

Counter and Cooperate: How Space Can Be Used to Advance US–China Cooperation While Curbing Beijing’s Terrestrial Excesses

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The question of whether or not the US and China will clash has been in vogue among scholars, politicians, and pundits in recent years. In *Destined for War: Can America and China Escape Thucydides’s Trap*, Harvard University’s Graham Allison employs the Thucydides’s Trap thesis to demonstrate how Washington and Beijing might arrive at the brink of war.¹ This concept dictates that whether or not a rising power (Sparta/China) intentionally provokes a conflict with the status-quo power (Athens/America), a conflagration will develop because a security dilemma will inevitably occur. As the ascendant nation grows stronger—diplomatically, militarily, and economically—it poses a threat to the status-quo power. The result is that the predominant power is more likely to use force to deter the rising power before it becomes an existential threat.

There’s a profound trust deficit between China and the US. This article will propose a two-fold approach to develop trust and preserve the American interest: (1) deter Chinese excesses in the South China Sea (SCS) and (2) employ a multifaceted approach to prevent conflict from extending to space. But before diving into policy proposals, it is necessary to have a foundational understanding of China’s current space policies, perspectives, and ambitions.

China’s Diplomatic Power

Since People’s Republic of China (PRC) President Jinping XI came to power in 2012, China’s diplomatic disposition has experienced a profound evolution. Jinping XI is promoting his vision of the “Chinese Dream” and national rejuvenation, the goal of which is to reverse the “Century of Humiliation” that China suffered, from the start of the First Opium War in 1839 and lasting until the Chinese Communist Party (CCP) came to power in 1949. In testimony before the US–China Economic and Security Review Commission, Dr. Alison A. Kaufman, a senior Asia policy researcher with the Center for Naval Analyses, explained that this period provides a key foundational story for the CCP. “Today, this narrative has become a key legitimizer for CCP rule, because the CCP is portrayed as the only modern Chinese political party that was able to successfully stand up to foreign aggression.”²

The dilemma for Beijing is how to ascend without ensnaring itself and the US in Thucydides's Trap. Previously the PRC abided by former paramount leader Deng Xiaoping's dictum of Tao Guang Yang Hui, which translates to "lay low and bide one's time." The purpose of this strategy was to fight the perception that China is an ascendant threat, incurring preemptive hostilities from outside powers. Today, however, China is much more confident on the world stage. Beijing seeks to promote its vision for the future on the diplomatic front, and space policy plays an important role in this objective. According to James Andrew Lewis, the Center for Strategic & International Studies technology and public policy program director, China's space endeavors are "... especially important to show that it has reclaimed its place among the leading nations of the world. China's successes in space reinforce its claims to regional dominance by demonstrating that it is the most advanced among Asian nations, with technology and resources that others cannot match."³ China's space initiatives play an instrumental role in showing that it has returned to its place as a preeminent regional power. While China's neighbors question US commitment to the Indo-Asia-Pacific, Beijing's promulgation of a multidecade plan for developing space capabilities demonstrates its staying power and ambition.

China's Informational Power

While China's focus on diplomatic messaging travels outward, the informational element of Chinese space policy is mainly directed inward. To this day, the CCP's legitimacy is premised upon a Faustian bargain with its citizens. In exchange for economic results, social improvement, and the respect of the world, the political elite expects loyalty and acquiescence from the public. The CCP's space aspirations play a fundamental role in demonstrating the government's ambitions for China's future. They include landing a rover on the far side of the moon by 2018, landing a Mars rover by 2020, probing asteroids by 2022, sending humans to the moon by 2025, bringing Mars samples back by 2028, sending an exploratory mission to Jupiter by 2029, and establishing a lunar research station manned by robots with occasional astronaut visits by 2050.⁴ Shooting for the stars keeps the Chinese people's eyes skyward and away from CCP malfeasance. To borrow Karl Marx's reference to religion, Beijing's space policy is an opiate for the Chinese masses.

