projection. It also assumes that U.S. forces will face relative disadvantages compared to potential adversaries in forward basing. The JOAC stresses joint force interoperability and mutual support across all of the domains of conflict, in all phases of operations before, during and post-conflict.³⁷

The JOAC is extended by a nested, supporting concept called Air Sea Battle (ASB) which, despite containing explicit text to the contrary,³⁸ is widely asserted by defense analysts to be the JOAC concept applied to the A2/AD challenge in the Western Pacific.³⁹ In this regional translation the central idea for achieving cross-domain synergy is expressed in terms generally associated with the offensive platform-based maritime and air strike capabilities. According to the concept paper developed by the Air Sea Battle Office, “the ASB Concept’s solution to the A2/AD challenge in the global commons is to develop networked, integrated forces capable of attack-in-depth to disrupt, destroy and defeat adversary forces.”⁴⁰

ASB vs A2/AD – Mutual Denial of the Commons

The foundational language of the JOAC does not necessitate the primacy of platform-based strike capabilities. The JOAC seeks the full, seamless integration of joint force capabilities, command, control, communications, intelligence and targeting systems across the full spectrum of military operations and conflict domains. The goal is

that any sensor in any component of the joint force be capable of informing and enabling a decision and action by any other element of the joint force, be it a sea, air, space platform, cyber capability, or land-forces. The JOAC seeks to eliminate doctrinal, mission command and materiel systems barriers to efficient interoperability such as incompatible Navy and Air Force ground control systems, for example.⁴¹ The JOAC argues that increased joint force synergies and use of mission command will better set conditions for subordinate commanders working within the Joint Force Commander's intent to establish windows of opportunities across the five domains of conflict.⁴² These windows of opportunity will permit commanders to "exercise disciplined initiative" to gain and exploit relative advantage in order to achieve joint force success.⁴³ JOAC also explicitly includes allied and coalition forces within its cross-domain synergy concept.⁴⁴

While the JOAC is a necessary and logically complete imperative to U.S. and supporting allied forces worldwide, ASB currently falls short for two key reasons. First, ASB, as the JOAC applied to the Western Pacific theater, fails to define a conceptual "position of advantage" given the growing asymmetry between the U.S. platform-based strike capabilities and emerging Chinese A2/AD capabilities upon which the two nations' military strategies are founded. Second, in a region in which U.S. strategic goals are to maintain stability, deter aggression and send clear strategic signals, the strike-centric ASB language may send ambiguous signals and provide reinforcement to those Chinese strategists who view offensive U.S. strike capabilities as a destabilizing military threat against strategic Chinese interests including on the Chinese mainland.

Although currently judged to be "preventable and highly unlikely,"⁴⁵ conflict with China in the Western Pacific in the emerging A2/AD environment employing the ASB

concepts with current forces would likely lead to limited war of *hurt* and attrition.

Regional geography prevents decisive employment of landpower in order to prosecute a non-nuclear total war between the two nations. A regional conflict would therefore likely unfold in an exchange of strikes in which both sides seek to hurt sufficiently to coerce conflict settlement on favorable terms. Until a diplomatic solution becomes possible, the power to inflict reciprocal *hurt* could extend across all domains of conflict.⁴⁶ Both the China and U.S. would likely have the ability to *deny*, yet not achieve *persistent control* of the regional air, sea, cyber and space commons, resulting in a mutual denial of the commons. As currently resourced, ASB may also lead to an increasingly unfavorable U.S. loss exchange economy, possibly to strategic effect.

The ASB concept does, however, also speak to the need to shape the future joint force. While the current dependency on maritime and air platform-based strike power to implement U.S. regional deterrent strategy may lead to growing strategic risk, ASB seeks “to inform force development” in order to shape the combatant commanders’ forces with the required capabilities to support regional strategies.⁴⁷ Key future capabilities which can potentially enable ASB may be found in the roles of U.S. land forces in the Western Pacific.

