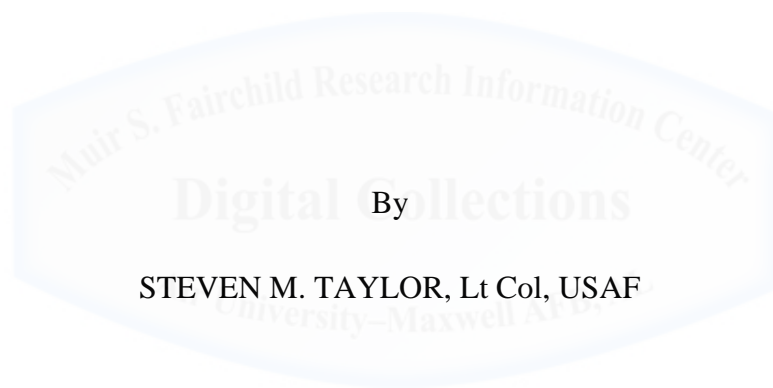


AU/ACSC/2019

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

HOLDING THE DRAGON AT BAY: The Role of the Air Sea Battle
(ASB) Concept in Preventing Chinese Military Domination of the
Western Pacific Region



A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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March 2019

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TABLE OF CONTENTS

	<i>Page</i>
DISCLAIMER	ii
TABLE OF CONTENTS.....	iii
ABSTRACT.....	iv
 Introduction	 1
Research Question	2
Background	3
Why The Western Pacific Matters	3
PLA Re-organization and the Four PLAF Training Brands	4
Peer Competition and the Decline of the Global Security Environment	6
Air Sea Battle-Warfare in the 21 st Century	10
Methodology	11
Results.....	12
The First Criteria	12
The Second Criteria	15
The Third Criteria	20
Analysis	23
Tailoring ASB for the Offshore Control Strategy	26
Multi Domain Battle	27
Accommodation	28
Recommendations	30
Conclusions	31
Bibliography	32
Endnotes.....	34

ABSTRACT

China has risen to a position of economic and political importance in the Western Pacific Region over past two decades. Under the leadership of Xi Jinping, the Peoples Liberation Army (PLA) has re-organized and modernized its military forces and in particular its anti-access/area denial (A2/AD) capabilities. As a result the A2/AD environment in the Western Pacific Region is much larger and more lethal than U.S. forces have faced in the past. Now that China is a nuclear power, any response to conflict with China must be considered in the context that it could escalate to nuclear war.

This paper utilized the evaluation framework to address the question of whether or not the Air Sea Battle (ASB) Concept is a viable answer to Chinese aggression in the Western Pacific Region. The ASB Concept was evaluated against three criteria addressing ASB as it relates to freedom of action and access, ASB in the context of PLA A2/AD capability, and ASB in relation to providing escalation options without substantial risk of a nuclear conflict.

Analysis indicates that ASB alone is not a viable answer and an adversary specific strategy of Offshore Control tailored to conflict with China is needed. ASB can still be useful in establishing an Offshore Control strategy by informing U.S. military force structure, training, integration, networking, and collaboration across all five domains of warfare, but in the context of conflict with China in the Western Pacific Region.

Introduction

While the United States (U.S.) has spent two decades focused on fighting the War on Terrorism, China has risen to a position of significant economic and political influence in the Western Pacific Region. Additionally, China has modernized and re-organized the Peoples Liberation Army, (PLA) the name for all branches of the Peoples Republic of China military. These changes may have dramatically increased the PLAs operational and tactical war fighting capabilities.¹ The impact of these changes is not fully understood; however, it appears that the PLA is emerging as a world military power that could challenge United States access to the Western Pacific Region. China has become increasingly assertive and at times aggressive in attempting to assert its influence in the South China Sea, with regard to Taiwan, and politically throughout the Western Pacific Region.²

While China has been experiencing a period of economic and military expansion, the U.S. military has been embroiled in costly wars in Iraq, Afghanistan, and Syria. In 2001 when the War on Terrorism began, the United States enjoyed a clear military advantage in every domain of warfare over all peer or near peer global competitors. The United States military quickly drove the Taliban into the Afghan countryside but was unable to destroy it as a fighting force. The United States military dominated and defeated the Iraqi Army in 2004 but soon found itself fighting an insurgency. From that time to the present, the United States military has been fighting a low intensity asymmetric conflict against an enemy that does not have the capability and resources to compete on equal terms. As the wars in the Middle East have begun to wind down, the Department of Defense (DOD) refocused on readiness to fight in a contested environment against a peer or near peer aggressor.

To meet this need, the Air Sea Battle (ASB) concept was conceived to provide decision makers with multiple options to counter aggression across all levels of the conflict spectrum.³ It is uniquely designed for integrated operations across all domains of warfare (air, sea, land, space and cyber space) in the 21st century.⁴ When the ASB concept was made known in 2012, Chief of Staff of the Air Force General Norton Schwartz and Chief of Naval Operations Admiral Jonathan Greenert believed that ASB would help, organize, train and equip the services to be able to maintain operational access in advanced anti-access/area denial (A2/AD) environments.⁵ A2/AD refers to the employment of weapons systems and forces to prevent an opposing force from crossing or seizing an area air sea or land. China is diligently working to develop its own A2/AD capabilities to prevent U.S. military forces from entering the South and East China Seas. As China establishes these capabilities, the ASB concept may become more important to the Western Pacific Region.⁶ This paper evaluates ASB to determine its viability as an answer to Chinese aggression in the Western Pacific Region through force development and by enabling U.S. military forces to conduct fully integrated operations across all domains of warfare (air, sea, land, space and cyber space).

Research Question:

This paper answers the question, “Does the ASB Concept provide the United States a viable answer to Chinese aggression in the Western Pacific Region”?

The ASB concept is designed to allow friendly forces to attack in depth, defeat adversary Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), defeat A2/AD platforms and weapons and to defeat adversary employed weapons and formations.⁷ It is possible that the ASB concept would be able to deliver as promised in each of these areas; however, it is not clear that the ASB concept alone would be

sufficient to prevent China from achieving military dominance in the region.

To answer this question this research uses the evaluation framework. In this paper I will briefly discuss the global importance of the Western Pacific Region and the importance of maintaining access to it for both military and economic purposes. I will also discuss how Chinas actions have created friction with its regional neighbors and created uncertainty about its intentions. I will also examine the re-organization and modernization of the PLA to determine the effectiveness of these changes on PLA strategic, operational and tactical capabilities.

