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CHINA'S A2/AD CAPABILITIES AND AMERICAN SECURITY INTERESTS IN THE ASIA-PACIFIC

This paper examines the challenges posed by China's increasing anti-access, area denial (A2/AD) capabilities in the Asia-Pacific, which are aimed at limiting the access and operational capabilities of rival militaries in the region. It discusses how and why China is building up its military, and shows that, following the logic of the security dilemma, this development has negative implications for the security balance in the Asia-Pacific. Subsequently, it investigates the consequences for American security interests in particular, such as the defence of Taiwan and freedom of navigation in the Asia-Pacific. It debates the strengths and weaknesses of the two dominant counters being considered by the American military: AirSea Battle (ASB) and or a blockade through the concept of Offshore Control. Lastly, this paper demonstrates that China's increasing A2/AD capabilities have had a ripple effect on the rest of the Asia-Pacific, driving up military expenditures and leading to closer cooperation between American allies as the security dilemma would predict.

China's A2/AD Capabilities and American Security Interests in the Asia-Pacific

By

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We will make it our mission to see that by 2035, the modernisation of our national defence and our forces is basically completed; and that by the mid-21st century our people's armed forces have been fully transformed into world-class forces.

-Xi Jinping, *Report at the 19th National Congress of the Communist Party of China*, 2017.

1. Introduction

The Xi administration of the People's Republic of China (PRC), as indicated by the quotation above, has ambitious goals for its military in the coming years. Its military modernisation has been observed uncomfortably in the United States. Although the American military is still vastly superior to China's and the United States easily outspends its rival on its military budget (Tian et al. 2019: p. 2), China's rise affects the balance of power negatively for the hegemon. In particular, China's increasing anti-access, area denial (A2/AD) capabilities in the Asian region are a cause of concern, as they could directly limit American power projection in China's periphery (Friedberg 2014).¹ This undermines the security network of alliances that the United States has built up in Asia, as its ability to conduct operations in the region will be obstructed. This paper will tap into the debate on how to best respond to the challenge posed by China's increasing A2/AD capabilities, examining the following research question: Why and how is China increasing its A2/AD capabilities, and how should the United States counter them to protect its security interests in the Asia-Pacific?

First, it will shortly explain the security dilemma in international relations, which will be used to discuss the effects of China's military build-up on the Asia-Pacific. It will discuss China's motivation in modernising its military, the development of A2/AD capabilities until now, and the prospects of its success in the near future. Based on this assessment, the paper will examine the impact of China's A2/AD capabilities on American security interests in the Asia-Pacific, and how

¹ A2/AD is an American military construct that does not have a direct equivalent in Chinese military jargon (Lanteigne 2016; Yuan 2016). Its closest approximation is the Chinese concept of 'active strategic counterattacks on exterior lines' (ASCEL), but as there is no consensus on whether ASCEL is analogous to A2/AD, this paper will only use the latter term.

the United States should subsequently respond. It will analyse the two main counters that have been proposed by strategists, namely AirSea Battle and a naval blockade, and evaluate their strategic strengths and weaknesses. Lastly, it will summarise the main arguments of the paper and indicate avenues of further research.

2. The Security Dilemma and China's A2/AD

This paper will show that China's growing A2/AD capabilities and the American responses to it are a classic illustration of the security dilemma as outlined by defensive realist Hertz (1950). According to this concept, the anarchical international environment forces states to rely mainly on their own military capabilities to ensure their survival and safeguard national security (Liff and Ikenberry 2014). States that feel insecure have no other choice but to increase their military might, as they cannot depend on a higher authority to prevent military aggression from other states. However, this would shift the balance of power, pushing other states to focus on upgrading their military as well. Even though the initial increase in military capabilities was purely intended for self-defence, the other states necessarily have to assume the worst and interpret the development as indicating possible future military expansionism. After all, it is difficult to determine whether a posture, weapon, or military action is motivated by offensive or defensive intentions in an environment of uncertainty. The more unclear the difference between offensive or defensive intent, the more intense the security dilemma will be. As Jervis (1976) wrote, "an increase in one state's security decreases the security of others" (p. 186), leading in a security spiral where overall security deteriorates, and an arms race ensues. Next to an arms race, a security dilemma can also have alliance formation as consequence, as states band together to protect themselves from a common threat (Jervis 1978). This paper will use the security dilemma to explain why China's increasing A2/AD capabilities indeed had these consequences in the Asia-Pacific.