Land Force Roles Asymmetric to A2/AD in the Western Pacific

Land forces already support U.S. strategy in the Asia Pacific but in expanded roles they may offer ASB the key advantages required to mitigate or overcome the emerging Chinese A2/AD threat. Land forces in expanded roles may arm ASB with key capabilities asymmetric to the emerging Chinese A2/AD threats. These asymmetric advantages may accrue to strategic effect across air, sea, cyber and space conflict

domains by reinforcing credible deterrence. Rebalancing ASB with land forces would also reduce strategic risk by clarifying U.S. strategic intent.

Landpower and Current Land Force Roles

Land forces play an important landpower role in U.S. strategy in the Western Pacific, especially in Korea where U.S. land forces partnered with South Korea represent the principle means of deterring North Korean aggression. Landpower is unique. Only land forces have the power to *take, protect* and *hurt* key terrain, facilities and people, and to seamlessly move between or persist in one or more of these effects.⁴⁸ U.S. land forces in a Western Pacific landpower role provide these powerful and unique capabilities in the land domain. Outside of the Korean peninsula, however, land forces in a landpower role are likely to be employed to enable or deny power in other conflict domains through seizure and control of key terrain. In this wider Western Pacific A2/AD environment, the likely purpose of the land forces *landpower* role will be to enable sea and air power.

Some authors suggest that the U.S. landpower *is* the decisive capability against the Western Pacific A2/AD threat.⁴⁹ This assertion has two significant weaknesses. First, the strategic and operational landpower projection capabilities required to move and maneuver landpower to and within the theater are exactly those against which emerging Chinese A2/AD threats are optimized. Second, with the exception of the Korean peninsula, there is no regional landpower conflict venue where the U.S. could face significant Chinese land forces *except* as the result of major successful Chinese power projection representing a failure of U.S. regional military strategy. The Mackinder “Heartland” nature of the vast and populous Chinese mainland presents significant challenges to rationalizing any strategic logic of *ends-ways-means* that includes major

landpower operations in mainland China as a way to achieve lasting regional *ends*.⁵⁰ Finally, even if the U.S. exerted landpower in a conflict with China in Taiwan or other regional island nation, critical lines of communication and support still lie exposed to the A2/AD threat projected primarily from the Chinese mainland. Sea and air power, not land forces in a *landpower* role, will likely be decisive in resolving a conflict in the Western Pacific A2/AD environment.⁵¹

Although regional landpower is likely not to be decisive outside of Korea, *land forces* still provide significant capabilities to Western Pacific military strategy across the conflict domains, including the sea. Some of these crucial land force roles include advancement of regional security cooperation to build the defense capabilities of partner nations, command and control capabilities, land-based ballistic missile defense to regional forces, “shore-to-ship” force projection, and protection of joint capabilities. As part of building partner capabilities, U.S. ground forces have a particularly significant role in shaping the theater working with regional country defense forces as many of these nations have capabilities heavily weighted to land forces due to specific domestic national security needs.⁵² These land force capabilities and roles are important, but land forces can do more to empower U.S. regional deterrence.

Asymmetric Land Force Roles in Air and Sea Domains

One of the most important current land force missions in the Western Pacific is air and missile defense, a role which could be further strengthened. The Army currently provides important Patriot and THAAD air defense support in the theater and John Deni asserts that in the future the Army rather than the Navy should operate the capable land-based Aegis Ashore systems noting that land-based air defense is a land forces function.⁵³ Looking only a bit deeper into the near future, emerging capabilities in

ground-based directed energy (DE) systems could significantly improve close-range air and missile defenses. Size, weight and power improvements promise to make DE systems mobile and could liberate air defenses from many current ammunition and targeting constraints.⁵⁴ Protection of fixed facilities and the air defense missile capabilities that defend them are also land force roles which reinforces the case for unifying land force proponentcy for ground-based regional air and missile defense capabilities. In this role, land forces exert land-based power into the air and maritime domains to protect naval, air and other fixed bases and assets and in so doing significantly enable regional sea and air power.

