
Deterring Conflict with China: A Comparison of the Air-Sea Battle Concept, Offshore Control, and Deterrence by Denial

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China has, ever since the 1996 Taiwan Strait Crisis, attempted to develop the means to counter America's power projection abilities in the Asia-Pacific. During the Crisis, President Clinton deployed two U.S. aircraft carrier battle groups to the region in order to coerce China to end its hostilities toward Taiwan. The event greatly accelerated Beijing's interest in missile technology, as this was seen as a way to hinder America's intervention abilities. In recent years developments in this field have allowed China to create a vast and complex network of missile might, shaping the backbone of what has been labeled anti-access and area-denial (A2/AD) capabilities. These capabilities increasingly threaten the U.S. military's previously unfettered access to the region, and thus put Washington's established position in the Asia-Pacific in danger.

China's A2/AD capabilities effectively make the area within the first island chain (an important area in Chinese military strategy), a contested zone for other military powers wanting to enter and operate there.² This could, consequently, call into question Washington's staying power and its commitments to its allies in the region. Concurrently, China's A2/AD

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capabilities increase Chinese coercion abilities and open up possibilities for adventurism. In short, as the deterrent of U.S. military power is lessened, it becomes harder for Washington to influence regional security issues, while the opposite is true for Beijing.

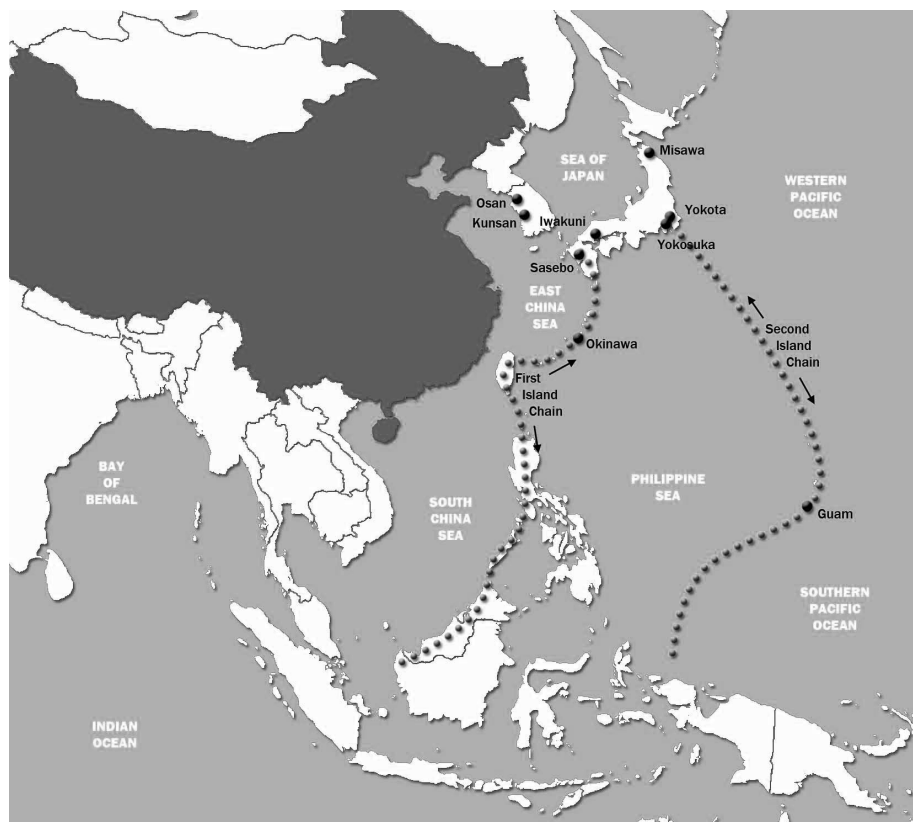


Figure 1. *The First and Second Island Chains*³

Washington has been concerned about America's vulnerability to China's A2/AD capabilities for several years. In 2009, Commander of U.S. Pacific Command, Admiral Robert F. Willard, told reporters, "China has exceeded most of our intelligence estimates of their military capability and capacity, every year ... And, they've developed some asymmetric capabilities that are concerning to the region."⁴

Several military solutions have been proposed to overcome this challenge. The Air-Sea Battle Concept (ASB) is the current Pentagon-sanctioned approach to solving A2/AD problems, but it has been heavily criticized for being excessively escalatory,

too costly, and for the possibility of triggering an arms race.⁵ In light of these critiques, several alternatives have been launched, including Offshore Control (OSC) and Deterrence by Denial (DBD).

It is important that conflict between the United States and China remain in the non-military realm only. This is exactly why an approach for the unlikely event of military conflict with China is needed to create a strong deterrent against the use or threat of force.⁶ Some observers believe that developing ways for waging war with China should be avoided entirely because a U.S.-Sino conflict would be such a destructive enterprise.⁷ However, the old adage “if you want peace, prepare for war” still holds. Accordingly, one of the ways the United States can prevent conflict is to make plans that credibly threaten China in such a way that it is dissuaded from aggressive behavior, i.e. by strengthening deterrence. The military approach is therefore supposed to be just a part—though an essential one—of the larger U.S. strategy for China, and, if successful, would never have to be used.

This article will assess which of these counter-A2/AD approaches has the greatest potential of restoring deterrence against Chinese aggression and coercion on the basis of three questions:⁸

1. *Is it credible?* The willingness of a U.S. decision maker to actually carry out the actions the approach proposes must be believable. This question therefore seeks to gauge if the approach is politically sustainable, if it is easily implementable with current U.S. forces, and if it is context flexible.
2. *Does it offer a convincing theory of conflict termination?* The approach needs to present a persuasive path to actually ending the conflict situation. Optimally, it would be able to settle the issue without inviting further escalation from China. This question thus investigates how far the approach purports to go militarily, and, relatedly, how much it asks China to accept politically.
3. *Is it compatible with the interests and capabilities of U.S. allies?* Having some or all of America’s regional treaty allies agree to the approach’s plan and help enact it if needed is vital. As such, the approach needs to align with their dual goals of maintaining a working relationship with China and preventing it from negatively expanding its sphere of influence.