3. China's Military Modernisation and A2/AD

The Chinese government initially started modernising the People's Liberation Army (PLA) in 1979, alongside its economic reforms to reintegrate China into the world economy (Cooper III 2018; Mahnken 2011). The direct drive for modernisation was the PLA's disappointing performance in the Third Indochina War, as it failed to achieve the strategic objective of forcing Vietnamese troops out of Cambodia (Bhartendu 2008). In addition, the Taiwan Strait crises painfully repeatedly confronted the PLA with its inferiority to the American military.² Moreover, American power

² Though Taiwan has had a separate government since 1949, the People's Republic of China views Taiwan as a breakaway province. After losing the civil war with the CCP, the ruling Kuomintang was forced to flee to Taiwan and

projection, uncomfortably close to Chinese territory poses a constant threat to Chinese security and constrains potential Chinese ambitions to pursue more expansionary or aggressive foreign policy. The crises underlined the necessity to strengthen the Chinese military, so that it could more effectively defend its interests in the region.

In 2015, the Xi administration initiated a new push for extensive military restructuring and modernisation (Defence Intelligence Agency 2019; Lague and Lim 2019b; Saunders et al. 2019). It aims to both ensure the PLA's loyalty to the Communist Party and Xi himself, to fight corruption within the PLA, and to translate China's growing economic power into military strength. The ultimate goal, from the Western perspective: to contest American supremacy in Asia. However, Fravel and Twomey (2015) disagree with the view that China's military strategy is primarily aimed at countering intervention of the United States. Rather, they argue that China's military modernisation has more general goals than specifically undermining the American military. Indeed, China's increasing participation in the global economy means that it also has a stake in shaping the international order, for which protection of Chinese territory and power projection are necessary. Furthermore, military modernisation is integral also to the Chinese Dream, that envisions a rejuvenation of the Chinese nation so that it can no longer be bullied into submission (Wang 2014).

Still, though they might not be solely and primarily aimed at the United States, it is a fact that China's A2/AD capabilities are increasing, and that they endanger American interests in the Asia-Pacific. It is nearly impossible to determine whether they have defensive or offensive purpose, especially as they are shrouded in secrecy for security reasons. As opposed to conventional coastal defence, A2/AD has the potential to provide new capabilities that would drastically change the security balance in the region. A2/AD thus not only increase China's security and ability to defend itself, it also enables offensive capabilities such as reunification with Taiwan. This intensifies the security dilemma concerning A2/AD. Specifically, A2/AD refers to the "use of weapons and

establish the Republic of China (ROC) there. The Taiwanese government has since continued to claim it is the true legitimate governing body over Taiwan and mainland China, contradicting the CCP's claim that Taiwan belongs to the People's Republic of China. Reunification with Taiwan is therefore one of the long-term objectives of the CCP. While the United States officially recognises the CCP's rule of China, the American government continues to foster informal relations with the ROC and has signalled it would come to its aid in case of an invasion from the mainland. This was also the case in the Taiwanese Strait Crises, a series of conflicts between the PRC and the Republic of China (ROC) in 1954-1955, 1958, and 1995-1996. Thanks to American intervention on behalf of the ROC, in which it demonstrated the damage its military could do to the clearly and inferior PLA, for all three crises the PRC was forced to back down. The crises demonstrated a humiliating difference in military power, as well as the American ability to effectively obstruct the CCP's foreign policy objectives. For more information on the crises, see Albert (2019), Reynolds (2000), or Council on Foreign Relations (2017).

supporting systems and operations to counter the efforts of a foreign force to access a specific region or contested area (A2); and to deny effective operation of that force in a specific geographic area of interest (AD)” (Heath et al. 2016). As Kazianis (2014) notes, A2/AD are particularly effective against technologically superior adversaries. American power projection relies on nearby military bases on land, as deployment from more distant bases runs into logistical obstacles. A2/AD thus exploits the American military’s reliance on sea lines of communication, forward basing, information networks, and depots. It also benefits from the technological progress in missile technology, which have helped to tip the balance in favour of defence over offence in a certain territory.