In a significant revival of a historic role, land forces armed with mobile anti-ship weapons systems could *directly* exert power over the maritime domain in ways that would significantly reinforce regional U.S. deterrence, outflank Chinese A2/AD investments, and clarify U.S. strategic intent to Chinese observers. This significant “new” land force role has recently been posited by several authors such as Jim Thomas writing in *Foreign Affairs*⁵⁵ and Terrence K. Kelly et. al. in a 2013 Rand Study.⁵⁶ John Deni writes that such a land-based sea power capability would “turn the Anti-Access / Area Denial (A2AD) challenge posed by China on its head, with U.S. shore-to-ship coastal artillery batteries holding at risk the growing Chinese navy and frustrating its ability to project power.”⁵⁷ Indeed, such a land force maritime role existed in pre-aviation military history. With advanced technology enabling mobile land-based missile launchers to exert lethal sea power over long ranges, this capability now presents a viable augmentation to or even, in some regions, a replacement for platform-based sea power. While mobile Anti-Ship Missile (ASM) systems are currently limited to ranges on

the order of 100 miles, it is a reasonable assumption that the range and precision targeting capabilities of these mobile missile systems will continue to improve.⁵⁸ It is true that land forces with mobile anti-ship missile launchers cannot *occupy* the sea, however they can still exert significant *control* upon it by hurting enemy sea-based platforms. David Gompert notes that “sea power, after all, is not power *upon* the sea but power *of* the sea—a distinction Mahan did not make in his world of battleships and gunnery.”⁵⁹

Land forces wielding sea and air power from the land do not share most of the A2/AD vulnerabilities of the naval and air platforms on which current U.S. strategy primarily rests. It follows that the extent to which ASB rebalances sea and air power capabilities to land forces in the Western Pacific correlates to asymmetric advantage gained against Chinese anti-platform A2/AD capabilities and reduces risk to credible regional deterrence of aggression. This is not to say that land forces in this theater do not potentially face significant risk. To the extent that land forces are provided enhanced capabilities and roles to exert air and sea power to growing strategic effect they can expect to be targeted by Chinese missile and rocket systems. The growing Chinese missile threat against fixed regional capabilities has been noted by senior U.S. military leaders and is well documented.⁶⁰

Joint force protection against such a missile threat is achieved through a combination of methods including persistent effective air defenses, hardened facilities for personnel and equipment, dispersion and mobility. Land force mobility and dispersion capabilities present the Chinese with significant targeting and damage assessment challenges. This is especially true for dispersed land forces exploiting cluttered terrain with pre-prepared positions and supply locations.⁶¹ Enduring land force

characteristics of survivability through dispersion and mobility offer distinct advantages against long-range weaponry compared to naval vessels and aircraft whether these platforms are maneuvering in the air and at sea or refitting in harbors and on airfields. This superior land forces survivability would alter the increasingly unfavorable loss exchange economy that U.S. platform-centric forces currently face in a protracted regional conflict of mutual denial of commons and *hurt*.

There exists substantial precedent for these land force roles in a maritime environment. East Asian countries including China and regional ally Japan already possess mobile land-based anti-ship missile capabilities. As a key partner nation capability, the Japanese land-based “sea power” supports regional deterrence against Chinese aggression based from the Japanese home islands which ultimately supports U.S. regional strategy. Evidence suggests that China is keenly aware of the development of this key Japanese counter-A2/AD capability.⁶²

These proposed roles for land forces will require future force development as envisioned by ASB. If regional U.S. military strategy embraces mobile, land-based sea power capabilities, the U.S. may generate new weapons systems and employing land force formations. As a new role for U.S. Army and/or Marine forces, this mission will also require generation of new enabling concepts and capabilities across the Doctrine, Organizational, Training, Material, Leadership, Personnel, and Facilities (DOTMLPF) spectrum. In the near term, our Japanese allies could reciprocate the “build the partner capacity” concept by assisting U.S. forces to acquire this sea power capability. Integration of new anti-ship land force capabilities would also require either forward force deployment or setting conditions for rapid deployment into prepared battle areas

with such important considerations as prepositioned ammunition, prepared routes and dispersal areas and pre-selected firing positions.⁶³ The value of such preparations underscores the vital role of land forces in pre-conflict theater shaping efforts such as security cooperation linked with diplomacy between the U.S. and regional allies and partners. It is likely that China would pressure U.S. allies and partners to limit new basing and access for these land force roles increasing the importance of regional engagement and relationship building.