China's Military Power

The Gulf War had a visceral effect on Chinese military planners. The rapid neutralization of Saddam Hussein's military demonstrated what decades of Cold War military spending were able to procure for the US armed forces, especially in the realm of command and control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR). The Chinese took this to heart and incorporated *informationized warfare* into their military doctrine in 1993.⁵ Increasingly, space has become a central focus of China's national security strategy, which continues to expand outward from an immediate defense of the Chinese homeland to protecting interests overseas and even in space.

In this capacity, the People's Liberation Army (PLA) is pursuing a comprehensive space strategy to allow for it to compete with near-peer adversaries. As the US–China Economic and Security Review Commission states:

A robust, space-based C4ISR system is often described as a critical component of a future networked PLA. The development of long-range cruise missiles and antiship ballistic missiles for over-the-horizon attacks requires the ability to locate, track, and target enemy ships hundreds of kilometers away from China's shores, as well as the ability to coordinate these operations with units from multiple services. In doing so, remote sensing satellites can provide intelligence on the disposition of enemy forces and provide strategic intelligence before a conflict begins. Communication satellites can provide global connectivity and can facilitate communications between far-flung forces. Navigation and positioning satellites can provide critical information on location and can improve the accuracy of strikes.⁶

Although China's current use of space primarily focuses on Earth, Beijing is rapidly developing its ability to conduct kinetic and nonkinetic strikes in space. Additionally, both China and Russia continue to develop systems and technologies that can interfere with or disable vital US space-based navigation, communication, and intelligence collection satellites.⁷ China also has a number of antisatellite capabilities, such as direct-ascent antisatellite missiles, co-orbital antisatellite systems, computer network operations, ground-based satellite jammers, and directed-energy weapons.⁸

China's space capabilities are a key component of their Anti-Access, Area Denial (A2/AD) strategy. This strategy focuses on the ability to prevent outside powers from projecting forces into an area of conflict where China is involved, such as in the SCS, around the Senkaku Islands, or during an attempt to conquer Taiwan. If a conflict occurs, a key objective of the PLA is the ability to push the US beyond the First Island Chain (Japan, Taiwan, and the Philippines) and eventually even beyond the Second Island Chain.⁹ We must plan accordingly for such a scenario.

China's Economic Power

As China's interests continue to expand outward from its shores, it seeks to build a military capable of protecting its economic interests overseas. For example, China has participated in counterpiracy operations in the Gulf of Aden since 2008 and recently established a permanent base in Djibouti to aid in this effort and serve as a PLA logistics hub for the region. This base will assist the PLA Navy in extending its reach while also securing sea lines of communication, through which much of China's imports and exports transit. Beijing also has grand ambitions in space, many of which are economical and also require protection. These ambitions include projects to start lunar and asteroid mining, bring the BeiDou-2 Navigation Satellite System network into global service by 2020 and establish a Chinese space station by 2022. Beijing even has preliminary plans for an ambitious space-based solar energy network that will use microwaves to transmit power back to Earth by 2050.¹⁰

In the *Strategic Studies Quarterly* 12, no. 1 edition, Dr. Namrata Goswami argues that Chinese space exploration must be viewed through the broader framework of the Chinese economy's expanding need for resources.¹¹ She explains that President Xi sees space

as an environment for scientific innovation as well as an opportunity to revitalize stagnant state-owned enterprises. She goes on to state that “. . . these goals are unique as they indicate a completely different view of space. Rather than just an arena for conquest and showing off, China views space as an environment in which to live, work, and create wealth through habitation and resource extraction.”¹² This begs the question: how will China protect its interests in space? Leadership in Beijing will increasingly have to consider how it will secure these important economic assets in a realm where there are few laws or agreed upon codes of conduct.