This paper establishes distinct criteria which should be met, in order for the ASB Concept to be determined to be a viable answer to Chinese aggression in the Western Pacific Region. The ASB Concept will be evaluated in the context of the established criteria, the results analyzed, and possible alternatives to the ASB Concept will be identified and recommendations made. Finally, after analysis of the ASB Concept is completed, I will discuss conclusions to be drawn from the research and their implications for the ASB Concept in the Western Pacific Region.

Background

Why the Western Pacific Matters

The Western Pacific Region is rich in fish, oil, mineral deposits and precious metals. Whoever controls this region also controls these resources. In recent years, China has increasingly sought a position of influence and leadership in the region. At the same time, China has become increasingly assertive in the South and East China Seas where it has declared exclusive economic zones. At stake are large oil and natural gas deposits found in these waters. China's need for oil grows with each passing year, in 2005, it was the second largest consumer of oil behind the United States.⁸

The South China Sea is also important to global maritime trade. By some estimates,

approximately half of the world's maritime trade, half of its liquefied natural gas and one third of its crude oil passes through the region through the Straits of Malacca.⁹ Any interruption of shipping in this area would have a major global economic impact.

PLA Reorganization and PLAF Four Training Brands

China has substantially modernized and reorganized the PLA, resulting in substantial military capability improvement. The 2012 edition of the U.S. Department of Defense Report to Congress on Military and Security Developments Involving the People's Republic of China, surmised that the PLA was pursuing military modernization as part of what it viewed as a "window of strategic opportunity to advance China's national development during the first two decades of the 21st Century".¹⁰ The 2017 report highlighted the sweeping Organizational reforms instituted by President Xi Jinping. The Chinese leadership signaled that these changes were essential to China achieving "Great Power Status. In addition to these reforms, China has become increasingly forceful in proclaiming its claims of sovereignty over the South and East China Seas. China has used law enforcement vessels and its maritime militia as a means of enforce its maritime claims and challenging the claims of Japan, Vietnam, and the Philippines in the East China Sea.¹¹ China's militarization of the Spratly Islands continues to be a source of tension and conflict with the Philippines and Vietnam.¹² These coercive tactics have allowed China to press its territorial claims in the region, without an escalation to open warfare with the United States or its regional neighbors.¹³ If China continues to employ these tactics, the risk of an unplanned escalation to war grows.¹⁴

China has continued to be concerned about Taiwan independence. China has maintained its position of "One China", and refuses to recognize Taiwan as an independent nation. The Taiwan crisis of 1995-96 highlighted the need for the PLA to develop joint amphibious, blockade and

firepower capabilities.¹⁵ The PLA has shifted its thinking with regard to joint operations. In the past joint operations were operations that were executed by two or more services. Recently the PLA has begun using the term Integrated Joint Operations and has been pushing the concept down to the division level or even brigade level.¹⁶

Prior to 2004, the PLA Air Forces (PLAAF) had traditionally been an inward focused homeland air defense force. Beginning in 2004, the PLAAF began working towards transforming into a world class strategic air force capable of supporting Chinese national interests in Asia and globally. The PLAAF and the Central Military Commission (CMC) recognized that modern air warfare is high intensity and occurs in a complex electromagnetic environment (CEME). State of the art equipment and weapons platforms are of little value without highly trained and flexible airmen to operate them.¹⁷

To address the need for highly trained and flexible airmen, the PLAAF developed the Four Key Training Brands.¹⁸ They are the Golden Helmet Competition, the Golden Dart Competition, the Blue Shield competition which include Golden shield, and the Red Sword exercise. Each are annual training events and are a means for the PLAAF to assess its progress towards becoming a strategic air force. Each of these events is concerned with a specific aspect of PLA air power.¹⁹ The Golden Helmet competition is a ten day air-to –air combat competition designed to improve and assess pilot skills. The focus of the Golden Dart competition is on air-to ground attack and involves bombers and attack aircraft. The Blue Shield exercise is a live fire exercise focused on ground based air defense forces that include surface to air missile systems, and the radar and information systems that support them. In 2017, this competition was expanded to include a general military skills competition called Golden Shield. The Red Sword exercise is much more complex than the other three. It is a campaign level exercise in which fighters, attack aircraft,

airborne early warning (AEW) aircraft, reconnaissance aircraft, SAMs and radar forces oppose each other in a complex and multidimensional environment.²⁰

Peer Competition and the Decline of the Global Security Environment

When the War on Terrorism began in 2001, the United States was the lone superpower. The absence of a peer competitor and the deteriorating situation in Iraq following Saddam Hussein's defeat in 2003 impacted Army and Air Force operations and thinking which became focused on counterinsurgency warfare, the capture of high value targets and the destruction of the Islamic State in Iraq and Syria (ISIS).²¹ The shift that occurred in operational focus is understandable, but there were unintended consequences. Former Deputy Assistant Secretary of Defense for Force Development, David Ochmanek is a senior international and defense researcher for the RAND Corporation. In a 2018 RAND Perspective article, he opined that the rapid defeat of Iraq in Desert Storm and Iraqi Freedom coupled with a lack of a peer competitor, created an atmosphere of complacency within the DoD. He believed that this resulted in the DoD failing to recognize and adapt to a declining security environment.²² During this time, China continued to pursue a position as a major international power, and Russia demonstrated a willingness to use military force to advance its revisionist policies by invading Georgia in 2008 and the occupation of the Ukrainian Crimea territory in 2014. North Korea's pursuit of nuclear weapons added to the instability in the global security environment. In a few short years, the United States went from having no peer competitors to having to meet challenges from two powerful adversaries.²³

While the United States continues to field the most capable military in the world, the stress of an extended high operations tempo and deployments is becoming evident. Readiness levels are below historical norms and the modernization of some key capabilities has fallen behind.²⁴ As recently as 2014, former Chairman of the Joint Chiefs of Staff General Martin Dempsey believed

that regardless of planned investments to improve military capabilities, the risk of interstate conflict in East Asia would increase, and the U.S. military's technological edge would continue to erode and its bases and weapons platforms would become more vulnerable.²⁵