Land Force Roles in Cyber and Space Domains

In addition to roles in projecting force in the air and sea domains, land forces offer key cyber and space capabilities in support of joint forces in the Western Pacific. The most important future roles would be to mitigate anticipated loss of the cyber communications and space capabilities. First, land forces have the opportunity to establish physically-protected, hard-wired communications networks which can afford a higher degree of protection from physical and cyber-attack than wireless networks. Second, land forces which already play a key role working with the joint force and defense agencies to facilitate regional satellite-based communications⁶⁴ could also employ near-terrestrial systems such as UAS or other systems to reestablish critical command and control capabilities. Finally, highly survivable land forces with pre-positioned assets can be equipped to episodically re-establish or even continuously reconstitute critical cyber and space capabilities and prevent naval or air platforms from surrendering munitions capacity for similar capabilities.

These recommendations for a more prominent land force role in cyber and space domains are not shared by all analysts, but the current distribution of joint force tasks in the maritime domain argues for their consideration. In their comprehensive study of a

notional PLA attack in the Western Pacific across all domains of conflict resulting in loss of space and cyber capabilities, Jan van Tol, et. al., in the Center for Strategic and Budgetary Assessment study *AirSea Battle: A Point of Departure Concept*, assign the tasks of reestablishing area communications networks and “complementary or backup functionality in the event of a loss or severe GPS system degradation” to the Air Force and Navy.⁶⁵ To the extent that they require use of platforms and command and control capabilities in competition with strike and other combat missions, these represent missions that can be considered for transferring to land forces. Moreover, these are the same platforms primarily targeted by China’s A2/AD capabilities. More survivable land forces can potentially assume a greater role of setting, maintaining and, if necessary, replenishing the theater’s cyber and communications networks as a critical ASB-enabling support task and also as a logical extension of the historical land force function to set and maintain theater support functions.

Residual Strategic Risk

As land forces assume a greater role in underpinning U.S. military components of Western Pacific strategy, China’s A2/AD investments will provide reduced strategic returns. As the U.S. military strategy to deter aggression allocates more functions to mobile, distributed land forces, the loss exchange economy in a limited war of attrition and *hurt* shifts in the U.S. favor. This increases the credibility of U.S. deterrent strategy which reduces risk.

Increasing land force roles in Western Pacific military strategy also sends stabilizing strategic signals. Shifting the *means* supporting regional strategy from near total emphasis on platforms with offensive strike capabilities to a mix of forces including clearly defensive formations such as land forces in anti-air and anti-ship fires roles will

clarify U.S. strategic intent for those Chinese observers predisposed to see a strategic U.S. offensive strike threat to mainland China. This strategic signaling enhances the deterrence credibility with allies and potential adversaries which reduces overall regional strategic risk.

Because ASB is a *networked system* of co-dependent forces and capabilities, the additional capabilities that land forces can provide across the domains of conflict will yield a non-linear increase in the ability to create windows of opportunity in one or more of the conflict domains. Fully exploiting the capabilities and unique survivability of land forces will better “weave together” the joint force and make its aggregate capabilities far greater than the sum of its parts while shifting critical capabilities to forces asymmetric to Chinese A2/AD strategy.

Finally, forward stationing or rotation of land forces executing these new functions would even further reduce strategic risk. Forward deployment of land forces is one of the most powerful possible statements of national intent and also enables a cascading chain of interaction between U.S. forces and host nation forces that has historically proven highly effective in setting conditions for successful deterrence. As retired brigadier general and innovative thinker Huba Wass de Czege noted in 1999:

The presence of ground forces demonstrated resolve, galvanized allied action, and sent a strong signal to aggressors. Special Operations Forces and conventional landpower formations must continue to provide forward presence in areas of strategic interests. Their liaison efforts facilitate the development of a desired endstate, provide accurate assessments of the conditions of allied forces, and strengthen allied/coalition efforts by coordinating the arrival of U.S. combat power throughout the various stages of the campaign.⁶⁶

Huba Wass de Czege asserts that land forces in a forward presence set essential conditions prior to conflict which aggregate to reduced strategic risk.