Assessments of China’s military modernisation reveal that it is indeed well on its way in improving its A2/AD capabilities (Cooper III 2018; Department of Defense 2019a). China has made significant advancements in both offensive and defensive reconnaissance and strike missions and systems, which allow A2/AD: “locating and striking an opponent’s targets, while denying the enemy information and defending vital Chinese targets against attacks” (Friedberg 2014: p. 28). It has been particularly proficient in updating its artillery. For example, the PLA’s Army Rocket Force (PLARF), which oversees the PRC’s land-based ballistic missiles, has been able to significantly expand its inventory and upgrade its capabilities every year (Department of Defense 2018; 2019a). Among other, it has activated new Dong Feng-26, an intermediate-range ballistic missile dubbed the ‘carrier-killer’, that has a range of around 4000 kilometres and can strike both naval and ground targets in the western Pacific Ocean (Miller and O’Hanlon 2019). It is the first Chinese conventionally armed ballistic missile that can threaten the American military base in Guam, as well as other bases in the area. The Dong Feng-26, and its anti-ship version, could also work as a powerful deterrent against operations of American aircraft carriers, keeping the US Air Force on the ground. However, their success depends on whether China manages to develop the missiles to realise their full capabilities, and on countermeasures placed by the United States.

China’s A2/AD capabilities are thus mostly missile-centric, but China’s military has invested heavily in long-range maritime and air weapons systems as well. In 2015, under the Xi administration’s push for military reform, the PLA’s Strategic Support Force (PLASSF) was established to amplify China’s cyber and space power, as well as its capabilities for electronic warfare. Investments in A2/AD include anti-ship ballistic missiles (ASBMs) and precision-guided conventional ballistic missiles, but also submarines, aircraft carriers, anti-satellite weapons, mines, cyberwarfare, as well as intelligence, surveillance, and reconnaissance (ISR) (Bonds et al. 2017;

Department of Defense 2019a). These investments have paid off: it has become significantly more difficult to penetrate China's airspace, specifically around the crucial area of Taiwan (Heginbotham et al. 2015; Department of Defense 2018). The Chinese navy, too, has seen substantial improvements, and is expected to account for a significantly larger share of future military outlays (Lague and Lim 2019a).

China's increasing assertiveness in the East and South China Sea under President Xi, where its territorial claim contests that of the Japan, Philippines, Vietnam, Brunei, Indonesia, Malaysia, and Taiwan, should be seen in light of these developments (Scobell 2018; Defense Intelligence Agency 2019). In a militarisation of the South China Sea, China is actively reclaiming land and building artificial islands to construct military bases and strengthen air and sea power. However, although in these specific fields China's military capabilities have improved, truly successful A2/AD requires highly integrated air power, sea power, and space power approach. As the Defence Intelligence Agency (2019) found, joint warfare and logistics are still significant weaknesses in the PLA. As such, China still faces high barriers towards complete A2/AD in its immediate neighbourhood, and its A2/AD capabilities as of now are still a manageable threat as long as the United States responds appropriately.

3. American Counters to China's A2/AD Capabilities

China's build-up of A2/AD capabilities has significant consequences for American security interests in the Asia-Pacific. Broadly, it hinders three general goals of American strategic planners: to maintain conventional military superiority in all aspects of warfare; to maintain its military's access to combat zones; and to maintain the openness and accessibility of the global commons (Kazianis 2014; Posen 2003). Free access to the Asian air and seas is crucial to ensure the free trade flows from which the American economy benefits greatly. Chinese control over the China Seas is therefore highly undesirable. Furthermore, it is a prerequisite for the United States to live up to its international commitments and come to the aid of its allies if necessary. A2/AD undercuts the basis of American alliances, possibly causing countries to start accommodating Chinese demands in fear of possible military action. China's A2/AD capabilities could thus undermine the United States' stabilising presence in the Asia-Pacific to counterbalance China's rising power. As the security dilemma poses, regardless of the actual offensive or defensive intent of China's A2/AD capabilities, they decrease American security and force the United States to develop its own military in response.