This article will assume that Beijing is indeed trying to expand its influence within its neighborhood in a way that will allow it to set the

regional norms according to its interests, that it is using A2/AD means as a part of this strategy, and that it currently prefers using a model of creeping expansionism to support its bid for hegemony. The resulting implication is that the on-going disputes over maritime islands and territory are the most likely contenders to become regional flashpoints in the near term. This article therefore puts a premium on deterring short-term, small level conflict. The article will also assume that Washington seeks to retain its pre-eminent military position in the Asia-Pacific region, an approach that is best described as primacy.

CHINA'S A2/AD CAPABILITIES AND THEIR IMPLICATION

Anti-access and area-denial are fairly recent concepts, referring to attempts to deny an adversary access to, as well as the ability to maneuver near and within, a military theater of operation.⁹ However, these are well-established goals in combat, and A2/AD measures in this sense are nothing new.¹⁰ What is new are the recent advances in both technology and proliferation that have made A2/AD capabilities much more potent. Developments in missile technology have been particularly important in this regard. They

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China has been emboldened by the development of anti-access forces at an unprecedented rate. Its current A2/AD capabilities comprise a formidable fusion of a "new generation of cruise, ballistic, air-to-air, and surface-to-air missiles with improved range, accuracy, and lethality."¹² This includes the much-touted anti-ship ballistic missile, nicknamed the "carrier-killer," which China has been integrating into the People's Liberation Army (PLA) doctrine.¹³ China is coupling these weapons with modernized submarines, fighter jets, and sea mining capabilities. The missiles will be able to accurately attack U.S. forces and forward bases at ranges exceeding 1,000 nautical miles.¹⁴ In addition, new developments in anti-satellite and cyber capabilities create other opportunities to hinder U.S. power projection abilities.

In a hypothetical conflict scenario, Chinese capabilities, in combination with the maritime geography of the region (where U.S. power projection is heavily reliant on island bases and bases on allied soil), would create a difficult environment for U.S. forces. China's A2/AD capacity would, at the very outset, create doubt in the ability of the United States to intervene. Furthermore, their capabilities could constrain the scope of an intervention, or push the United States to deploy at more distant locations.¹⁵ Such deployment problems would be further exacerbated by the "tyranny of distance," as U.S. forces would have to operate far from home, encountering a range of logistical challenges, while the theater of operations would take place in China's backyard.¹⁶

The rapid expansion of China's military can thus be seen as a calculated approach to counter the superior strength of the U.S. military, playing on the American weakness of distance, while building on its own technological strengths. The result could be defeat for U.S. forces in the region by preventing them from fulfilling their military goals, while allowing the PRC to successfully expand its influence in the island chain. Alternatively, inaction, or a lack of response on the part of the United States, might inaccurately convince leaders in Beijing that they would be facing an easy or no-war scenario, which, if confronted by a determined Washington, could in fact involve huge losses in blood and treasure.¹⁷

THE AIR-SEA BATTLE CONCEPT

The Air-Sea Battle Concept (ASB) was coined in a 1992 paper by then-Commander of the National War College, James Stavridis.¹⁸ Noting that the United States faced access challenges due to its geographical isolation from regional hotspots characterized by instability and uncertainty, Stavridis called for new ways of organizing air and sea forces. The ASB Concept would, therefore, be an attempt to create a unified strike force with global reach that was "immediately deployable, highly capable, and fully integrated."¹⁹

The nature of the two subsequent major U.S. land wars in Afghanistan and Iraq, where access to theaters of operations was guaranteed via secure logistical hubs, dulled the Pentagon's sensitivity to access problems and, as a consequence, its interest in the ASB.²⁰ According to Stavridis, coordination between the Navy and Air Force continued to develop during this period, but it was the dramatic military rise of China that put the ASB back in the minds of U.S. decision makers.²¹

Recognizing the changed international environment and the implica-

tions of recent Chinese developments in A2/AD technologies, Secretary of Defense Robert Gates addressed this observed weakness in 2009 by asking the Department of Defense to come up with an approach to these developments. Andrew Marshall at the Office of Net Assessment at the Pentagon answered the call by adopting the ASB Concept proposed by Stavridis, developing it further to take into account current conditions and technologies.²² The ASB subsequently became officially endorsed in the 2010 U.S. Quadrennial Defense Review, which called upon the Air Force and Navy to develop:

[A] new joint air-sea battle concept for defeating adversaries across the range of military operations, including adversaries equipped with sophisticated anti-access and area denial capabilities. The concept will address how air and naval forces will integrate capabilities across all operational domains—air, sea, land, space, and cyberspace—to counter growing challenges to U.S. freedom of action.²³

THE ASB BATTLE PLAN

There has been a great deal of public confusion as to what the components of ASB actually are.²⁴ Rear Admiral James G. Foggo III, the current chair of the Air-Sea Battle Senior Steering Group, gave perhaps the clearest public description to date during a testimony in October 2013 before the Subcommittee for Seapower and Projection Forces of the U.S. Senate Armed Services Committee.²⁵ Foggo explained that ASB was designed to assure access to the global commons, including air, sea, space, and cyberspace. It aims to defeat threats to this access by providing leaders with a range of options for concurrent or follow-on operations, which could range from military force alternatives to humanitarian assistance. This would be done by creating a networked, integrated force that can attack-in-depth, leveraging access in one domain to provide it in another.²⁶

Odyssey Dawn, the 2011 operation in Libya, was used by Foggo to exemplify a setting where an ASB-like approach was used. Here, the scenario started out as a humanitarian mission, but quickly escalated into a situation requiring the use of force with little time for a military build-up. Submarines and surface ships worked in tandem to clear Libya's modest A2/AD capabilities to allow for additional follow-on strikes, establishing control of the air domain.²⁷

The "attack-in-depth" aspect of ASB would be the tip of the spear in a conflict situation. Instead of attacking the outer layer of an enemy's forces, the ASB would strike an adversary's weapon systems, which could be

located in any warfare domain, in order to gain access to contested areas.²⁸ This attack would be aimed at affecting the adversary's vulnerabilities in its weapon systems through three lines of effort: disruption, destruction, and defeat.²⁹ Disruption involves impeding the opponent's command, control, communications, computers, intelligence, surveillance, and reconnaissance systems. Destruction entails destroying A2/AD platforms and weapons launchers, such as missile sites, aircrafts, and ships. Defeat means subduing the opponent's active weapons and formations.

