

Space Entanglements

The India–Pakistan Rivalry and a US–China Security Dilemma

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Abstract

The proliferation of space technologies to middle and regional powers raises new questions concerning contemporary international politics and the likelihood of war. Since China launched its infamous 2007 antisatellite missile test, the United States has grown increasingly concerned about the number of actors able to access these capabilities and their potential to complicate the situation on the ground during times of political and military tension. The following classroom activity was designed as a part of the Space Education Working Group at Air University, Maxwell AFB, Alabama. It ponders one potential future in which a spark in the India–Pakistan rivalry over Kashmir, accompanied by the potential use of space weaponry, might generate contagion for a US–China conflict. After reading the fictional case, students are provided with roles and questions to assist them in better understanding the international political impacts of space militarization.

Background on India–Pakistan Rivalry

The rivalry between India and Pakistan is rooted in British colonialism. In 1947, the British Empire partitioned India into two separate colonies, a generally Hindu India and a predominantly Muslim Pakistan. At the time of the partition, the ruler of Jammu & Kashmir (a princely state in the northwestern section of the colony) hesitated to determine with which side he would integrate his state politically. A rebellion in the western portion of the state stripped him of this decision, as Pakistani tribal militias moved into Kashmir to stake their claim, forcing Kashmir's ruler to join India and sparking the Indo–Pakistani War of 1947. The UN-mediated ceasefire that brought this war to an end established a Line of Control (LOC), designating Indian- and Pakistani-occupied portions of Kashmir.

The UN-mediated ceasefire did not resolve the conflict by any means. The military organizations of both states continued to grow, and their suspicions of one another grew with them. In 1951, during negotiations over demilitarizing Kashmir, each accused the other of warmongering and concentrating their armies on the Indo–Pakistan border.¹ China is also a claimant of 15 percent of Kashmir (Ladakh) and carried out a one-month war against India over the territory in 1962. This war ended in a ceasefire and an establishment of a second line of control in Kashmir (which came to be known as the Line of Actual Control [LAC]).²

establishing an independent Bangladesh (formerly East Pakistan).⁴ India used this victory as leverage in Kashmir, as it pressured Pakistan to agree to resolve the dispute bilaterally (Pakistan later disputed the exact terms of the agreement).

In addition to India's first successful nuclear tests in 1974, a growing Kashmiri nationalism complicated the political situation over the next several decades. In 1989, a separatist revolt began in Indian-administered Kashmir. India blamed Pakistan for the crisis, accusing the Pakistani government of arming and sending Islamist militants into Indian territory to foment rebellion. Tensions surrounding these accusations simmered for the next decade and erupted into conflict when Pakistani soldiers disguised as Kashmiri separatists began skirmishing with Indian soldiers on its side of the LAC. The 1999 Kargil War was especially alarming, as Pakistan had successfully completed its first nuclear tests a year prior. As Islamabad faced another imminent military defeat to India appeared likely and international pressure intensified, Pakistan retreated its forces back to the preconflict LAC.⁵

The first two decades of the twenty-first century have been witness to a number of developments in the outstanding dispute, including the mutual mobilization of more than one-million troops in 2001, the launching of a formal peace process in 2004 that was disrupted by the Mumbai terrorist attack in 2008, an 80-percent increase in ceasefire violations in 2012, exchanges of gunfire in 2014,⁶ and a terrorist attack on an Indian convoy in 2019 that resulted in an Indian Air Force bombing mission on Pakistani Kashmir territory. This airstrike resulted in heavy skirmishes along the LAC, as well as retaliatory airstrikes by Pakistan. Tensions de-escalated as both sides responded to international calls for restraint, and Pakistan released a captured Indian pilot.⁷ Nearly all these crises were initiated by militant attacks in India or its territory in Kashmir, for which the New Delhi government then pointed to Pakistan, alleging its covert support. This brief background on the Indo-Pakistani dispute over Kashmir illustrates the entrenched positions the two states have taken over the last half-century and the lengths to which two nuclear states will go to demonstrate their resolve. Neither India nor Pakistan are strangers to nuclear brinksmanship, and this makes any fissure in South Asian relations incredibly volatile.

An Explosive Crisis⁸

On 1 May 2023, protests in Pakistan-administered Kashmir (commemorating the 75th anniversary of the entrance of the Pakistan Army into the 1947 war), devolved into riots, and a subsequent militant action to cross the LAC into Indian union territory of Jammu and Kashmir.⁹ The night of protests seem to have served as cover for the covert action, thought to be carried out by Jaish-e-Mohammed

(JeM), designated as a terrorist group by a number of countries and international organizations, including the United States and the United Nations.