Conclusion

New and enhanced land force roles to project power across the domains of conflict offer a counter-A2/AD solutions asymmetric to China's emerging A2/AD capabilities. Like the Japanese defense forces, U.S. land forces can project land-based sea power through mobile anti-ship missiles. U.S. forces can consolidate and enhance projection of air power through land based air defense systems including Patriot, THAAD, land-based Aegis systems and future directed energy systems. Mobile, dispersed land forces also reduce the vulnerability of key ASB capabilities to China's strike systems and greatly increase the complexity and scope of China's targeting challenges in a potential conflict. Finally, land forces are also well-suited to assume a greater role in establishing and maintaining essential freedom of maneuver in and use of cyber and space domains consistent with other tasks to set and support theaters of operations.

Sun Tzu writes "thus a victorious army wins its victories before seeking battle; an army destined to defeat fights in hope of winning."⁶⁷ Land forces currently perform critical theater roles and can provide key additional capabilities significantly supplementing Navy and Air Force platform-based strike forces which would reduce overall strategic risk. Upgrading ASB with land forces less vulnerable to China's A2/AD threat would strengthen the credibility of U.S. deterrence to Chinese regional aggression. Land forces in the Western Pacific theater can provide the joint forces commander additional strategic options to realize the cross-domain joint synergies underpinning JOAC and thereby better support U.S. regional interests to maintain stability and preserve access to the global commons in the sea, air, space and cyber domains. The endless cycle of Colin Gray's "traffic between ideas and behaviour" favors

the nation which can most effectively visualize the evolving characteristics of war. Sun Tzu's "bloodless victories," however, are contingent on the will to implement the force changes required to seize and exploit the resulting conceptual advantages.

Endnotes

¹ Colin S. Gray, *Modern Strategy* (New York: Oxford University Press, 1999), 134.

² Air-Sea Battle Office, *Air-Sea Battle: Service Collaboration to Address Anti-Access & Area Denial Challenges* (Washington, DC: U.S. Department of Defense, 2013), 2.

³ John Gordon and John Matsumura, *The Army's Role in Overcoming Anti-Access and Area Denial Challenges* (Washington, DC: Rand Corporation, 2013), 5-20. Summary of current and future global A2/AD threats.

⁴ Jan van Tol et al., *AirSea Battle: A Point-of-Departure Operational Concept* (Washington, DC: Center for Strategic and Budgetary Assessments, 2010), 24-26.

⁵ U.S. Department of Defense, *Joint Operational Access Concept (JOAC)*, Version 1.0 (Washington, DC: U.S. Department of Defense, January 17, 2012), 14-17.

⁶ Air-Sea Battle Office, *Air-Sea Battle*, 4-7. The Air-Sea Battle Office offers this caveat and disclaimer early in the description of the ASB concept, "The Concept is not an operational plan or strategy for a specific region or adversary. Instead, it is an analysis of the threat and a set of classified concepts of operations (CONOPS) describing how to counter and shape A2/AD environments, both symmetrically and asymmetrically, and develop an integrated force with the necessary characteristics and capabilities to succeed in those environments." Nonetheless several studies and journal articles assess ASB as primarily developed for the emerging A2/AD challenges of a specific region (the Western Pacific) and potential adversary (China); Van Tol et al., *AirSea Battle*, 9-11. This study assesses ASB as a largely dual-service Air Force and Navy concept focused on the Chinese A2/AD threat in the Western Pacific.

⁷ Bonnie S. Glaser, "Armed Clash in the South China Sea," *Contingency Planning Memorandum No. 14* (Washington, DC: Council on Foreign Relations, April 2012), 4.