Although this analysis is not exhaustive, it provides a basis for understanding China's current space initiatives and ambitions. So what kind of policy should Washington adopt to accommodate China's interests, advance our own, and dissuade Beijing from extending a potential conflict into space? An intelligent approach will be two-fold. On one hand, we should foster cooperation where our interests with the Chinese overlap. On the other, we should develop a comprehensive approach for defending our interests, especially in the SCS. The latter issue is of great importance because we must first confront Beijing's transgressions here on Earth to deter China's militaristic expansionism in space.

Proposals for US Policy

Cooperate

China's economic and military rise during the last several decades was made possible by the post-World War II economic order established by the US. However, as a great power, China is unsatisfied with the current US-led order that it did little to help shape. Beijing and Washington are increasingly at odds internationally as their competing interests and visions for the future begin to collide. New avenues for cooperation are desperately needed to foster mutual trust and create an environment where the US and China can coexist with minimal friction. Space presents an excellent opportunity for cooperation between Washington and Beijing. Our two nations will compete in this realm—there is no avoiding that. However, both parties will benefit greatly from having a standardized set of rules governing military and economic activities in space. Hopefully, if these two great powers establish a framework of behaviors and norms for space, the rest of the world will follow suit.

To start, the US should extend an olive branch. As Brian Weeden and Xiao He point out in their article for *War on the Rocks*, “Washington still hopes that Beijing can be a constructive partner for greater international space security. While China still chafes at the largely American constructed rules-based order, it likewise has a clear interest in using its development of space capabilities to promote bilateral cooperation and to play a role the formation of new international regimes.”¹³ While Russia seeks to undermine international space initiatives, Beijing and Washington should look toward the future and create a bold plan for space governance. This does not mean intimate cooperation, but there should be norms and codes for how government entities and private corporations

should act in space. Weeden and He go on to say that both sides should seek to establish confidence-building mechanisms to help build trust as well as processes for cooperation and deconfliction. On the economic front, private companies crave stability and clear rules. If the world's two preeminent military and economic powers establish clear guidelines early on, potential financiers will have greater confidence to invest the large up-front costs for expensive space-based projects. This leads to the next point that both sides should promote: private sector cooperation in the space domain.

It would be advantageous for both sides if private corporations in the US and China pursue space exploration together. Space-lift capabilities, space stations, asteroid mining, lunar stations, and other endeavors all require significant initial costs. By partnering, American and Chinese corporations could call upon the support of both the Chinese and US governments in seeking out new resources such as solar power, rare elements, and numerous other fields for scientific discovery that would be of great benefit to people everywhere. A private-sector partnership should be plausible as long as intellectual property rights are respected and the governments involved don't micromanage the projects. Deep US–Chinese economic integration is often cited as one reason war between our two nations is unthinkable. Why would the same logic not extend to space?

Despite the potential space holds for cooperation, there is plenty of room for conflict. While high-ranking military officials in both China and the US believe the militarization of space is inevitable, it would be beneficial to agree upon one rule up front: no kinetic strikes.¹⁴ In 2007, China tested an antisatellite missile against one of its failing weather satellites, projecting debris that continues to threaten space-based assets to this day. A kinetic battle involving satellites would create clouds of space junk for which there is no current remedy. Both Beijing and Washington have reason to limit space warfare to non-kinetic means. If a conflict were to occur, there are a number of different ways to neutralize or affect satellites short of kinetic strikes. These methods include radio frequency jamming and lasers that can temporarily incapacitate or even completely destroy satellite-based sensors.

It should be added that spy satellites are important to building trust. Spy satellites allow nation-states to have an understanding of what their rivals are doing, at least partially allaying suspicion of the other party. A similar terrestrial example is the Treaty on Open Skies, which is primarily based around the US and Russia but claims 32 other signatories. According to the Department of State, “the Treaty is designed to enhance mutual understanding and confidence by giving all participants, regardless of size, a direct role in gathering information through aerial imaging on military forces and activities of concern to them.”¹⁵ Both sides must recognize the importance of this technology in allaying suspicions and preventing paranoia. An agreement to not target spy satellites (through a kinetic strike, jamming, lasers, or any other means) would be a bitter pill to swallow but would foster greater openness while also mitigating the militarization of space.