Two possible counters in particular dominate the strategic debate: AirSea Battle (ASB), or a blockade through the concept of offshore control (OSC). Alongside these two main options, the United States should encourage and aid allies to improve their own military capabilities and decrease their reliance on American military presence. However, regardless of its allies' military capabilities, American military power projection remains indispensable to counterbalance China's rise in the region. Therefore, this section will weigh the strengths and weaknesses of ASB and OSC, which are opposing approaches to the A2/AD problem.

3.1 AirSea Battle (ASB)

AirSea Battle is a concept that involves an initial strike on China's A2/AD capabilities, including radars and missiles, seeking to destroy or handicap them to protect American freedom of movement in the air and sea (Johnson 2017; Kearn Jr. 2014). ASB is intended to signal deterrence, assuring American allies and discouraging Chinese aggression, as well as provide a plan of action in case deterrence proves unreliable. The US Navy and US Air Force started joint work on the concept in 2009, after Secretary of Defence Robert Gates tasked his department to how to address the 'China challenge' (Torsvoll 2015). ASB was then officially endorsed in 2010 as important to maintaining American freedom of action.

The first authoritative analysis of the concept after its further development was provided by the Center for Strategic and Budgetary Assessments' report *AirSea Battle: A Point-Of-Departure Operational Concept* (Van Tol et al. 2010). The early conceptualisation of ASB envisioned four initial lines of operation, which are to be executed in parallel. First, to endure Chinese initial attacks and contain possible damage to the militaries of the United States and its allies. Second, in a 'blinding campaign', the military would target Chinese battle networks and interrupt ISR. Third, a 'missile suppression campaign' would disable long-range strike systems, and lastly, the United States would seize the initiative in the non-land warfighting domains. In the words of the Department of Defence (2013), ASB seeks D3: to Disrupt Chinese Command, Control, Communications, Computers, and ISR; to Destroy A2/AD capabilities; and to Defeat Chinese employed weapons. Since its initial development the concept of AirSea Battle (ASB) has evolved significantly over time. ASB has since been morphed into the Joint Concept for Access and Maneuver in the Global Commons (JAM-GC) in 2015 (Heginbotham et al. 2015; Hutchens et al. 2017). Despite its new conceptualisation to include the US Army and the US Marine Corps into joint coordination, this counter still mainly relies on air and sea operations. However, it expanded to address ally capabilities as well, encouraging a multilateral rather than a unilateral response to A2/AD.

While its specifics are classified, much can be derived from the available information on ASB to analyse its strengths and weaknesses. First, ASB exploits A2/AD's vulnerability of reliance on reconnaissance, surveillance, and target acquisition (RSTA) technologies, specifically the centrality of radar to its success. Without radar, China will not be able to effectively locate forces entering its island chain, undermining the basis of A2/AD. Furthermore, it makes use of the active emitter characteristics of radar, which indicate its location. ASB also provides a flexible approach towards Chinese aggression, from low-level conflict to direct strikes into the Chinese mainland (Torsvoll 2015). However, the success of this direct confrontation is constrained by technical limits. Biddle and Oelrich (2016) show that in the near future, military technology is expected to develop in favour of the defender as it will become easier to conceal possible targets that the blinding and missile campaign of ASB seek to damage. Offence is set to become more problematic over time, which the writers argue will "make it more difficult to sustain air or surface-naval operations near enemy-controlled landmasses without systematically outspending one's enemy" (p. 41). While the American military can boast superiority in air and sea power, it will be increasingly difficult to overcome China's dominance in land power from which it will protect its A2/AD and resist ASB. The offence-defence military balance in this scenario is not sufficiently balanced in favour of American offence, meaning that the success of ASB cannot be guaranteed. ASB would push American military to substantially increase its investments in technology and force the United States to drastically outspend China for a sustained period of time. Additionally, its main logic is deterrence by punishment, which does not provide the same security as deterrence by denial, as the 2018 National Defence Strategy recognises (Gallagher 2019; Torsvoll 2015). Indeed, the United States has to convince China that it has the ability to disrupt its A2/AD, which might only stimulate its enemy to further invest in its own capabilities.