⁸ Barack Obama, *National Security Strategy* (Washington, DC: The White House, May 2010), 17.

⁹ United States Pacific Command, "USPACOM Strategy," <http://www.pacom.mil/about-uspacom/2013-uspacom-strategy.shtm> (accessed January 4, 2014).

¹⁰ John R. Deni, "Strategic Landpower in the Indo-Asia-Pacific," *Parameters* 43, no. 3 (Autumn 2013): 78.

¹¹ David C. Gompert, *Sea Power and American Interests in the Western Pacific* (Washington, DC: Rand Corporation, 2013), 11-16.

¹² Ibid., 80-83.

¹³ Richard Armitage and Joseph Nye, *The U.S.-Japan Alliance: Anchoring Stability in Asia* (Washington, DC: Center for Strategic and International Studies, August 2012), 8-9.

¹⁴ Statement of Admiral Samuel J. Locklear, US Navy, Commander, US Pacific Command *Testimony before the House Armed Services Committee on US Pacific Command Posture*, 113th Cong., 1st sess., March 5, 2013, 8.

¹⁵ Ibid., 8-9.

¹⁶ Glaser, "Armed Clash in the South China Sea," 1-3.

¹⁷ "Document 9: A Chinafile Translation," *Chinafile*, August 11, 2013, <http://www.chinafile.com/document-9-chinafile-translation> (accessed January 5, 2014); J.M., "Tilting Backwards," *The Economist Online*, July 24, 2013, <http://www.economist.com/blogs/analects/2013/06/political-rebalancing> (accessed January 5, 2014). There is some discussion about the extent to which Document 9 reflects official Chinese Communist Party policy, but it clearly communicates a hierarchy of the most serious concerns by the current Chinese leadership and underscores the nearly completely incompatible non-economic political cultural value sets of the U.S. and China. It also underscores the Chinese government fear of instability within the Chinese population.

¹⁸ Nathan Freier, *Beyond the Last War: Balancing Ground Forces and Future Challenges Risk in USCENTCOM and USPACOM* (Lanham, MD: Center for Strategic and International Studies, 2013), 43.

¹⁹ Deni, "Strategic Landpower," 83-86.

²⁰ Van Tol et al., *AirSea Battle*, 3, 17-20.

²¹ Gompert, *Sea Power*, 4-5.

²² Andrew Krepinevich, "The Pentagon's Wasting Assets," *Foreign Affairs* 88, no. 4 (July/August 2009): 23.

²³ US Joint Chiefs of Staff, *Joint Operation Planning*, Joint Publication 5-0 (Washington, DC: U.S. Joint Chiefs of Staff, August 11, 2011), GL-15.

²⁴ Office of the Secretary of Defense, *Annual Report to Congress on Military and Security Developments Involving the People's Republic of China 2011* (Washington, DC: Government Printing Office, 2011), 14.

²⁵ Van Tol et al., *AirSea Battle*, 20, 30. Authors posit that a significant Chinese advantage in quantity of 4th generation fighter forces threatens to overwhelm U.S. air power close to Chinese territory.

²⁶ Thomas G. Mahnken, "Weapons: The Growth and Spread of the Precision-Strike Regime," *Daedalus* 140, no. 3 (Summer 2011): 51-57.

²⁷ Van Tol et al., *AirSea Battle*, 21-25.

²⁸ Andrew Krepinevich, Barry Watts and Robert Work, *Meeting the Anti-Access and Area-Denial Challenge* (Washington, DC: Center for Strategic and Budgetary Assessments, 2003), 17-19.

²⁹ Krepinevich, "The Pentagon's Wasting Assets," 21-23.

³⁰ Thomas C. Schelling, "The Diplomacy of Violence," in *Arms and Influence* (New Haven, CT: Yale University Press, 1966), 2-3. Thomas Schelling describes the military significance of the power to hurt in *The Diplomacy of Violence*, as the power to "...destroy value...In addition to weakening an enemy militarily it can cause an enemy plain suffering." He proceeds to explain the difference between brute force and coercion based on the power to cause suffering as "the difference between taking what you want and making someone give it to you...the difference between unilateral, "undiplomatic" recourse to strength and coercive diplomacy based on the power to hurt."