The ASB's attack-in-depth features have received the most attention in the public debate. Many have criticized the prospect of deep strikes on China's mainland because it would be a dramatic escalation during a U.S.-Sino conflict.³⁰ However, it is important to note that this would be the highest level of intensity for a response to Chinese provocations. ASB also proposes lower levels of reactions to overcome A2/AD forces, such as the use of cyber capabilities.³¹

EVALUATING THE ASB CONCEPT

Is It Credible?

The political sustainability of an ASB-based response will be highly context sensitive. Its legitimacy is strengthened by the assumption that Beijing would be the one to make the initial offensive move, not the United States.³² In almost any scenario, a U.S. president is likely to be highly reluctant to initiate the attack in-depth option.

However, as mentioned above, ASB presents a range of options to counter aggression from an actor like
 China, including cyber and space operations. While detailed battle plans are classified, the official ASB document references alternatives at the low-level of conflict, including carrying out "a show of force, or conduct[ing] limited strikes."³³ The latter need not take place on China's mainland, but could happen offshore, in space, or in cyberspace. This flexibility is something that has been lost on many of the ASB's critics. Far from relying solely on mainland strikes and requiring "a total war with China" that could "lead to nuclear war,"³⁴ ASB presents alternatives at various levels of conflict. Indeed, it has been designed to be responsive to evolving situations, like the one in Libya,

The Air-Sea Battle concept presents a range of options to counter aggression from an actor like China, including cyber and space operations.

which was compared to a “pick-up game of basketball.”³⁵ Having several options to choose from depending on the scenario increases the credibility of ASB.

The approach relies on a combination of current capabilities and technology, as well as the infusion of additional large investments. New acquisitions would be particularly geared toward attaining the ability to attack-in-depth against A2/AD systems. This would include a mixture of penetrating strike assets, including long-range stealth bombers and the F-35 Joint Strike Fighter, coupled with electronic attacks, cyber-warfare, cruise missiles, and a more capable command system.³⁶ A private report on the estimated costs of attaining such an attack-in-depth capability indicates that the ASB could cost USD 524.5 billion through 2023.³⁷

Does It Offer a Convincing Theory of Conflict Termination?

The ASB envisions that aggression could be deterred by the punishment Washington would be able to inflict upon an adversary. It thus relies on a deterrent based on punishment, rather than denial.³⁸ This does not provide a convincing theory of conflict termination, as the issue would not be settled one way or another. Rather, the conflict is likely to drag on with no clear end in sight. In the example of the 2011 intervention in Libya, Gaddafi’s forces were outmatched in every relevant dimension, and

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..... easily overcome. This would not be the case with the PLA, which would prove a much more potent opponent.

Lower-level ASB measures could be ignored or potentially invite responses elsewhere.³⁹ Furthermore, higher-level reactions, though presented by some proponents as a shrewd way of seizing the “last rung of the escalation ladder before strategic warfare,” are unlikely to lead to conflict termination.⁴⁰ Even if the mainland strikes are successful in

..... their goals, all this would lead to is the opportunity for the United States to continue bombing China, as Washington would be no closer to a strategic victory against Beijing.

Recent history shows that war termination through air power, which would be the main component of an ASB attack-in-depth campaign against China, is a dubious claim. For instance, it did not compel Saddam

Hussein to surrender in either the first or second Gulf Wars.⁴¹ The only potentially positive example is the Kosovo War in 1999. But still, in the case of Kosovo, it took NATO seventy-eight days and numerous aircraft sorties to force the submission of an enemy with no air defenses, and, arguably, it was the threat to introduce ground troops that pressured Milosevic to capitulate, not the aerial bombardments. China would be a much harder case. Furthermore, bombings would also provide visible evidence of enemy destruction to China's populace. This is sure to increase the "rally round the flag" effect for the Chinese leadership and harden their resolve, encouraging them to open a new combat theater somewhere else.⁴² Accordingly, there is currently no clear ending to combat in the proposed ASB approach.

Lastly, it would be extremely difficult to demonstrate to China's leadership that the United States does indeed possess the ability to take out their A2/AD systems, particularly given that there is a vast network of PLA command and control nodes, radar sites, and thousands of launchers inside China, that many of the systems have secret locations with potentially heavy fortifications, and that many of the launchers are mobile.

Is It Compatible with the Interests and Capabilities of U.S. Allies?

The reception of ASB has been lukewarm at best in allied capitals.⁴³ The fact that important operational details of the ASB have remained classified has meant that allies do not fully understand the concept or what is expected of them. This has, according to Richard Bitzinger and Michael Raska, created concern for "future allied interoperability requirements and involvement."⁴⁴ Allies worry about the substantial command and attack-in-depth system investments required to remain compatible with U.S. capabilities.

The aspect of ASB that has raised the most eyebrows among U.S. regional allies, however, was the envisioned attack-in-depth campaigns against China. ASB proposes to use the friendly territories of allies as bases from which to launch U.S. strikes on China. This could become a problem for U.S. allies, as they are all within firing range of Chinese retaliation strikes.⁴⁵ Furthermore, America's allies realize that they are reliant upon maintaining friendly relations with both the United States *and* China. Ben Schreer, of the Australian Strategic Policy Institute, argues that Australia is reluctant to fully embrace the ASB approach because it "interferes with Australia's interest in developing closer strategic interactions with China."⁴⁶ This concern about the political message sent to China highlights the image problem ASB has acquired.