Members of JeM reportedly crossed the LAC sometime around midnight in several different places and fired on Indian Army patrols and outposts near Uri, Punch, Rajauri, and Naushahra, killing hundreds of Indian personnel before retreating back across the border. Based on Indian reports, many of the militants are believed to be members of the regular Pakistan Army. JeM historically has been known to have close ties to Pakistan's security establishment.

While Pakistan arrested dozens of JeM members in response, this was not satisfactory for New Delhi, which, in retaliation, ordered immediate air strikes on several known JeM encampments in Pakistan-administered Kashmir. Much as it did in 2019, Pakistan responded with air strikes of its own, but more reminiscent to the events in 2001, both states as of 5 May 2023, have mobilized their armies not only along the Kashmiri borders but also elsewhere along the borders of Pakistan and India. The mutual mobilizations are creating the tensest situation between the two nuclear powers since the 2001 standoff and threaten to spill over into a full-blown regional war.

China, having come to blows with India as recently as 2020,¹⁰ grows increasingly concerned with the buildup and mobilization of Indian forces. Since the Indian government officially announced the establishment of the Jammu & Kashmir and Ladakh as separate union territories in 2019, to more easily integrate the region politically into India, relations with China have deteriorated. The Chinese Communist Party, in addition to providing military aid to Pakistan, has placed troops on alert along its Himalayan border with India.

The United States is in a peculiar position regarding the crisis, as it values both of its partnerships with India and Pakistan in South Asia. As the world's largest democracy, India has always served the interests of the United States and has proved to be a potential balancer against China's rise in the East. Pakistan, for its part, remains a necessary, if sometimes unreliable, partner that is needed to assist bringing an end to the America's 22-year misadventure in Afghanistan.¹¹ Since the incident in Indo-Pakistan 2019, the United States has largely stayed above the fray, advising and (in some cases) aiding the construction of resiliency mechanisms to terrorist attacks across the Indian government, while turning a relatively blind eye to Pakistani belligerence.¹² While many in the United States are calling for a condemnation of Pakistan's involvement in the attacks, Washington has remained mute. When asked directly as to why this was, the US secretary of state responded that a regional war in South Asia would be "devastating." Still, Chinese involvement in the conflict, especially the activation of its space assets on behalf of Pakistan, has increased US concern.