Counter

Any discussion that involves the US–China geopolitical rivalry will span far and wide. For brevity, this article will focus on Beijing’s actions in the SCS and how space capabilities can be leveraged to advance the American interest. During the last decade, the Chinese have increasingly perpetuated the notion that 90 percent of the SCS is their sovereign waters and territory. Cartographically, this is indicated by the nine-dash line that is ubiquitous in Chinese maps, textbooks, passports, government documents, and essentially anywhere a map of East Asia exists in the PRC. In the SCS itself, this claim has been propagated with land reclamation, maritime militias, militarized islands, an increasingly assertive China Coast Guard, and forceful diplomatic initiatives.

A strategy for leveraging space-based assets to counter Chinese aggression in the SCS should contain three components. First, the US should create a task force focused on the SCS for US allies in the Asia-Pacific to allow for the integration of space assets and information dissemination. Second, we should increase our sharing of satellite imagery with the Association of Southeast Asian Nations (ASEAN) partners to allow them to better understand China’s actions in the SCS. Third, Washington should pursue a quantitative increase in high-caliber electro-optical (EO)/infrared (IR)/synthetic aperture radar (SAR) and C4ISR satellites to monitor the SLOCs in the SCS better and resist China’s A2/AD strategy.

After World War II, the US implemented a hub-and-spoke approach to alliances in the Pacific, forming strong bilateral bonds with Thailand, the Philippines, Japan, Australia, New Zealand, South Korea, and Taiwan. Unlike the North Atlantic Treaty Organization, there is no broad military alliance for the region. A Southeast Asian Treaty Organization once existed but was ultimately dissolved in 1977. Although most nations in the region chafe at Beijing’s aggression in the SCS, forming a broad counter-China alliance would be untenable because of China’s economic importance in the region, Beijing’s willingness to engage in economic warfare, China’s military heft, and doubts over Washington’s future ability (and willingness) to maintain an international rules-based order in East and Southeast Asia.

To combat these trends, the US should create a task force for close US allies in the Asia-Pacific to integrate space assets and disseminate information that will aid in countering China’s information and military campaign in the SCS. This initiative should focus on creating resilient EO/IR/SAR and C4ISR capabilities that will survive any preemptive employment of the PRC’s A2/AD strategy. This includes systems to counter Chinese assets designed blind and incapacitate our satellites using radio frequency jamming, directed-energy weapons, and kinetic strike. Washington should create a framework by which long-term allies such as Japan, Australia, New Zealand, Thailand, and the Philippines can integrate space capabilities. This approach should also incorporate Singapore, a long-term friend but not a formal ally, and India, the world’s largest democracy and an increasingly close partner for the US.

Second, Washington should increase its sharing of sensitive satellite imagery with ASEAN partners to allow them to make well-informed decisions in protecting their

SCS claims. The US should aid littoral states by expanding programs to share imagery from our EO, IR, and SAR satellites. Such programs are expensive and ASEAN nations rarely have the capacity or cash to develop such initiatives. Additionally, creating a unified front against Chinese expansionism in the SCS will demonstrate to Beijing that multi-lateral partnerships will develop to counter any similar actions in the space domain.

Third, the US should invest greater sums in the research and development for C4ISR satellites that can provide crucial intelligence on activities taking place in the SCS. These SLOCs are vital to global trade, fossil fuel imports for key allies, and freedom of navigation more broadly. The best way to prevent deception is with accurate intelligence. The current policy of carrying out freedom of navigation operations in the SCS risks a confrontation that might turn kinetic, such as the 1 April 2001 EP-3 Aries II incident near Hainan Island. Using satellites to capture imagery of China's actions in the SCS, including the deployment of self-propelled artillery and landing bombers on artificially created islands, help bring Beijing's true intentions to light without risking kinetic confrontation.¹⁶