Authors of a 2017, RAND Corporation study entitled *US Military Capabilities and Forces for a Dangerous World*, contend that the DoD's force planning construct continues to be focused on defeating two regional adversaries such as Iraq and North Korea simultaneously rather than meeting the strategic and operational challenges posed by China and Russia. They also argue that this has contributed to the poor state of military readiness, and they advocate a change in force structure to address the current realities faced by the U.S. military.²⁶ To affect this change, they recommend that one of three possible force planning constructs be adopted to meet current and future challenges. The first option is a One Major War construct. Under this construct, the U.S. military would be able to defeat the forces of any single adversary, including China or Russia in a localized conflict. The second possible force planning construct is the "One Major War and One Regional War" construct. This force planning construct would be designed to allow the U.S. military to defeat one regional power such as North Korea or Iran and one major power i.e. Russia or China. The third possible force construct to be considered is the "Two Major Wars" Construct which would have the ability to defeat any two adversaries including Russia or China.²⁷

This study also concluded that the problem is compounded because the U.S. military does not place enough emphasis on force posture, modernization of U.S. military capabilities, and developing operating concepts to maximize power projection.²⁸ These forces should be tailored to the threat they are expected to address. They should be sized right, and equipped with the right mix of modern equipment and support assets. They should also be postured correctly to be able

to respond and sustain operations in their theater of operations.²⁹

The 2017 RAND study also identified eight priorities for force enhancements and posturing needed for U.S. forces to be able to meet potential challenges from China.³⁰

They are:

- Accelerated development and fielding of air to surface missile systems and a longer range air to air missile.
- Establishing forward stockpiles of air deliverable weapons, including cruise missiles and long range anti-ship missiles as well as surface to air missile suppression systems and air to air missiles.
- Pre-positioning equipment and sustainment assets for multiple short range air defense systems (SHORADS) to be used for cruise missile defense.
- Increasing investment in base recovery; such as airfield damage repair, and in personnel and equipment to enable operations from dispersed locations.
- Accelerated development and fielding of the next generation jammer
- Accelerated development and fielding of a high altitude low-observable aerial vehicle is needed.
- Development of more resilient space-based capabilities as well as counter-space capabilities
- Development of kinetic and non-kinetic counter-space weapons.³¹

This report also stressed that these enhancements should be in addition to existing items already planned for and in development such as the F-35 fighter, B21 bomber and the Ford class aircraft carrier.³²

Investment in these priorities will be expensive; however, development of these capabilities

will also have a positive impact on the U.S. military's ability to address challenges from Russia, Iran and North Korea. Understanding that financial resources are not unlimited, the United States is going to have to count the cost and choose wisely with regard to force planning.

In 2017 the DoD had a budget of \$532 billion dollars and was authorized to spend \$591 billion; an amount equal to approximately 3.2% of the United States 2016 Gross Domestic Product (GDP). The authors of the RAND Study mentioned believed that pursuing a one major war construct would require approximately 3.2 % of the United States GDP. Pursuing a one major war and one regional war would require approximately 3.3% of the GDP or \$610 Billion dollars, and the two major wars force planning construct would require 3.4% of the GDP or \$628 billion dollars.³³

It is evident that the United States has to make some hard choices in the near future or run the risk of being unable to successfully address global security challenges to United States vital interests. In particular, the U.S. military must be able to counter challenges posed by China in the Western Pacific region. To successfully meet these challenges, it must have a military force that is planned, funded, correctly postured and rightly constructed to do the job.

That doesn't necessarily mean that the ASB concept is the best way to deal with challenges from China. In an Institute for National Strategic Studies article published in 2012, the author T.X. Hammes points out that the ASB concept pre-supposes airstrikes into Chinese airspace to eliminate PLA A2/AD networks.³⁴ Conducting strikes against the Chinese mainland however limited, also risks the possibility of nuclear escalation.³⁵ Hammes also points out that it is unlikely that a continental power can be defeated in a short war utilizing conventional strikes. Instead, Hammes advocates for wearing China down through economic attrition by applying a strategy of Offshore Control.³⁶ Perhaps the biggest advantage to the Offshore Control is that it is

fought far away from the Chinese mainland and out of range of most Chinese assets which diminishes the risk of nuclear escalation.³⁷

I believe that Hammes observations and concerns are valid, but that does not mean that ASB or a version of it should not be developed. While ASB may not be the best means of dealing with China, ASB may still play an important role countering Russian aggression in Eastern Europe.

Air Sea Battle-Warfare in the 21st Century

The ASB concept has its roots in the Air Land Battle (ALB) concept of the 1970s and 80s which was designed to defeat Soviet land forces through deep attack and degradation of enemy rear echelon forces. The ALB concept primarily focused on controlling the land domain from the air through attack in depth.³⁸ The ASB concept has a much broader focus. ASB is designed to create an advantage through integrated operations across all domains of warfare, (air, sea, land, space, and cyber space). ASB also differs from ALB in that it simultaneously provides defense in depth for friendly rear echelon forces across those same domains.³⁹ When the ALB concept was designed, the importance of the space domain was not clearly defined, and the cyber domain did not exist. In essence, the ASB concept was envisioned to address these changes and meet the unique challenges of 21st century warfare.

One could mistakenly assume that the ASB concept is a strategy for addressing the challenges inherent in military conflict with China or Russia. ASB is not strategy, rather it is a concept established to assist the organization, training and equipping of the services forces so that they can continue to operate in a complex A2/AD environment.⁴⁰

ASB is described in the Pentagon's Joint Operational Access Concept (JOAC) as a limited operational concept which is focused on the integration of naval and air forces in the context of eliminating A2/AD threats. Furthermore, ASB is concerned with the employment of weapons at

the tactical level of warfare to defeat A2/AD threats.⁴¹

Ultimately the ASB concept seeks to synthesize the Services efforts to develop forces which are exceedingly efficient and lethal when conducting joint operations. This is accomplished by encouraging institutional change, developing a common concept for joint operations, and modernization of U.S. joint military capabilities in each domain of warfare.⁴²

The ASB concept encourages long lasting inter-service collaboration that addresses the evolving state of A2/AD environments over time. In the long term, the ASB concept envisions the services organizing, training and equipping their forces in a more collaborative and integrated fashion. Integration efforts will be expanded and joint training at the operational and tactical levels will be emphasized.⁴³

ASB also provides decision makers options across the full spectrum of conflict.⁴⁴ For example, at the low end of the conflict spectrum, decision makers might choose conducted limited strikes or make a show of force while they engage with regional partners. If conflict occurs at the high end of the spectrum, ASB provides decision makers with escalation options and the ability to defeat aggression if needed.⁴⁵

Methodology:

The question of whether the ASB Concept provides the United States a viable answer to Chinese aggression in the Western Pacific Region, cannot be answered based on the capabilities of the ASB concept alone. The capabilities provided by the ASB concept must be balanced against the practical concerns of employing those capabilities. An evaluation of the PLA's capabilities must determine to what degree the PLA would be able to counter the ASB concept in the event of conflict with the United States. Ultimately however, for the ASB Concept to be considered a viable answer to Chinese aggression, it should satisfy three criteria.