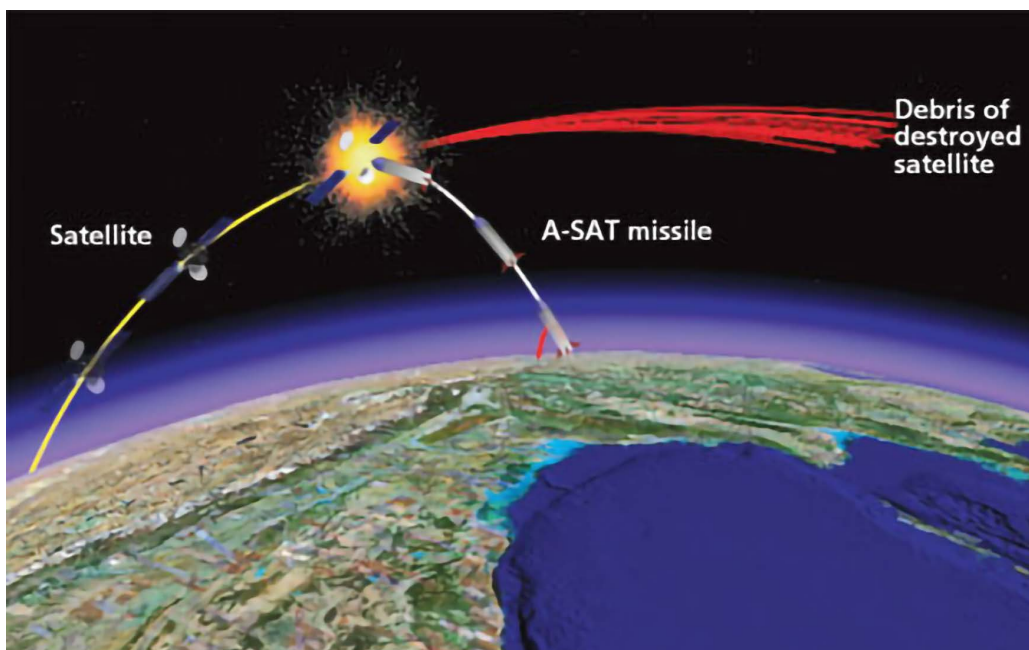
Alignments in Space

US and Indian cooperation in space goes back to the 1960s, when the United States assisted the inception of the Indian space program to train personnel, assemble and launch sounding rockets, and establish a launch center on Indian soil. Over the course of the 1970s and 1980s, the United States continued to share telecommunications and weather forecasting satellite data with India. The progressive development of the Indian space program has been accompanied by further cooperation with the United States and NASA. India was the first country in the world to enter the Martian orbit on its first attempt. Additionally, the Indian Space Research Organization (ISRO) successfully directed satellites in the vicinities of the Moon and Mars between 2008 and 2014. As the number of Indian assets in space has grown, the need to protect those assets has grown as well.¹³ Additionally, the increasing militarization of space by countries such as the United States and China has pushed India further in the direction of military space programs that go beyond the current limits of military communications and surveillance. Asked about India's reaction to the Chinese antisatellite missile test (ASAT) test of 2008, the former ISRO head responded, "Obviously we start worrying. We cannot overlook this aspect. India has spent a huge sum to develop its capabilities and place assets in space. Hence, it becomes necessary to protect them from adversaries. There is a need to look at means of securing these."¹⁴ The Pakistani government has raised concerns about the growing Indo-US relationship in space,¹⁵ noting that too much US assistance will undermine strategic stability in South Asia.¹⁶

In combination with the new Indian warfighting strategy, "Cold Start," designed to seize Pakistani territory quickly to prevent the tactical use of nuclear weapons over India, India's quest for larger constellations of remote sensing satellites in low-Earth orbit (LEO) risks to further destabilize the political situation in South Asia: "It is generally believed that India's ballistic missile defense (BMD) system cannot work effectively without having a constellation of remote sensing satellites in LEO."¹⁷ A more functional Indian BMD system provides the Indian arsenal a higher probability of survivability, almost guaranteeing an Indian second-strike option. The capability afforded by India's dedicated geostationary satellite GSAT-7 plays an important role in supporting such a delivery of ballistic missiles and, more generally, in any future crises.¹⁸ Thus, it threatens to undermine the fragile balance of nuclear and conventional capabilities on the subcontinent. The successful Indian direct ascent antisatellite (DA-ASAT) missile test in 2019 compounds this danger, promising to remove adversary's orbiting remote sensing satellites that might threaten India's own missile capabilities. Any move by the

United States to further this offset could result in a larger military action on the part of not only Pakistan but China as well.

China and Pakistan's space cooperation has a shorter history than that of the United States and India, but it is growing and deepening at a rapid pace. In March 2009, the countries agreed to manufacture a geosynchronous and communications satellite with built-in monitoring features (controlled from a ground station).¹⁹ Assistance from China in space was enough to convince Pakistan's space agency to transition its geolocation tracking onto China's BeiDou navigational system (BDS) platform. BDS became operational in December 2012, and China completed building the constellation in 2020.²⁰ Much of this space cooperation is tied to terrestrial politics, specifically, a collection of infrastructure projects jointly pursued, known as the China–Pakistan Economic Corridor. China, as a part of its Belt and Road Initiative (BRI) is devising a new trade route to the Middle East reliant on the Arabian Sea in Pakistan. So far, this transactional relationship, based on Pakistani land and Chinese soft loans, has developed into a beneficial one for both countries, especially for Pakistan's security needs requiring use of Chinese space assets.²¹



(Acquired from Dinsa Sachan, "Code of Conduct for Space," DownToEarth, 4 July 2015, <https://www.downtoearth.org.in/>.)

Figure 2. Depiction of the 2019 Indian ASAT test

Antisatellite Assets and a US–China Security Dilemma

India's advantage over Pakistan in space is easily mitigated with the assistance of China. Current numbers are unavailable, but in 2019 India had fewer than 50 operational satellites in space, whereas China maintained approximately 250 in operation.²² These numbers include satellites with dual-use capabilities—those that can be used for commercial and military purposes in communications, reconnaissance, and navigation. In addition to its DA-ASAT capabilities, China has demonstrated a number of passive techniques that allow it to disrupt the flow of satellite information, such as jamming and high-powered radio transmitters, as well as more sophisticated “laser-ranging stations.”²³

Since the mobilization of the Indian and Pakistani militaries on 5 May 2023, India has used electro-optical (EO) imagery satellites to monitor Pakistan's troop movements, airfield activity, and port activity but has run into consistent trouble due to Chinese jamming operations. India has reached out to the United States for additional assistance with intelligence, surveillance, and reconnaissance. To these requests, Washington is thought to have begun sharing information gathered by US satellites but publicly has only gone so far as to condemn China's interference in the dispute, warning that it could fan the flames of a regional war. The American president, however, stated at a press conference on 11 May, that “as soon as we see a bunch of direct ascent antisatellite missiles getting moved around—that would be a red line for us.”

Perhaps unfortunately for the American president, photos obtained from Roscosmos, the Russian space agency, suggest that China has moved at least five DA-ASAT assets to three different launch sites near its southern border. White House officials have anonymously confirmed the accuracy of these photographs and have alluded to ongoing debates within the administration over Chinese intentions. Sources note that three possibilities are held in contention. First, China is using the DA-ASAT assets as leverage to gain concessions over the disputed territory, Ladakh. Second, China intends to use its DA-ASAT assets to attack Indian satellites and rebalance the BMD theater in South Asia. Third, China intends to use its DA-ASAT assets to attack US satellites that may or may not be sharing information with India.