The fact that ASB also proposes alternatives for lower levels of conflict, which do not involve deep strikes on China, is not represented well in the literature on allied responses to the concept. Daniel Hartnett is perhaps right that it could be impossible to “fully delink the concept from efforts specifically tied to defeating China.”⁴⁷

OFFSHORE CONTROL

T.X. Hammes at the National Defense University launched the Offshore Control strategy in 2012.⁴⁸ It was written at the request of the strategy section of the Pentagon’s Office of the Secretary of Defense for Policy, as a response to the initial writings on the ASB in 2010. According to Hammes, certain people in the Pentagon believed ASB lacked a strategic framework and application, and he was tasked with writing a strategy that would more ably match ends, ways, and means.⁴⁹ OSC was therefore devised in direct opposition to ASB.

In the event of conflict, OSC proposes to interrupt China’s sea-based ability to import energy and raw materials, as well as interdict its maritime exports. China is heavily reliant on foreign trade and the import of raw materials, particularly oil. For example, in 2011 it purchased 60 percent of its oil from abroad, 90 percent of which was transported into China via sea routes.⁵⁰ OSC purports to establish a set of concentric rings that would “deny China the use of the sea inside the first island chain, at the same time defend those islands, and dominate the air and sea outside that theater.”⁵¹ Clearly establishing its disagreement with ASB, Hammes goes on to explain that OSC pictures a “stand-off military campaign focusing on a war of economic strangulation rather than on penetrating Chinese airspace to physically destroy its infrastructure.”⁵²

The strategy thus targets China’s economic foundation. The envisioned result would be the exhaustion of China’s economy and the eventual admission of defeat by leaders in Beijing, whose best choice would be to sue for diplomatic talks. OSC would therefore strike at the source of legitimacy for the Chinese Communist Party (CCP): China’s continued economic growth and the increasing opportunities for its people. It is important to note, however, that OSC does not call for bringing China’s economy to a halt, but rather suggests making it less or non-competitive globally.

THE OSC BATTLE PLAN

During conflict, the inner concentric ring established by OSC would be declared a maritime exclusion zone where U.S. forces would sink ships illegally present. For such actions the United States would mainly rely on attack submarines, mines, and some air power.⁵³ The main target would be large cargo ships and tankers, which are the backbone of China's export economy.⁵⁴ At the same time, allied air and sea fortifications would be better integrated with American forces to bolster allied territorial defenses against attacks. OSC does not ask U.S. allies to allow Washington to strike China from their soil, only that the United States assist in their territorial land, sea, and air defenses.⁵⁵

The outer concentric ring would attempt to control the area beyond the first island chain. This is outside the reach of most of China's A2/AD forces, so the United States could more freely employ the range of its military forces, including ground, naval, and air forces, to intercept and divert super-tankers and container ships headed to China.⁵⁶ The cost imposition between China and the United States would thereby be reversed, because China does not currently possess a blue water navy that can practice sea control capable of penetrating distant defenses or defending its maritime trade.

With a focus on economic strangulation, OSC assumes that there is a high probability for a long, drawn-out conflict, rather than a short and decisive one. This slow-moving nature is an asset, according to Hammes, because it allows time for the conflict to be resolved.⁵⁷ Furthermore, he argues that

employing OSC creates greater stability and predictability during conflict than ASB, since it eschews the use of cyber and space capabilities. As those capabilities are currently offense-dominated in nature, with the actor that strikes first gaining the advantage, their employment can lead to escalation. Hammes therefore believes that a slowly developing conflict will give "diplomats time to seek a solution free from the demand for sudden escalation in space or cyber."⁵⁸

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EVALUATING OFFSHORE CONTROL

Is It Credible?

In relation to political sustainability, OSC is less than credible. Even though it also assumes that China would strike first, it is highly doubtful that any U.S. president would initiate a blockade of China over anything but a major hostile action, because of the great economic and political costs. Economic warfare cuts both ways, exhausting not just the enemy, but Washington and foreign powers as well.⁵⁹ Furthermore, it will prove difficult to maintain a commitment to the blockade, both in relation to the U.S. constituency and foreign capitals. The strategy's slow-moving nature also gives China more opportunity to challenge the blockade through military and diplomatic means, thereby further increasing the political costs levied on the United States.⁶⁰

OSC also lacks context flexibility, as it is designed solely for high-level conflicts with China. For example, it would be a highly disproportional U.S. reaction to employ a blockade in response to Chinese aggression over island disputes in the East China or South China Seas.

The strategy's credibility is stronger in terms of the capabilities it plans to draw on. OSC envisions using presently available U.S. assets, such as attack submarines, mining vessels, and air forces, within the first island chain, as well as bolstering U.S. ground and sea-based anti-air missile defense systems to allied territory within China's kill zone.⁶¹ However, it is obvious that the U.S. Navy does not have enough capabilities to oversee the shipping fleet of 1,500 very large container ships expected to be in operation by 2015.⁶² Hammes responds to this objection by proposing that the U.S. use amphibious shipping, in conjunction with the Navy, to launch Army and Marine Corps boarding parties that can intercept cargo ships.⁶³ However, it is doubtful that these troops would be able to steer supertankers if the crew turned unwilling, perhaps acting on orders from their home government or company. This problem would be compounded if the problem arose on several vessels at once.⁶⁴

Does It Offer a Convincing Theory of Conflict Termination?