Conclusion

While at the Johns Hopkins University Nanjing University Center for Chinese and American Studies, I took a class on the politics of Southeast Asia. Professor Yang Guanghai and I had many spirited debates about US and Chinese foreign policy in the region, and on the last day of class, I asked him if our two nations could peacefully coexist in the long-term. Unfortunately, his retort was one that is often heard in modern Chinese strategic thought. "I don't think it's possible because Chinese people fear America will preemptively undercut our rise." On the other hand, I recall visiting a quiet corner of Nanjing that houses the Nanjing Kangri Aviation Martyrs' Memorial, which honors the Chinese, American, and Soviet aviators who fought the Japanese invasion during World War II. The museum details the exploits of the 1st, 2nd, and 3rd American Volunteer Groups (AVG), which would later become the Flying Tigers. At this solemn location, a series of stone tablets consecrate the names and final resting place of 2,601 American Airmen who made the ultimate sacrifice while fighting alongside their Chinese brothers. Time has passed, but their memory lives on. Today, the Flying Tigers are comprised of three A-10 Thunderbolt II squadrons based at Moody AFB, Georgia. Serving in the 75th Fighter Squadron, the successor of the 2nd AVG, I see this legacy daily. It reminds me that the US and China are not destined for war and that we must not let increasing competition in space lure us into Thucydides's trap.

An intelligent space policy for dealing with China should seek to counter Beijing's excesses while simultaneously promoting cooperation between our two nations. Space holds abundant promise for the future, but the militarization of this domain would have irrevocable consequences. It is imperative that we promote cooperation in exploring space while also ensuring we are prepared to confront any Chinese transgressions. ★

Notes

1. Graham Allison, *Destined for War: Can America Escape Thucydides's Trap?* (Boston, MA: Houghton Mifflin Harcourt, 2017) 27–40.

2. *The 'Century of Humiliation' and China's National Narratives, Testimony Before the U.S.–China Economic and Security Review Commission Hearing on China's Narratives Regarding National Security Policy* (2011), (statement of Alison A. Kaufman, China analyst, Center for Naval Analyses), <https://www.uscc.gov/sites/default/files/3.10.11Kaufman.pdf>.

3. Anthony H. Cordesman, "Chinese Space Strategy and Developments," *Center for Strategic & International Studies*, 19 August 2016, <https://www.csis.org/analysis/china-space-strategy-and-developments>.

4. Marina Koren, "China's Growing Ambitions in Space," *The Atlantic*, 23 January 2017, <https://www.theatlantic.com/science/archive/2017/01/china-space/497846/>; and Mike Ives, "As America Looks Inward, China Looks to Outer Space," *New York Times*, 23 May 2018, <https://www.nytimes.com/2018/05/23/world/asia/china-space-moon.html>.

5. Cordesman, "Chinese Space Strategy," 3.

6. *Ibid.*, 5.

7. *Ibid.*, 22.

8. *Ibid.*

9. James R. Holmes, "Defend the First Island Chain," *Proceedings Magazine* 140, no. 4 (April 2014), <https://www.usni.org/magazines/proceedings/2014-04/defend-first-island-chain>.

10. Namrata Goswami, "China in Space: Ambitions and Possible Conflict," *Strategic Studies Quarterly* 12, no. 1 (Spring 2018), https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-12_Issue-1/Goswami.pdf.

11. *Ibid.*, 83.

12. *Ibid.*, 80.

13. Brian Weeden and Xiao He, "Use Outer Space to Strengthen U.S.–China Ties," *War on the Rocks*, 26 April 2016, <https://warontherocks.com/2016/04/USE-OUTER-SPACE-TO-STRENGTHEN-US-CHINA-TIES/>.

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15. US Department of State, "Treaty on Open Skies (OS)," <https://www.state.gov/t/avc/cca/os/>.

16. Matthew Rosenberg, "China Deployed Artillery on Disputed Islands, U.S. Says," *New York Times*, 29 May 2015, <https://www.nytimes.com/2015/05/30/world/asia/chinese-artillery-spotted-on-spratly-island.html>.

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