³¹ Krepinevich, Watts, and Work, *Meeting the Anti-Access*, 35-36.

³² Gompert, *Sea Power*, 108.

³³ U.S. Department of Defense, *JOAC*, 19, 26.

³⁴ Carl von Clausewitz, *On War*, eds. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 77.

³⁵ Deni, "Strategic Landpower," 83.

³⁶ Michael Kraig and Leon Perkowski, "Shaping Air and Sea Power for the Asia Pivot," *Strategic Studies Quarterly* 7, no. 2 (Summer 2013): 126.

³⁷ U.S. Department of Defense, *JOAC*, 8-33.

³⁸ Air-Sea Battle Office, *Air-Sea Battle*, 4.

³⁹ Richard D. Fisher, Jr. and Brian Johnson, "Enhancing the U.S. Rebalance Toward Asia: Elevating Allies," *Joint Force Quarterly* no. 70 (Third Quarter 2013): 62.

⁴⁰ Air-Sea Battle Office, *Air-Sea Battle*, 4.

⁴¹ Van Tol et al., *AirSea Battle*, 35. A key example of joint systems incompatibility is Navy inability to use the Air Force's Digital Common Ground System.

⁴² U.S. Department of Defense, *JOAC*, 28.

⁴³ U.S. Department of the Army, *Mission Command*, Army Doctrine Publication 6-0 (Washington, DC: U.S. Department of the Army, September 10, 2012), 2. The language in *JOAC* describing establishment of cross-domains windows of opportunity for joint maneuver mirrors closely the U.S. Army doctrinal language defining the purpose for mission command.

⁴⁴ U.S. Department of Defense, *JOAC*, 3.

- ⁴⁵ Freier, *Beyond the Last War*, 43.
- ⁴⁶ Gompert, *Sea Power*, 86, 108, 126-129, 143.
- ⁴⁷ Air-Sea Battle Office, *Air-Sea Battle*, 7.
- ⁴⁸ Lukas Milevski, "Fortissimus Inter Pares: The Utility of Landpower in Grand Strategy," *Parameters* 42, no. 2 (Summer 2012): 9.
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- ⁵² Deni, "Strategic Landpower," 77-82.
- ⁵³ *Ibid.*, 79-80.
- ⁵⁴ Mark Gunziger and Christopher Dougherty, *Changing the Game: The Promise of Directed-Energy Weapons* (Washington, DC: Center for Strategic and Budgetary Assessments, April 2012), 21-23.
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- ⁵⁶ Terrence K. Kelly et al., *Employing Land-Based Anti-Ship Missiles in the Western Pacific* (Washington, DC: Rand Corporation, 2013), 3-6.
- ⁵⁷ Deni, "Strategic Landpower," 79.
- ⁵⁸ Kelly et al., *Employing Land-Based Anti-Ship Missiles*, 8-14.
- ⁵⁹ Gompert, *Sea Power*, xiv.
- ⁶⁰ Krepinevich, Watts and Work, *Meeting the Anti-Access*, ii.
- ⁶¹ Kelly et al., *Employing Land-Based Anti-Ship Missiles*, 18-19.
- ⁶² Sun Xiabo, "Japan Deploys Missiles on Strategic Strait," *Global Times*, November 7, 2013, <http://www.globaltimes.cn/NEWS/tabid/99/ID/823106/Japan-deploys-missiles-on-strategic-strait.aspx> (accessed January 8, 2014). This Chinese Beijing-based online news article emphasizes regional political sensitivities based on inflammatory historic Japanese behavior in reporting the Japanese employment of Type-88 anti-ship missiles on the Miyako Island commanding the strategic Miyako Strait.
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⁶⁴ Walker, Amy, "Army, DoD Team Together to Increase Pacific Military Satellite Access," (Lanham, MD: Federal Information and News Dispatch, November 20, 2013), 1-2.

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