Freedom of access and action in the Western Pacific Region is critical to U.S. and allied interests. A substantial share of global trade, crude oil, and natural gas shipments pass through the Malacca Strait. China's ability to shut down the Strait of Malacca and the Lombok Sound, would result in an enormous cost to maritime trade. Shipping would have to be re-routed and commercial transportation costs could rise as much as 60 percent.⁴⁶ The first ASB Concept criteria should ensure freedom of action and access in the global commons for the United States and its allies. The second criteria is related to the first and they should work in concert. PLA A2/AD networks are designed to restrict U.S. forces freedom of access and action in the Western Pacific Region. The ASB concept should satisfactorily address current PLA A2/AD capabilities in the Western Pacific as well as the South and East China Seas guaranteeing U.S. and allied economic interests are assured.⁴⁷ China is a nuclear power and the United States must take this into consideration before undertaking escalatory actions during conflict. A lack of understanding with regard to China's nuclear decision making process increases the risk of accidental escalation to nuclear warfare. Therefore, any escalation option that is exercised should be deliberate and as transparent as possible to ensure U.S. intentions are not misunderstood.⁴⁸ Thus, the third ASB criteria should provide escalation options to United States decision makers, without substantially raising the risk of nuclear escalation during conflict with China.

Results

The First Criteria

With regard to the first criteria, in the event of conflict with China, the United States would need to maintain freedom of action in the global commons.⁴⁹ The ASB concept addresses this problem through the employment of networked integrated forces, with the ability to attack in depth to disrupt, destroy and defeat enemy forces (NIA/D3). A definition of these terms is useful

in helping to understand the potential advantages of ASB. In the context of the ASB concept, networked means that the joint force is mission-organized, fully integrated, and capable of carrying out operations across all domains of warfare and coordinated in real time. These operations are tightly coordinated in real time and not bound by service specific procedures, tactics or weapons systems.⁵⁰ This means that personnel and assets are connected in time and purpose and have interoperable procedures, command and control structures (C2), and authorities to convert information into action.⁵¹

In the context of ASB, integration of forces means more than just de-conflicting operations. Integration refers to the organization of the joint force and their actions to create a force that operates networked across all the domains of warfare. An integrated force operating in this fashion is able to optimize its combined capabilities when conducting missions across multiple domains.⁵² To be successful, and provide the maximum operational advantage to friendly and allied forces, these forces require integration across service lines and should be integrated before they arrive in the theater.⁵³

When the ASB concept was first introduced, the main focus was on defeating A2/AD networks through close cooperation and integration of naval and air forces. Because of this, some have mistakenly concluded that the ASB concept does not apply to the Army and Marine Corps.⁵⁴ This misunderstanding is not surprising given that the predominant domains of the Western Pacific Region are air, sea, space and cyberspace. Notwithstanding, multiple Army and Marine Corps mission sets are suitable for the ASB concept, and Army and Marine forces play an important role in ASB operational practice.⁵⁵ Still, due to the geography of the Western Pacific Region, I believe that naval and air forces will play a disproportionate role in how ASB operational art is practiced there.

Timothy A. Walton is a Fellow in the Center for Strategic and Budgetary Assessments (CSBA), he states that the U.S. Navy currently enjoys advantages in both surface warfare and undersea warfare. However, the PLA Navy has been working to address U.S. undersea warfare capabilities by developing anti-submarine warfare capabilities. These efforts could foreseeably diminish U.S. freedom of action for U.S. submarines operating in the Western Pacific in the event of hostilities.⁵⁶ He also believed, that U.S. surface warfare abilities to carry out offensive sea control operations has diminished relative to the PLA Navy's ability to counter those efforts.⁵⁷ This implies that freedom of action for U.S. Navy surface warships and submarines is not guaranteed in the long term.

With regard to freedom of action for U.S. Air Forces in the Region, Walton posits that in a Defense of Taiwan scenario, U.S. air forces would face major operational problems. It is likely that the area in which supporting and strike aircraft could operate would be limited by the PLA's networked and integrated air defense systems (IADS) systems. Additionally, land based airfields would also be vulnerable to PLA air and missile strikes.⁵⁸

Rehberg and Wrenn believe that China will continue to seek to mitigate U.S. power projection capabilities by fielding increasingly modern and sophisticated A2/AD networks, cyber and space control technologies, robust IADS networks, and improved ballistic and cruise missiles. The result of these efforts will likely result in increased risk to U.S. naval forces and land bases in the region. Additionally, these developments could restrict U.S. military access and freedom of maneuver in the waters and airspace far from the Chinese mainland.⁵⁹

China does not have the global commitments that the U.S. military has and thus is able to tailor its military investments to address threats posed by U.S. naval and air forces.⁶⁰ This means that a comparison of Chinese and U.S. total forces will not provide an accurate picture of how

conflict between them would play out. The U.S. military's current global obligations would prevent it from employing its full military might in the Western Pacific Region in the event of conflict with China.⁶¹ China has no such limitations, and thus has the advantage of being able to focus all of its efforts on denying access and freedom of maneuver to U.S. forces operating in the airspaces and waters of the Western Pacific.⁶²

The United States Pacific Air Forces (PACAF) and United States Pacific Command (PACOM) have been working to develop aspects of ASB into doctrine and operational action to defeat A2/AD networks. ASB is the framework used by PACOM to counter PLA efforts to deny U.S. forces access to the Western Pacific.⁶³ PACOM's efforts should enable U.S. military operations across all domains of warfare and ensure freedom of action and access in the Western Pacific Region.⁶⁴ The establishment of the Pacific Air-Sea Coordination Element (PASCE) is a first step towards inculcating a culture of persistent collaboration between PACAF and U.S. Navy Pacific Fleet (PACFLT). The establishment of PASCE has also facilitated the integration of ASB into everyday theater operations.⁶⁵ In theory, PACOM's dynamic implementation of ASB should be able to defeat PLA attempts to limit U.S. military or allied forces freedom of access and action in the Western Pacific global commons.⁶⁶ However, the ASB concept has not been tested in a conflict with China. Therefore, in terms of meeting the first criteria to be considered a viable answer to Chinese aggression by ensuring freedom of action and access in the global commons, the answer is a "qualified yes."