Many question the logic of forcing Beijing's leadership to sue for a settlement based on economic strangulation. Elbridge Colby suggests that it will be incredibly hard to wear down the resolve of China's populace.⁶⁵ He believes "the Chinese [populace] are likely to have a greater reservoir

of willingness to suffer than [the United States]” regarding issues that are of widely accepted importance.⁶⁶ Additionally, Daniel Blumenthal finds economic strangulation just as escalatory as mainland strikes, given that they are equally regime threatening to the CCP.⁶⁷ Bryan McGrath goes further, averring that, since the strategy is actually threatening the demise of the CCP, it might elicit a nuclear response.⁶⁸

History reflects both the positive and negative aspects of the gradual nature of OSC. The slow intensification presents off-ramps that allow time for a diplomatic solution to contain or end the crisis. In the 1962 Cuban Missile Crisis between the United States and the Soviet Union, the 1969 Zhenbao Island incident between the Soviet Union and China, and the 1999 Kargil War between India and Pakistan, both sides deliberately sought to slow down the conflict and prevent initial escalation.⁶⁹ This suggests that the United States and China would most likely work hard to find a diplomatic solution in a crisis situation, making the gradually developing nature of OSC an advantage. Compared to ASB, the OSC approach could create a political climate that encourages settlement, a possibility that would dissipate with strikes on China’s mainland.⁷⁰ On the other hand, the political environment might be so charged that China would be unwilling to admit defeat. The historical analogy to the gunboat diplomacy displayed during the First and Second Opium Wars would most likely not be lost on the CCP, which has taken a “never again” stand to the vulnerability felt during China’s so-called “Century of Humiliation” between 1839 and 1949.⁷¹

In the battle of wills between the United States and China, Offshore Control presents a theory for conflict termination, but whether it will be successful is going to be highly context dependent.

Furthermore, in the event of an attack on Chinese vessels, one cannot rule out that Beijing would use its seagoing and shore-based military assets to full effect. Under OSC, American forces would specifically be charged with not attacking China’s mainland, which would, in the words of James Holmes, grant China “one heckuva sanctuary.”⁷² In the battle of wills between the United States and China, OSC presents a theory for conflict termination, but whether it will be successful is going to be highly context dependent. This might be sufficient, however, because the strategy only needs to plausibly be able to achieve victory to add to its deterrent value.

Is It Compatible with the Interests and Capabilities of U.S. Allies?

America's allies in the region will be able to find several positive aspects of OSC, but with some important drawbacks. The strategy's transparency is a strong point, as it can be openly demonstrated through joint allied training and military exercises. This cannot be done in the same way with ASB's suggested cyber, space, and mainland attacks on China. OSC would thus be able to display its potency and feasibility during a crisis situation.⁷³ Furthermore, by building on existing capabilities, OSC does not require substantial developments in new technology to be able to penetrate China's battle systems.

OSC proposes to protect U.S. allies within the first island chain, which would include South Korea, Japan, and parts of the Philippines, and perhaps partners such as Taiwan and Vietnam. Though it promises to defend them from Chinese aggression, close U.S. allies like Seoul and Tokyo would be rightly worried about being trapped in a locked room with a fire-breathing dragon. This is because the OSC battle plan, in contrast to the ASB approach, proposes not to attack the source of potential Chinese aggression, namely Beijing's military means on the mainland. China would consequently be free to strike from a position of near impunity. In such a situation, U.S. allies might not be pacified by American assurances that the blockade is taking effect. Instead, they might demand action and find the OSC lacking in its ability to punish China for attacking them.

If faced by the large-scale aggression assumed by OSC, it is not unreasonable to believe that U.S. allies would find the OSC strategy in alignment with their interest in preventing China from creating a sphere of influence in their neighborhood. But, they would certainly have reservations about the danger they found themselves in during a blockade with an aggressive China and would likely not support an OSC-approach in anything but a high-level conflict.

DETERRENCE BY DENIAL

Professor Andrew Erickson at the U.S. Naval War College, finding the two previous approaches lacking, launched his own strategic approach in December 2013: Deterrence by Denial (DBD).⁷⁴ In accordance with those arguing for ASB or OSC, Erickson believes the United States must make sure that its security commitments in the Asia-Pacific are not hollowed out by China's ability to threaten both its neighbors and Washington. However, instead of focusing on deterrence through punishment, as ASB and OSC do,

he suggests that an approach emphasizing deterrence through denial would be a more effective way of preventing China's most likely expansionist goals. Rather than meeting China head-on, the United States can play defense. While the United States would merely seek to uphold the territorial status quo, Beijing would need to lastingly alter it—a much more difficult task.⁷⁵

Erickson thus criticizes the ASB approach for pushing the United States to “compete with Beijing in excessively expensive and ultimately ineffective arms competitions.”⁷⁶ He does not believe it to be fruitful for Washington to try to compete with Beijing by acquiring counter-capabilities in every aspect where China has a technological advantage. He argues China is exploiting simple laws of physics in military platforms that are hard to deny: e.g. that missile attacks tend to be both easier and more cost-effective than missile defense, particularly when attacking fixed targets like military bases.⁷⁷ Furthermore, he echoes the consistent criticism leveled against ASB that deep strikes on China would be excessively escalatory or counterproductive and that they lack credibility to deter small-scale conflict in the East or South China Seas.⁷⁸

Erickson also worries about the escalatory effects of OSC once the blockade has started. He is not convinced that the strategy would be feasible in our current globalized world because of the logistical problems involved in separating China from world trade, as well as keeping allies and neutrals on the same page as America.⁷⁹

Moreover, he claims neither of the two approaches presents a convincing theory of conflict termination in cases where China would be willing to start a war to pursue its interests.⁸⁰

Instead, Erickson favors DBD's strategic approach, which would aim to establish Washington's “capability to deny China the ability to seize and hold disputed territories.”⁸¹ He describes DBD as a bottom-line strategy that indicates what, at minimum, is required to keep the peace in the region over time.⁸² DBD's strategic rationale is therefore to develop America and its allies' own A2/AD defensive measures. This would turn the tables on China, by forcing it to be the one that has to make sacrifices associated with breaking through A2/AD defenses. In doing this, DBD attempts to

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demonstrate to Beijing that it will be unable to achieve its goals in China's near seas by the use of aggressive means.