This scenario would exemplify the security dilemma, showing that the increase in China's military capabilities decreases the United States' security. No matter whether China's military build-up is motivated out of self-defence or to enable expansionism, the United States is forced to assume the worst and increase its own capabilities as well. This would lead to a security spiral, in which ASB could trigger an expensive arms race as China and the United States attempt to improve their A2/AD and A2/AD destruction capabilities respectively. Rather than escape the security dilemma, opponents argue that this response would move China and the United States further down the security spiral towards imminent confrontation.

Even worse, this method of countering China's A2/AD faces a high risk of uncontrolled, possibly nuclear, escalation, as it is centred around offensive attacks (Johnson 2017:p.281). This has led to resistance from American allies, whose support is crucial for ASB's success as the American military will need to operate from bases in allied countries. This creates political difficulties to implement ASB. According to Biddle and Oelrich (2016), ASB is a disproportionate and unsuccessful counter to the limited threat of A2/AD, as they contend "the A2/AD threat at the heart of this debate is real, but limited" (p. 48). Especially in popular media, the possibilities of China's A2/AD development are overstated, and the United States does not have to fear its extension over great distances if the United States and its allies invest in their own A2/AD capabilities and continues to modernise its military. This provides no solution to China's A2/AD threat for nearer territories, including Taiwan, but the authors argue that ASB will not be able to remove this at an achievable cost either (Biddle and Oelrich 2016: p. 14).

3.2 Offshore Control (OSC)

The second possible counter against China's A2/AD capabilities, is Offshore Control. consisting of a naval blockade to block China from the sea-lanes crucial to its international trade and the access to resources needed for its military operations (Hammes 2012; Mirski 2013). It was proposed in 2012 by those in the Pentagon that disagreed with ASB, mainly by T.X. Hammes, who envisioned a blockade to be a more feasible counter in matching ends, ways, and means (Torsvoll 2015). OSC supporters argue it is more realistic in its assessment of the necessary American capabilities, basing its operations on already available American assets. Rather than a direct fight between the American and Chinese army, this method effectively harms the Chinese economy, industrial capacity, and military mobilisation. As 'economic strangulation' rather than direct strike on Chinese mainland, it was deemed less likely to escalate into damaging conflict than ASB. It was also specifically designed to undermine a pillar of legitimacy of the Chinese Communist Party, namely its ability to ensure economic prosperity for its people. The Chinese government would then face pressure to initiate diplomatic negotiations with the United States. As opposed to ASB, where its mainland infrastructure would directly be damaged, OSC "allows higher probability for China to declare victory (saving face) and end the conflict" (Hammes 2012: p. 11).

OSC would impose concentric rings around China, where the United States would confront all ships it deems illegally operate in the inner ring, turning it into a maritime exclusion zone (Hammes 2012; Torsvoll 2015). It would make use of maritime geography, which limits trades to a restricted selection of sea lanes. For this objective, the American military would employ mines, attack

submarines, as well as intelligence and intervention from the US Air Force. In the outer ring, well away from China's A2/AD capabilities, the United States could operate even more freely and include all its forces to block ships from sailing to China. Here, OSC plays to the dominance of the American navy of the China's, which does not yet have blue water capabilities (Wu 2019: p. 672). OSC is prepared for longer conflict and uses it to its advantage to allow time for conflict resolution through negotiation. It is also argued to be more effective in its deterrence, as it is more transparent and realistic than ASB, and the US Navy can already demonstrate its feasibility through peacetime exercises to assure allies and discourage China.