The Second Criteria

With regard to the second criteria, properly networked joint forces can attack enemy A2/AD systems in depth, across all domains to create and exploit vulnerabilities.⁶⁷ Maj. William H. Ballard, Col (Ret) Mark C. Harysch, Col (ret) Kevin J. Cole, and Byron S. Hall are strategists

and researchers for the United States Pacific Command (USPACOM). In a 2015 Air and Space Power Journal article, they argue that the Navy has an inherent advantage because it is difficult to find, target and neutralize moving aircraft bases and power projection platforms.⁶⁸ In the future, the U.S. Navy may not be able to rely on this advantage to the degree that it does now. Testimony presented before the U.S. - China Economic and Security Review Commission, and published by the CSBA in May of 2011, regarding emerging capabilities are cause for concern. One of the items highlighted in that report was the Dong Feng (DF) 21 medium range ballistic missile, which was capable of targeting aircraft carriers at ranges of up to 810 nautical miles from the Chinese mainland.⁶⁹ Even more unsettling is that the PLA is exploring the possibility of integrating data from various space based platforms to provide the DF 21D anti-ship ballistic missile (ASBM) with real-time, accurate targeting information. The degree to which these efforts have been successful is not currently known; however, this capability would represent a significant bolstering of PLA A2/AD capability and place U.S. Navy warships at significantly greater risk and at far greater distances.⁷⁰

Additional testimony pointed out that the PLA has embraced the “informationalization” of warfare and recognize that it means more than just embracing technology; rather it means information must permeate every process from, planning, to operations and logistics in all five domains of warfare.⁷¹ Chinese recognition of the importance of information and the role it will play in future conflict has implications for the United States. First it will likely drive investment in future space assets to be able to provide information in all domains of warfare.⁷² Currently an aircraft carrier operating a great distance from the Chinese mainland can probably use its inherent mobility to its advantage, because the DF 21 ASBM is not able to receive in-flight targeting updates. Space based sensors feeding real time targeting information to DF 21 ASBMs

would rapidly diminish the effectiveness of that advantage.⁷³

This raises another point that bears examining. Douglas C. Peifer is a professor in the Department of Strategy, at the U.S. Air Force War College, in Montgomery Alabama. He argues the threat of China's blue water navy and modernized air force is overdone. He stated "the very same technologies that threaten to make the China seas high risk environments for our surface ships and aircraft render Chinese ships and aircraft highly vulnerable."⁷⁴ T.X. Hammes argues this point as well. He asserts that mines, ASBMs and IADS could create similar problems for China.⁷⁵ It is true that Chinese ships and aircraft are also highly vulnerable to the same types of technology they are using in their A2/AD networks. However, that does not necessarily mean that those concerned about China's growing A2/AD capabilities are alarmists or that the threat is overdone.

A2/AD networks now employ weapons with longer ranges and greater accuracy than in the past resulting in a more expansive and lethal A2/AD environment to oppose U.S. forces seeking to operate in the Western Pacific.⁷⁶ This makes U.S. power projection efforts increasingly high risk and costly. The PLA can also employ A2/AD strategies to challenge U.S. forces during times of conflict that fall below the threshold of armed conflict.⁷⁷

The fact that technology works both ways is a possible vulnerability of the ASB Concept. The U.S. military's reliance of space systems for precision warfare is another example of this. The United States' form of precision warfare has been on display for the past two decades. The Chinese have been observing and are sure to have an understanding of the U.S. military dependence on space based assets. Precision munitions without precision targeting information and timely information for targeting are no longer precision weapons.⁷⁸ ASB seeks to address these vulnerabilities by going beyond simply de-conflicting operations, by seeking to create the

requisite level of cross domain integration required to defeat progressively diverse and complex threats.⁷⁹ This is why the integration through the space and cyber space domains is going to be increasingly important to ASB as China pursues modernization of its ASBM assets and space based capabilities.

U.S. military planners should consider whether their assumptions of how China would address the space domain in the event of conflict are still valid. Barry D. Watts is a Senior Fellow at the CSBA. He states that in U.S. war games, the frequent assumption has been that China would seek to deny use of satellites by anyone, reasoning that the U.S. forces are more reliant on space capability and thus have more to lose. Watts also points out that as China continues to develop and integrate space assets into the PLA's rocket forces, and those systems become dependent on information from space. This assumption may not be as valid as it might seem.⁸⁰ China's rocket forces dependence on space assets for targeting information will likely reach a level on par with that of the U.S. military. Accordingly, U.S. military planners should begin to re-think their assumptions about how China would be likely to address the space domain should military conflict with the United States occur.

The U.S. military reliance on commercial satellites (COMSAT) is also an inherent vulnerability of the ASB Concept. In Operation Iraqi Freedom (OIF), approximately 84 percent of all military communications went through COMSATs and approximately half of the guided munitions expended in the OIF air campaign used inertial/Global Positioning System (GPS) to home in on their aim points.⁸¹ China recognizes the U.S. military dependency on these systems and will seek ways to take advantage of them should military conflict with the United States occur.⁸²

China arguably has the most active space warfare program in the world and the United States

cannot afford to cede control of that domain to China in the event of war.⁸³ U.S. military planners should be planning for a worst case scenario in which China attacks U.S. Low Earth Orbit (LEO) reconnaissance satellites or attacks and exploits vulnerabilities in COMSATs relied upon by U.S. forces.⁸⁴

Cross domain integration is the key to ASB success against sophisticated A2/AD networks. The defense of naval surface vessels and anti-submarine warfare (ASW) are two examples of the utility of cross domain integration.⁸⁵ In the first instance, surface ships have a limited ability to counter large numbers of ASBMS and cruise missiles; however, concentrated air power can make up for this deficiency utilizing tactical networks that link weapons and sort targets.⁸⁶ In the case of ASW, networks of autonomous sensors can locate submarines by tracking missile launches and then vector ASW assets to attack and destroy the adversary submarine.⁸⁷ Finally ASB sets the framework for addressing the PLA A2/AD by creating pre-integrated forces based upon habitual relationships and collaborative teamwork.⁸⁸

With regard to the second criteria, the ASB concept does address current PLA A2/AD capabilities in the Western Pacific and South and East China Seas. Because of advances in technology, U.S. forces will be forced to operate in a progressively larger and more lethal A2/AD environment in any future conflict with China. U.S. counter A2/AD capabilities have also not been tested against the PLA's A2/AD networks in combat.