THE DBD BATTLE PLAN

For China to be able to resolve its current maritime disputes by way of force, it would need to seize and hold on to territory, as well as resupply its forces on the ground.⁸³ From a military standpoint, achieving these goals will be exceedingly difficult due to the geography of the islands. They are “[s]mall, isolated, uninhabitable and unsuitable for the use of defensive weapons systems because of their terrain,” making them “difficult if not impossible to defend and hard to exert control over symbolically or otherwise.”⁸⁴ If attempting to seize islands in the East or South China Seas, Beijing's forces would thus be operating in an offense-dominated environment, which would be prone to volatile turnaround if another nation wanted to challenge its gains.⁸⁵

Therefore, in order for the United States and its regional allies to maximize their own disruption capabilities through bolstered A2/AD defenses, DBD proposes that they invest in and deploy as quickly as

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possible certain high-payoff military capabilities.⁸⁶ These include advanced surface-to-surface, air-to-surface, and surface-to-air missiles, in addition to extra naval mines and submarines.⁸⁷ By building on such capabilities, Erickson asserts, “U.S. submarines can oppose any Chinese naval forces engaged in invasion, resupply, and protection. Long-range air or missile delivery can blow any lodgment off disputed islands or rocks.”⁸⁸ This shifts the U.S. focus

toward denying China's expansionist goals, rather than punishing Beijing for pursuing them. Such an emphasis sets it apart from the highly expensive ASB solution for similar expansionist problems, and from an OSC approach that is not geared toward lower-level issues.

Erickson admits that this would create an environment where both sides possessed potent A2/AD abilities, and each would be able to plausibly deny the other access so as to prevent them from achieving their military goals. However, he believes this actually would be to the benefit of the

United States, because by denying China access, the United States also denies China the ability to upend the current security situation.⁸⁹ In short, by creating a no man's land Washington achieves its goals while Beijing is denied theirs.

EVALUATING DBD

Is It Credible?

Putting more emphasis on the *denial* aspect of deterrence does bolster DBD's political sustainability. In the most likely conflict scenarios, DBD's approach appears more justifiable, with its proposal of a convincingly limited but firm response to Chinese aggression. By eschewing cyber, space, mainland strikes, and full-blown blockades, the willingness of U.S. decision makers to carry out its purely denial-seeking objectives to deter maritime aggression could be seen as more acceptable than OSC and ASB.

However, its sustainability would certainly be lessened if China were able to seize disputed islands in a bloodless operation. Beijing accomplished such a feat in 2012 when it seized control of the Scarborough Shoal from the Philippines by using only coast guard vessels.⁹⁰ Then again, larger operations, like the attempted seizure of the Senkaku/Diaoyu islands from a more capable Japan, would pose greater difficulties for China. This type of operation would almost certainly involve casualties on the Japanese side and, under such conditions, DBD would become a justifiable reaction.

The fact that DBD builds on existing capabilities, as well as current investment programs, strengthens the strategy's credibility. It calls for focused investments on military platforms that can produce disproportionate deterrence benefits by their high cost-benefit ratios, including naval mines, missiles, and submarines. The strategy proposes to further strengthen such A2/AD capabilities by investing in undersea forces to preserve the lead the United States currently has in this field.⁹¹ It can thus be easily implemented in the short-run and does not propose to put an additional unduly heavy burden on the American military budget.

The approach has limited context flexibility due to its predominant focus on deterring conflict over maritime disputes in China's near seas. It can be an effective strategy against such incidents, but not in preventing conflicts that are larger in scale. Yet, the fact that DBD directs attention to the area where military showdowns are most likely to occur does add value.

Does It Offer a Convincing Theory of Conflict Termination?

In the case of Chinese maritime aggression, DBD proposes to neutralize Chinese troops and their logistical chain by relying particularly on America's undersea advantages. Since the conflict would be limited to maritime territory with China as the initial aggressor, Beijing could potentially back down after such a move and end the conflict. It is not unreasonable to believe that this would be a "limited enough" issue for two nuclear great powers to resort to negotiations once the initial skirmish had died down.

While DBD would be successful in "turning back the clock" and restoring the status quo, the U.S.-Sino relationship would now be redefined as one where both parties harbored significantly more hostility toward each other.⁹² This would create a climate in which a resumption of conflict would be highly likely. In this sense, the high-end ASB approach could be seen as a more effective strategy given its objective of eliminating China's military power. If effectively executed, the ASB strategy would at least more plausibly prevent a rematch from occurring.

Of course, it is not at all certain that Beijing would back down if its forces were defeated in their attempt to hold islands in China's near seas. It is possible that the CCP leadership would want to escalate the situation further as a response to being attacked or to prevent a humiliating loss. Strong nationalist sentiment has hardened the regime's position when it comes to maritime disputes, particularly the one over the Senkaku/Diaoyu islands.⁹³ In order to avoid a loss of credibility at home, China's leadership could decide to respond with greater aggressiveness rather than withdrawal.

Is It Compatible with the Interests and Capabilities of U.S. Allies?

U.S. treaty allies, such as Japan, the Philippines, and South Korea, will certainly find it in their national interests to prevent China from seizing any of the islands over which they are currently in dispute with Beijing. In the event of a Chinese assault, these states would most likely demand assistance from the United States. DBD, therefore, provides a strategy for guaranteeing and enforcing their defense. Australia and Thailand, America's other Asian-Pacific allies, are not currently in any island disputes with China but would undoubtedly want to deter and prevent Chinese mari-

time aggression as well.⁹⁴ This goal is similarly shared by other U.S. regional partners locked in island disputes with China, such as Vietnam, Taiwan, Malaysia, and Indonesia. DBD's proposal for a proportional response to a limited problem could make the approach more readily acceptable in allied capitals, rather than the greater escalations proposed in ASB and OSC.

There is a risk, however, of China taking advantage of the probable discrepancy between U.S. allies in their support of forceful responses to lower-levels of conflict, like the Scarborough Shoal incident. The country directly involved would most likely want U.S. assistance, while countries without a claim might view military support as an unnecessary escalation. The opportunities for simple and bloodless operations for China seem to be slowly disappearing, as the countries in the region bolster their own navies and coast guards.⁹⁵ Consequently, if Beijing did try to capture maritime territory through so-called "salami slicing" tactics in the future, it might have to use force in such a way that the support for a U.S. reaction would be strong.