However, this method, too, faces obstacles. First of all, US Navy would have to be significantly expanded and improved in capability to impose a blockade on such a large area, especially now that China is building military bases and islands in the South China Sea. This could again further an arms race between China and the United States, exacerbating the security dilemma. Furthermore, the blockade will not only impact the Chinese economy, but could have costly consequences for the global economy as well (Collins 2018; Collins and Murray 2008). In this way, it will indirectly damage American economic interests. Moreover, it could invoke more aggressive foreign policy, as it will inflame nationalist sentiments in the Chinese population and help rally support for the Chinese government. In this way, it could be seen as just as escalatory as ASB. For all this trouble, China could attempt to work around the blockade through land-based trade with Russia and other allies, decreasing the effectiveness of the blockade. Therefore, this method might end in a stalemate as well. Opponents argue that the political will to impose a blockade might only be summoned in the case of an acute threat, as economic warfare that damages the American economy would not easily gain support. However, the ongoing current trade war between the United States and China, which certainly harms sectors of the American economy, casts doubt on these protests. American allies, too, will not be eager to have OSC affect their economy and remain ill-protected from Chinese attacks. However, its creator Hammes indeed specifically designed OSC as last resort and acknowledges that it is not meant to be as flexible as ASB.

4. China's A2/AD and Security in the Asia-Pacific

China's increasing A2/AD capabilities are not only affecting American security interests, but also has broader implications for the security balance in the Asia-Pacific. For many of China's neighbouring states, its growing military might is no more welcomed than by the United States. After all, the states in the Asia-Pacific rely on American military alliances and freedom of navigation in the seas and skies for their prosperity and safety, both of which are endangered by China's

A2/AD capabilities. Moreover, China's actions in the China Seas have reignited the disputes over the area, angering the countries in the Asia-Pacific with competing territorial claims. The Xi administration continues to assert that China can rise peacefully despite its military build-up (Herrick et al. 2016). However, this message is undermined by Chinese militarisation of the China Seas and its belligerent rhetoric towards Taiwan. As Liff and Ikenberry (2014) wrote, "the pace and scale of Beijing's military build-up, its tendency to dismiss other states' concerns, and its low transparency about actual spending, capabilities, and intentions seem to be exacerbating regional tensions and, consequently threat perceptions vis-à-vis Beijing" (p. 88).

In response to the fears of China's rise, the Obama administration announced a Pivot to Asia in its foreign policy in 2011 (Clinton 2011). Later named the Rebalance to Asia, this signalled the government's intent to rebalance its resources to Asia in reflection of the changing balance of power and the importance of regional stability to American interests. Under the Pivot, the Obama administration relocated thousands of marines to Australia, and increased efforts to strengthening partnerships with allies in Asia to check Chinese power. This trend continued under the Trump administration's 'Indo-Pacific' strategy (Department of Defence 2019b). For example, the United States has agreed to stage joint exercises with the Indonesian special forces unit again, after years of limited cooperation under a ban imposed to punish human rights abuses by the special forces (Ali and Nilufar 2019). Military ties between Taiwan and the United States are growing closer as well, as exemplified by the recently signed Taiwan Travel Act that allows high-level American officials to visit Taiwan (Chung 2018). In 2018, an American aircraft carrier was granted permission to visit Vietnam for the first time, most likely in response to China's maritime assertiveness (Ali and Brunnstrom 2019). The visit was meant to reinforce American presence in the region and set a precedent for future visits, with another port stop scheduled for later this year. The United States has been improving its military ties with the Philippines as well under increased tensions in the South China Sea. In April 2019, Foreign Affairs Secretary Teodoro Locsin Jr even explicitly named the United States as the Philippines' only military ally (Lopez 2019). Meanwhile, it should be noted that China's economic ties with its Asian neighbours have only grown closer over time, as countries struggle to balance their economic dependence on China with their military concerns (Woetzel et al. 2019: p. 54; Wuthnow 2019).

In addition, China's increases in military spending have been followed by increased efforts of Asian-Pacific states to build up their own forces, as the security dilemma predicts. Accordingly, military spending in Asia grew at a higher rate than in other regions in the world (Tian et al.