U.S. forces have the potential temporary advantage of combat experience gained from two decades of fighting in the Middle East. In the initial stages of conflict with China, the U.S. military could exploit this advantage to defeat PLA A2/AD networks seeking to limit U.S. access and freedom of action.⁸⁹ Timothy R. Heath is a Senior International/Defense Researcher for the RAND Corporation. Heath points out that while the PLA's arsenal is increasingly modern and

high-tech, its ability to use these weapons is still unclear.⁹⁰ The PLA's last major conflict was in 1979 against Vietnam and the result was an embarrassing defeat for China. Most of the veterans from that conflict have retired from military service leaving the PLA with little combat experience. While combat experience is important, the degree of advantage it provides should not be overstated. For example, Heath also points out that any advantage enjoyed by U.S. forces resulting from the PLA's inexperience would diminish over time as conflict progresses and both sides gain combat experience.⁹¹ The ASB concept would likely be able to capitalize on networked and integrated operations to exploit PLA inexperience at the operational and tactical level of warfare.⁹² At the strategic level of war, it is difficult to determine how much if any advantage U.S. combat experience would have in a conflict with China. The high intensity conflict that would ensue would be on a scale neither side has experienced, and either could be the victor.⁹³ With regard to the second criteria, the ASB concept can be considered a viable answer to Chinese aggression. The ASB Concept in theory does address current PLA A2/AD capabilities in the Western Pacific and South and East China seas. Because the ASB Concept has not been tested in combat against PLA A2/AD networks, it is a "qualified yes" with regard to being a viable answer to Chinese aggression in the Western Pacific Region. In the future, U.S. Forces can expect that operations against the PLA A2/AD efforts to be more costly and risky.⁹⁴

The Third Criteria

With regard to the third criteria to be considered viable, the ASB concept must provide escalation options to United States decision makers, without substantially raising the risk of nuclear escalation during conflict with China. In the event of military conflict in the Western Pacific Region, the ASB concept seeks to maintain escalation agility and furnish decision makers a wide range of options to counter Chinese aggression.⁹⁵ Dr. Michael Kraig is an instructor, and

Col Leon Perkowski is the Vice Commandant at the Air Command and Staff College, Maxwell AFB, Alabama. They argued in 2013 that escalation management and escalation agility are as important to United States' interests as being able to defeat PLA A2/AD networks. They go on to point out that strategic U.S. military developments intended to create stability in the Western Pacific may in fact be destabilizing.⁹⁶ They propose that conventional deep strike capabilities of the kind that would be employed against Chinese A2/AD networks could be incorrectly viewed as an existential threat to PRC leadership.⁹⁷ This could potentially elevate the political stakes for PRC leadership and result in an escalation spiral of cyber, space or nuclear warfare which could impose costs on U.S. forces that are un-proportional to the interests the United States is trying to safeguard.⁹⁸ Peifer also argues that ASB advocates who contend that U.S. military forces must be prepared to conduct an extended campaign against PLA A2/AD networks, do not grasp the magnitude of the risks associated with conducting deep strikes into the interior of a nuclear capable China.⁹⁹

T.X. Hammes seems to agree with Kraig, Perkowski, and Peifer. Hammes points out that China's nuclear decision making process is not understood by U.S. decision makers.¹⁰⁰ He also asserts that deep strikes against A2/AD networks are not the only dangers to consider. As discussed earlier, the domains of space and cyberspace will be increasingly important to the way the United States and China conduct military operations in the future. Prior to the advent of offsetting nuclear arsenals, the prevailing thought was that escalation in war should be violent and sudden to achieve optimal effects. This has serious implications for the domains of space and cyberspace.¹⁰¹ A first strike in these domains risks escalation in the same way as deep strikes against A2/AD networks because PRC leadership could misinterpret their intent.¹⁰²

Dr. Carl D. Rehberg and Col Christopher Wrenn serve as Director and Deputy Director of

the Asia-Pacific cell, in the Headquarters Air Force Directorate of Strategic Planning, Air Force Strategic Plans and Programs. Rehberg and Wrenn take exception with Kraig and Perkowski's analysis of the ASB threat. Rehberg and Wrenn argue that Kraig and Perkowski place too much emphasis on the "deep strikes" and the risks associated with them.¹⁰³ They point out that "deep strikes" are only one of many Lines of Effort that are a part of the ASB concept. They also argue that being able to fight for air and maritime control in the global commons improves deterrence and enhances crisis stability.¹⁰⁴ There is some validity to Rehberg and Wrenn's criticism of Kraig and Perkowski's singular focus on the deep strike aspects of ASB. Rehberg and Wrenn only make a passing acknowledgement of the risk of escalation if the PRC feels its existence is at risk.¹⁰⁵ Ultimately, there would be no winners in a nuclear conflict between the United States and China so it is incumbent upon the United States seek ways to achieve its objectives in the Western Pacific Region without risking escalation.¹⁰⁶

To be considered a viable answer to Chinese aggression in the Western Pacific Region, the ASB concept must provide United States decision makers with escalation options, without substantially raising the risk of nuclear escalation during conflict with China. The ASB concept does provide escalation options to United States decision makers across the full spectrum of military operations.¹⁰⁷ However, ASB does not address the intangible aspects of the China's leadership and their decision calculus should they interpret deep strikes against A2/AD networks or a first strike in space or cyber space as an existential threat. With regard to the third criteria, the ASB concept provides escalation options to U.S. decision makers but it does so at a substantial risk of escalation to nuclear conflict. Therefore the ASB concept does not satisfy this criteria to be considered a viable answer to Chinese aggression.

Analysis:

The ASB Concept, by itself, cannot be considered a viable answer to Chinese aggression. This does not diminish the importance of ASB in terms of how the U.S. military organizes, trains, networks, and integrates forces. The evaluation does not preclude the ASB Concept from being a part of a broader strategy to counter the PLA A2/AD efforts in any future conflict with China. The United States has other options it can employ to counter Chinese aggression that involve far less risk than deep strikes against the Chinese mainland would involve.