DBD would probably also be well-received in allied capitals based on the fact that it builds on current military capabilities, in addition to supporting their own A2/AD systems. Not requiring substantial investments into developing or adopting new technology is an asset. Furthermore, DBD's potency could be demonstrated in peacetime exercises where drills with similar content and deterrence messages are already taking place.⁹⁶ This would mean its feasibility could be displayed both to allies and to China in advance, which is an advantage DBD shares with OSC over ASB.

SUMMARY OF FINDINGS

As has become evident, finding a suitable approach for deterring conflict with China in an A2/AD environment is challenging. Table 1 offers an overview of this study's findings.

	Air-Sea Battle	Offshore Control	Deterrence by Denial
Credible?	<p>Overall assessment: Medium.</p> <ul style="list-style-type: none"> + Flexible, range of options to choose from (show of force, cyber, space, mainland strikes) - Need to develop new attack-in-depth capabilities: costly and long-term - Deep strikes on mainland do not seem politically viable in most cases 	<p>Overall assessment: Low.</p> <ul style="list-style-type: none"> + Uses mostly available U.S. military capabilities - A lot of political will needed to maintain a blockade - Inflexible, would likely not be initiated over anything but a major conflict - Economic warfare cuts both ways - Slow-moving nature presents opportunities to challenge the blockade 	<p>Overall assessment: High.</p> <ul style="list-style-type: none"> + Political will to deny limited goals more believable than (possibly) escalating punishment + Uses mostly available U.S. military capabilities + Focuses on maritime disputes where incidents are most likely - Does not address large-scale conflict or open warfare scenarios
Convincing theory of conflict termination?	<p>Overall assessment: Low.</p> <ul style="list-style-type: none"> + Threat of punishment could be a sobering notion to Beijing - Hard to demonstrate penetrating and intelligence capabilities - No clear way of ending conflict after higher escalation - Deep strikes do not give real strategic advantage, only ability to bomb more - Strikes would create "rally-round the flag" effect in China 	<p>Overall assessment: High.</p> <ul style="list-style-type: none"> + Gradual intensification allows for diplomatic solution + Easier to sue for peace in a political climate where China's mainland and forces have not (necessarily) been struck + Capability can be openly trained for and demonstrated - Targeting economy could lead to escalation - Does not go after the military source of potential aggression 	<p>Overall assessment: Medium.</p> <ul style="list-style-type: none"> + Operating in offense-dominated environment means it is hard to hold on to islands + Could be a "limited enough" conflict for both sides to back down after skirmish - Limited operation "turns back the clock," but creates ambiguity about lasting conflict termination - No firm explanation for why China would back down instead of escalate
Compatible with interests and capabilities of allies?	<p>Overall assessment: Low.</p> <ul style="list-style-type: none"> + Intends to improve military interoperability - Secrecy has led to confusion and concern - Unclear which new technology and investments that are needed to be compatible - Allied fear of Chinese reactions if allowing U.S. strikes from their territory 	<p>Overall assessment: Medium.</p> <ul style="list-style-type: none"> + Builds mostly on existing allied capabilities + Transparent, efficacy can be displayed through joint military exercises - Would go against allied interests in anything but large-scale conflict - Does not present a wholly assuring picture to allies trapped with China inside the blockade, their defenses will likely be overcome 	<p>Overall assessment: High.</p> <ul style="list-style-type: none"> + Builds mostly on existing allied capabilities + Transparent, efficacy can be displayed through joint military exercises + In interest of allies to repel attacks on their claimed islands + In interest of most regional countries to prevent abrupt changes to the status quo through force - If quick and relatively bloodless, sympathy for escalation beyond the country involved could lessen

Table 1. *Summary Analysis of Counter-A2/AD Approaches*

Overall, this article finds DBD to be the most convincing approach in restoring deterrence in current flashpoints around China. U.S. politicians may view DBD as more credible than OSC and ASB, because it emphasizes deterrence through denial instead of punishment. The strategy is also more believable in terms of implementation possibilities, taking into account the complexities of the U.S.-Sino relationship. Relatedly, the narrow scope of the response proposes to keep the issue contained, possibly working against escalation in dangerous situations of heated emotions where naval blockades, as well as space, cyber, and mainland attacks, could make the situation worse by hardening positions or opening new fronts. This characteristic also makes DBD more likely to be readily accepted in allied capitals. U.S. allies have an obvious interest in preventing Chinese island invasions, but not necessarily in participating in escalation beyond the immediate operations necessary to prevent Chinese incursions.

DBD is far from perfect, however. It does not present a clear theory of victory beyond preventing PLA troops from holding on to islands in dispute. In this regard, OSC presents a course of action that is more likely to lead to a termination of the conflict. Furthermore, while effective for its purposes, DBD cannot be used for large-scale conflicts, since it relies on the offense-dominated environments of islands to be successful. At this point, OSC presents a better solution through engaging the CCP's core interests.

A FALSE TRICHOTOMY?

Though it is certainly a useful exercise to evaluate the merits and weaknesses of these three approaches, it must also be pointed out that the divisions between them are not as strong as it might seem. While some authors have held firmly to the mutual exclusivity of these approaches, others have begun investigating whether they could be joined in a coherent and effective way.⁹⁷

In this respect, a combination of DBD and OSC seems to make the most sense, as the two are close in spirit. Both advocate using current military capabilities to turn China's A2/AD strengths against it. They eschew cyber, space, and direct strikes on China, finding them too escalatory. Additionally, the two strategies would be able to display their efficacy through public military exercises where allies could also partake. They may also complement each other. DBD could be the small-scale approach to preventing Chinese aggression over islands in the East and South China Seas, while OSC could be used as a deterrent to large-scale aggression. This would allow the two to form a highly flexible approach that covered the entire spectrum of escalation responses. Moreover, by relying on OSC as a potential escalation option, DBD's theory of conflict termination would be strengthened by the fact that, if China decided to intensify the conflict, the United States could respond with a debilitating blockade. This would put pressure on Beijing to settle an island grab skirmish at an earlier stage.