2019:p.9). The United States has actively pushed for this, as this development reduces the security burden of the United States. For example, the United States is selling 34 Boeing-made ScanEagle drones to Indonesia, Vietnam, the Philippines, and Malaysia, which will allow for more advanced intelligence operations in the South China Sea region to contain Chinese activity there (Stone 2019). Taiwan has been requesting new arms sales from the United States, which is pursuing to sell more than 2 billion USD in weapons to the island and has been approving arms deals at an increasingly faster rate (Stone and Zengerle 2019; Chung 2018). The Asian-Pacific states have also grown closer military ties among themselves in response to China's growing power. For example, in 2018 Vietnam and Australia officially established a strategic partnership, formalising closer cooperation between their militaries (Pearson and Vu 2019). Together, the new allies also made a statement to criticise China's actions in the South China Sea in August 2019. These examples show that stronger military alliance formation is indeed a result of China's increasing A2/AD capabilities, as the security dilemma concept poses.

5. Conclusion

This paper has assessed the following research question: Why and how is China increasing its A2/AD capabilities, and how should the United States counter them to protect its security interests in the Asia-Pacific? It showed that China's military modernization started focussing on A2/AD capabilities after the PLA suffered several embarrassing defeats, which demonstrated the need to reduce American military superiority over China. A2/AD then sought to change the balance of power by limiting the access and operational capabilities of the American military in the region. It was seen as a defensive response to American freedom of navigation operations in the China Seas, intended to push back its military presence. The United States worries more about the effect of China's A2/AD on China's aims of reuniting with Taiwan, in which American intervention in the conflict would be constrained. While the exact extent of China's A2/AD capabilities is unclear, it is certain that they will significantly increase in the near future, and that they will pose a threat to American security interests in the Asia-Pacific if left unchecked. After all, regardless of whether the A2/AD capabilities are intended for defensive or offensive and expansionary purposes, under the security dilemma the United States is forced to build up its own military in response.

Therefore, the paper also analysed two possible counters to China's A2/AD: ASB and OSC. AirSea Battle is the more offensive of the two and was proposed first. Although it has evolved since its conception, it still seeks to address the A2/AD challenge by directly taking out the systems and weapons that it is based on. It makes use of A2/AD reliance on radar, which as active emitter gives

away its location and is therefore vulnerable to strikes. Furthermore, it provides a flexible approach, proposing actions from low-level to high-level conflict involving direct strikes into the Chinese mainland. This is also one of its main weaknesses, as ASB could easily escalate into wider conflict because of its offensive nature. Its main logic of deterrence by punishment has been criticised, as well as the technical limits it faces to be effective, its significant cost, and the possibility of leading to an arms race. Its opponents therefore deem it a disproportionate answer to the challenge of A2/AD. They therefore propose a second counter: Offshore Control, or a naval blockade. This is intended to wear out the Chinese economy and its military capabilities by limiting access to international trade and energy and raw materials, forcing the Chinese government to accede to negotiations. However, OSC might be ineffective, as China could work around the blockade through land-based trade. Furthermore, rather than decreasing the CCP's legitimacy, it could help rally nationalistic support for the government in the face of a common enemy, stimulating more aggressive foreign policy.

Though neither ASB nor OSC are perfect counters to China's A2/AD capabilities, in the long run OSC poses the less costly option, with the least risk of hurting overall American strategic objectives of limiting conflict in the region. On the other hand, ASB is more politically feasible, as OSC would face opposition to its costs on the American economy. However, both counters require further American military build-up, which in turn could drive further Chinese investment in military capabilities, illustrating the security dilemma that encapsulates states in the anarchical international environment. Meanwhile, this paper has shown that China's increasing A2/AD capabilities have had a ripple effect on the rest of the Asia-Pacific, driving up military expenditures and leading to closer cooperation between American allies as the security dilemma would predict. Further research is needed to elaborate upon the solutions to OSC's and ASB's weaknesses, and to research possible ways to escape the security dilemma.

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No 3

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