For example, Peifer argues that the United States could counter Chinese aggression in the Western Pacific through the implementation of a distant blockade. Hammes refers to this as a strategy of “Offshore Control” and it is based on the idea that seeking the elimination of the Chinese Communist Party (CCP) is too perilous given the potential for escalation to nuclear war.¹⁰⁸

China is highly vulnerable to a distant blockade; and Peifer believes the United States can exploit this vulnerability by bolstering its naval, air, and space based capabilities on the periphery of the South and East China seas.¹⁰⁹ Approximately 9 million barrels of the 13 million barrels of oil that China consumes daily is imported. This equates to 69% of China’s daily oil consumption.¹¹⁰ Hammes contends that that by controlling the Malacca, Sunda, and Lombok straits as well as sea lanes north and south of Australia, the United States could cut off approximately 80 percent of Chinese oil imports.¹¹¹ Piefer seems to agree with Hammes in terms of the vulnerability of China to a distant blockade. He argues that 85 percent of China’s oil imports pass through the Indian Ocean and the Malacca and Lombok Straits making China extremely vulnerable to a distant blockade. Peifer also states “Should China ever use force against the United States or its allies in the region, America could respond by throttling the very

lifeblood of the Chinese economy.”¹¹²

Peifer and Hammes are not in complete agreement about where the U.S. military should focus any distant blockade efforts. Hammes advocates utilizing a distant blockade to target Chinese exports whereas Piefer believes shutting off China’s oil imports should be the priority. Hammes argues that cutting off China’s oil supply would create a series of cascading effects which would lessen the effectiveness of a distant blockade. For example, Hammes claims that cutting off 80 percent of China’s oil imports would drastically reduce its energy demands making energy interdiction less effective; whereas targeting Chinese exports would be much more effective. Hammes goes on to point out that Chinese exports rely on large container ships to be cost effective and these ships are easy to track and divert elsewhere. Another issue to be considered in any war with China is to what degree it would damage the global economy. Any war between the United States and China would be destructive to the global economy and the resulting negative effects would be magnified over time.¹¹³

Walton implies that both ASB and distant blockade would play a role in a United States response to an attack on Taiwan. Direct pressure would be applied via strikes against PLA power projection forces and indirect pressure would be applied through the enforcement of a distant blockade and other whole-of government efforts.¹¹⁴ More than likely, any potential Chinese use of military force in the South and East China seas or against Taiwan or would be preceded by some sort of crisis. The United States could address the risks associated with a military use of force by applying indirect pressure via distant blockade to discourage the PLA from conducting overt attacks.¹¹⁵ The United States could leverage the imposition of a distant blockade to influence the PRC’s decision calculus regarding the use of direct military force against Taiwan or other regional partners.

Imposing a distant blockade and simultaneously conducting strikes against PLA A2/AD networks would be ill advised given the potential for nuclear escalation associated with deep strikes into Chinese territory. Instead, in the event of a crisis with China, the United States should employ a distant blockade as a means of applying indirect pressure to slow the crisis down before it escalates into an outright conventional or nuclear conflict. As Hammes points out, the value of Offshore Control is that it is designed to slow a crisis down. The ability to slow a crisis is critical because it provides decision makers time to weigh various options when making decisions about the need for escalation.¹¹⁶

Peifer acknowledges that a distant blockade would be extremely costly to the global economy but would still be far less expensive than conducting deep strikes that risk escalation to nuclear war. Peifer also posits that while the United States and China are part of a market economy, the competition for resources is market driven and economic in nature. Because of this, Peifer believes it would be imprudent for China to trade access to global markets and resources for a monopoly of Southeast Asian resources.¹¹⁷

There are additional potential benefits associated with the United States adopting an Offshore Control approach to counter Chinese aggression in the Western Pacific. For example, a distant blockade imposed on China clearly signals U.S. intentions to engage in a limited conventional war. Additionally, as long as the United States maintains air, sea and space dominance over the Indian Ocean and the Western Pacific, it can still project power into the South and East China seas at least for now.¹¹⁸ However, as China continues to modernize its A2/AD networks and space based capabilities, the United States may find maintaining dominance in the Western Pacific increasingly challenging.

Tsun Tzu is reported to have said “Ultimate excellence lies not in winning every battle but in

defeating the enemy without ever fighting,” and “the highest form of warfare is to attack [the enemy’s] strategy itself.”¹¹⁹ By applying pressure on the periphery of Chinese territory the United States could potentially avoid direct military confrontation with the PLA. Additionally, Offshore Control allows U.S. forces to attack China’s strategy of complex A2/AD networks by removing the need for deep strikes into Chinese territory.¹²⁰ As Hammes points out, because of the potential for nuclear escalation, the United States must be prudent in its selection of ends, ways and means to ensure they secure U.S. strategic goals without risking a major nuclear exchange. Offshore control accomplishes this by establishing three concentric rings of control. The first ring prevents Chinese use of the sea inside the first island chain. The second ring defends the air and maritime domains of the first island chain and the third, allows U.S. forces to dominate the sea and airspace outside of the first island chain. These measure do not require sorties into Chinese airspace and they may serve to simplify cessation of hostilities.¹²¹

Offshore Control also allows the United States to take advantage of the geography of the Western Pacific to maximize advantages at the strategic and tactical levels of warfare. Offshore Control allows the United States and its allies to employ integrated air-sea defense over their own territories, while forcing China to fight at distances that are out of range of much of its military power.¹²² This is another example of the practice of the highest form of warfare according to Tsun Tzu. Forcing China to fight over long distances is another means of attacking China’s strategy by reducing the relevance of its A2/AD networks.

Tailoring ASB for the Offshore Control Strategy

Analysis of the ASB Concept shows that it could still play an important role with regard to an Offshore Control approach to counter Chinese aggression especially if the organization, collaboration, networking and integration and training of U.S. forces and allied partners is

tailored as a component of an Offshore Control strategy. The ASB Concept is not strategy; in its current design, it would probably be effective against a regional power such as North Korea or Iran. Applying the ASB Concept effectively against a peer competitor like China is another matter. The ASB Concept is focused on domain warfare rather than addressing the unique challenges of fighting China in the Western Pacific without risking nuclear warfare.¹²³ Finally, it is difficult to determine of the efficacy of the ASB Concept in the absence of an identified strategy to defeat China in a war.