The implications of embracing DBD, or some combination of DBD and OSC, however, would be a departure from the established U.S. grand strategy and defense posture for the region. These approaches are inherently defensive in nature, as they do not intend to break through and destroy China's A2/AD systems.⁹⁸ This means that the U.S. military would cede its ability to retain guaranteed freedom of movement in certain areas and, as a consequence, would lose the type of dominant air and sea position it has held historically.⁹⁹ Yet the strategies would reinforce the U.S. preference for

stability in the region, which is arguably why it has maintained its dominant military position in the first place. Though Washington might cede its undisputed military access by employing these military approaches, China would no longer be free to upset the status quo.

Another direction worth exploring could be to combine all three existing approaches. They could be viewed sequentially, with DBD offering deterrence against the higher probability but arguably lower consequence

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It is important to be able to offer proportional options to whoever is sitting in the White House.

scenarios, and OSC and ASB providing a deterrent to low probability, high consequence situations. Any confrontation with China would be a situation fraught with uncertainty and unforeseen contingencies. In such an environment, it is important to be able to offer proportional options to whoever

is sitting in the White House. For example, if the scenario escalated and a move from a DBD to an OSC approach were warranted, there would be a critical period of time between OSC being initiated and it actually becoming effective. During this timeframe, Beijing could take escalatory actions of its own to hurt the United States. This could involve striking the U.S. base on Guam or American bases on allied soil. In such a scenario, waiting for OSC to take effect could be deemed insufficient by U.S. policymakers and allies wanting a prompt response. Having the capability to perform ASB-proposed actions would therefore be valuable. ASB remains highly expensive however, significantly raising the economic cost of a trilateral approach. If one wanted to conserve resources and simply combine two of these approaches, DBD and OSC would offer the best returns.

CONCLUSION

This article has argued that DBD would be the single best approach to deter the most likely sources of Chinese military aggression in an A2/AD environment. To make the strategy more context flexible, it could conceivably be combined with OSC. However, as all three approaches seem to be designed mainly for their deterrent effect, they are also limited in their explanation of the unstable peace that is likely to follow from any kind of forceful operation against China. It is fair to assume that, if any of these proposed approaches were employed, their repercussions would redefine the U.S.-Sino relationship, and almost surely for the worse. This is a research area that needs to be prodded more deeply. It also needs to

be recognized that some problems simply do not have a purely military solution. Preventing China from negatively challenging the status quo also needs to be assisted by persistent engagement including diplomacy, cultural and educational exchanges, security cooperation, and trade. Such a platform might be the only way to produce a stable relationship with China and prevent a disastrous and avoidable conflict. *f*

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- 90 M. Taylor Fravel, “China’s Island Strategy: Redefine the Status Quo,” *The Diplomat*, November 1, 2012, <<http://thediplomat.com/2012/11/chinas-island-strategy-redefine-the-status-quo/>>.
- 91 David Axe, “China Thinks It Can Defeat America in Battle: But Beijing doesn’t seem to take into account U.S. submarines,” *War is Boring*, February 1, 2014, <<https://medium.com/war-is-boring/874bffe1b1b9>>. Also see Jonathan Greenert, “How the U.S. Can Maintain the Undersea Advantage,” *Defense One*, October 21, 2013, <<http://www.defenseone.com/ideas/2013/10/how-us-can-maintain-undersea-advantage/72314/>>.
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- 94 Manuel Mogato and Stuart Grudgings, “ASEAN to reach out to China on maritime disputes,” *Reuters*, April 25, 2013, <<http://in.reuters.com/article/2013/04/25/asean-china-idINDEE93O04V20130425>>; and John Ruwitch, “China warns U.S., Japan, Australia not to gang up in sea disputes,” *Reuters*, Oct 6, 2013, <<http://www.reuters.com/article/2013/10/07/us-asia-southchinasea-china-idUSBRE99602220131007>>.
- 95 For example see “Loan plan for new Philippines patrol ships unveiled,” *The Japan Times*, July 28, 2013, <<http://www.japantimes.co.jp/news/2013/07/28/national/loan-plan-for-new-philippines-patrol-ships-unveiled/>>; and IBTimes Staff Reporter, “Philippines Gets Support From Japan, Others Against China,” *International Business Times*, May 23, 2012,

- <<http://www.ibtimes.com/philippines-gets-support-japan-others-against-china-699765>>. On the need for ASEAN members to continue seeking greater coordination amongst themselves against Chinese belligerence see Prashanth Parameswaran, "Countering China in the South China Sea," *The National Interest*, March 18, 2014, <<http://nationalinterest.org/commentary/countering-china-the-south-china-sea-10065>>.
- 96 Helene Cooper, "In Japan's Drill With the U.S., a Message for Beijing," *The New York Times*, February 22, 2014, <<http://www.nytimes.com/2014/02/23/world/asia/in-japans-drill-with-the-us-a-message-for-beijing.html>>.
- 97 Bryan McGrath explained in 2013: "But what most concerns me most [sic] about [T.X. Hammes'] approach is the as yet uncompensated suspicion I have that there is a military strategy for the defeat of the PRC (...) that would comfortably embrace both counter-A2AD effects (read: ASB) and a distant blockade. Again, were I to be in charge of waging such a war, I would want *both tools*," see McGrath, "Five Myths about AirSea Battle," (emphasis added). Victor Vescovo was perhaps the first author to present a developed fusion approach, proposing to mix ASB and OSC. See Victor Vescovo "Deterring the Dragon ... From (Under) the Sea," *Proceedings Magazine* 140 (2) (February 2014).
- 98 Here ASB is much closer to the established defense posture of retaining dominance. See Colby, "The War over War with China."
- 99 If this change is fully embraced by China too, this could allow Beijing to focus its attention on capabilities to challenge the DBD and OSC strategy. This could, for example, be to build a blue water navy to oppose a blockade. Such an endeavor would take a long time, however, most likely decades. See Andrew Erickson and Gabe Collins, "China's Real Blue Water Navy," *The Diplomat*, August 30, 2012, <<http://thediplomat.com/2012/08/chinas-not-so-scary-navy>>.