Multi Domain Battle

Developing an Army and Air Forces joint doctrine to facilitate coordination between air and ground forces is another potential means of countering Chinese aggression. David E. Johnson is a principal researcher for the RAND Corporation. He advocates for a concept called Multi-Domain Battle (MDB) to address conflict with peer or near peer competitors like China or Russia. He believes the MDB Concept can provide U.S. military forces with reliable conventional warfighting power to deter Chinese aggression.¹²⁴ Like the ASB Concept, the MDB Concept has its roots in the ALB concept, and calls for close collaboration between land and air forces.

However, there are several potential problems associated with the MDB Concept. Johnson argues that establishing the MDB Concept will be more difficult to implement than ALB was because MDB will have to solve more than one problem. The ALB concept was designed to defeat Warsaw Pact forces in a Western European land war. This singular focus allowed the Army and Air forces to focus their efforts on defeating one foe. Like ASB, current versions of MDB are domain focused instead of having an adversary focus. Johnson also argues that China and Russia pose distinctly different challenges for U.S. forces and a generic MDB Concept is

inadequate to address them. Thus, two distinct MDB concepts would need to be developed. One Army and Air Force MDB Concept to counter Russia and another Navy and Marine Corps version of MDB to address challenges from China.¹²⁵

Finally, the MDB Concept is based at least in part on Army doctrine and joint operational doctrine published in 2017. This doctrine focuses on controlling the battlespace through maneuver and the employment of fire support. Johnson argues that the Army's long range fires can decisively address enemy A2/AD capabilities and enable air and space operations.¹²⁶

Analysis of the MDB Concept indicates it is not a viable option to counter Chinese Aggression in the Western Pacific. As with the ASB Concept, deep strikes associated with MDB operations against PLA A2/AD networks needlessly raise the risk of nuclear conflict with China.

Accommodation

Charles Glaser is a professor in the Elliott School of International Affairs and the Department of Political Science at George Washington University. He argues that the U.S. could reduce the chance of conflict with China by adopting a policy of accommodation. Glaser believes the U.S. can negotiate a deal with China that ends the U.S. commitment to defend Taiwan in exchange for China agreeing to resolve its maritime and land disputes in the South and East China Seas. China would also be expected to officially accept that the U.S. military is in East Asia to stay.¹²⁷ Glaser posits that a U.S. decision to end its commitment to defend Taiwan could positively impact the security environment in the Western Pacific in two ways. First it would remove the most likely catalyst for war with China. Secondly it would substantially reduce China's fears with regard to its vulnerability in the SLOC and signal U.S. peaceful intentions.

Accommodation is fraught with political and military risks. China and U.S. regional allies could misread U.S. intentions and assume that the U.S. no longer has the resolve to protect its

interests in the Western Pacific Region. This would be damaging to U.S. credibility. China thus emboldened, may abandon moderation and seek further concessions from the United States with regard to Korea and the South and East China Seas.¹²⁸ Accommodation with Taiwan would also free up PLA forces and resources to challenge U.S. forces in the Indian and Pacific Oceans, as well as the Malacca and Lombok straits. Glaser argues that with Taiwan no longer a concern, China might be less determined to challenge U.S. forces in the SLOC. This argument is purely conjecture, because there is no way to know for sure how China would respond in this situation. Something else to consider, is how a PLA capability to challenge U.S. forces in the SLOC could impact future conflicts with China. If the U.S. were unable to employ a strategy of Offshore Control, it would lose the ability to apply indirect pressure against China to slow conflict down. This is a substantial concern because it would also narrow the escalation options available to U.S. forces and increase the risk of nuclear conflict.¹²⁹

Accommodation would also significantly bolster PLA military capability at the expense of U.S. forces. Control of Taiwan would allow the PLA forward deploy forces and to project power into the airspace and waters of the Western Pacific. Submarine access to the Philippine Sea would expand PLA A2/AD capability and pose a grave hazard to U.S. carrier groups. Finally, accommodation on Taiwan may cause regional partners like Japan and South Korea to lose faith in the U.S. as a reliable ally that is capable of meeting its commitments in the Western Pacific Region.¹³⁰

Accommodation is not a viable answer to Chinese aggression. Accommodation requires the United States to make concessions to China that far outweigh any benefit to be gained.

Recommendations

The United States must develop an adversary specific strategy that is designed to defeat China in the event of war in the Western Pacific Region. To be effective, any counter-China strategy must meet the following objectives:

- Guarantees U.S. forces and regional allies' access to the Western Pacific.
- Assures regional partners that the United States is in the region to stay
- Deters China from settling disputes by force
- Achieves the United States strategic goals without risking nuclear conflict
- Ensure United States credibility in peacetime.¹³¹

Of the three options discussed, a strategy of Offshore Control is currently the most viable means of achieving these objectives. By employing a strategy of Offshore Control through imposition of a distant blockade, the United States can diminish the relevance of China's A2/AD strategy by eliminating the need for attack in depth against those systems. This is in line with Tsun Tzu's strategy of attacking the enemy's strategy.

Having an established Offshore Control as the counter-China strategy, the United States military will be able to tailor the force structure and procure assets specifically for conflict in the Western Pacific Region. This does not mean that the ASB Concept is of no value in the Western Pacific Region. The ASB Concept has much to contribute with regard to how U.S. forces collaborate, train, network and integrate across all domains of warfare. ASB efforts should be applied in the context of an Offshore Control strategy rather than deep strikes against the Chinese mainland. This means that ASB Concept can also be of use to inform the development of the joint force structure needed to prosecute a strategy of Offshore Control against China.

Conclusions:

In the first two decades of the 21st Century, China has attained a position of economic and political prominence in the Western Pacific Region. Additionally, technological improvements in China's A2/AD systems over the last two decades has resulted in a situation where U.S. forces in the Western Pacific Region are operating in a larger and more deadly A2/AD environment than in the past. This paper has evaluated the ASB Concept to determine its viability as an answer to Chinese aggression in the Western Pacific Region. The current ASB Concept as is not a viable answer to Chinese aggression because it substantially raises the risk of a nuclear confrontation between the United States and China.

Thus the United States should adopt a strategy of Offshore Control through distant blockade to deal with any future conflict with China. By doing so, the United States can virtually eliminate the need for deep strikes against the Chinese mainland; mitigating the prospects of a nuclear escalation. Additionally a strategy of Offshore Control may slow down a developing crisis and provide decision makers time to attempt to negotiate a peaceful resolution and minimize economic damage to the global economy. Finally, the ASB Concept can play an important role in an Offshore Control strategy by informing force development, collaboration, integration and training in the context of an Offshore Control strategy.

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