Experts have noted that the second and third possibilities are equally threatening to the United States due to the orbital debris created by space collisions. No matter whether the DA-ASAT targets an Indian or US satellite, there is potential for orbital debris to collide with other satellites of various origins. These experts further point out, however, that potential collateral damage would also include Chinese and Pakistani satellites, suggesting that China is merely flexing its muscle

along the southern border. Skeptics suggest that the possibility of cascading damage due to orbital debris is less likely than many experts suggest. As one skeptic remarked, “Space is very big.”

Task for the Classroom

- The instructor will assign each participant to the following roles:
 - India
 - Pakistan
 - China
 - United States
 - Russia
- Your task is to analyze the case from the perspective of the state you are assigned. Pay particular attention to how you would react to events based on your role.

Lines of Inquiry to Guide Reading and Discussion²⁴

- From the perspective of any one class of actor in the scenario, who created the conditions over Kashmir that are relevant to decisions you must now make?
- What actions could have been taken to promote a more stable environment in the time leading up to the activation of all space assets, and by whom?
- What were the pivotal moments when bold action or a different decision could have brought an entirely different outcome? How might key players have changed the course of events for better or worse?
- How has India’s national policy movement toward space militarization contributed to the security dilemma inherent in this case?
- Who is responsible for maintaining stability in South Asia?
- Does the involvement of Jaish-e-Mohammad in the conflict necessitate a deeper US commitment as a part of the Global War on Terror?
- Why did Russia choose to release information on classified Chinese asset movements? From the perspective of your role, was this release helpful or hurtful?
- From the perspective of your role, are China’s intentions with its DA-ASAT assets?
- What should the United States do now?
- What are the consequences on the ground if orbital debris begins to damage or destroy the satellites and space assets of other nations, not currently involved in the conflict? 🌐

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Notes

1. Michael Brecher, *The Struggle for Kashmir* (New York: Oxford University Press, 1953).
2. Steven A. Hoffman, *India and the China Crisis* (Berkeley: University of California Press, 1990).
3. Rachna Bisht Rawat, *1965: Stories from the Second Indo-Pakistan War* (New York: Penguin, 2015).
4. "The World: India: Easy Victory, Uneasy Peace," *Time*, 27 December 1971, <http://content.time.com/>.
5. Much of the preceding narrative was adapted from Sumit Ganguly and S. Paul Kapur, *India, Pakistan, and the Bomb* (New York: Columbia University Press, 2010).
6. Associated Press, "India and Pakistan Exchange Fire in Kashmir Border Clashes," *Guardian* (UK), 8 October 2014, <https://www.theguardian.com/>.
7. Jeffrey Gettleman and Suhasini Raj, "Pakistan Frees Indian Pilot Who Was Beaten by a Mob and Then Served Tea," *New York Times*, 1 March 2019, <https://www.nytimes.com/>.
8. While based on real places, the following narrative is entirely fictional.
9. In 2019, New Delhi withdrew Jammu & Kashmir's status as an autonomous region and created two separate union territories: Jammu & Kashmir and Ladakh. In the Indian federal system, which is comprised primarily of states, union territories are governed directly by the central government rather than by a state government. The union territories are generally smaller than states—although the two new ones are exceptions to this case. Additionally, they have considerably less power in their administrative organization than do Indian states, with the president of India appointing officials to govern the territories. In practice, this means that the union territories follow the central government's will.
10. Soutik Biswas, "India-China Clash: 20 Indian Troops Killed in Ladakh Fighting," *BBC News*, 16 June 2020, <https://www.bbc.com/>.
11. Joshua T. White, "America's Role in the India-Pakistan Nuclear Theater," *The Atlantic*, 5 March 2019, <https://www.theatlantic.com/>.
12. See for detail, White, "America's Role in the India-Pakistan Nuclear Theater."
13. Rajeswari Pillai Rajagopalan, "India's Changing Policy on Space Militarization: The Impact of China's ASAT Test," *India Review* 10, no. 4 (2011): 354–78, <https://www.tandfonline.com/>.
14. Press Trust of India, "Ex-ISRO Chief Calls China's A-SAT a Cause for Worry," *The Outlook*, 14 September 2009, <https://www.outlookindia.com/>.
15. It was, for example, a US–Indian joint team that came to identify the presence of water on the Moon. Ajey Lele, "India's Policy for Outer Space," *Space Policy* 39–40 (1 May 2017): 26–32, <https://doi.org/10.1016/j.spacepol.2016.11.009>.
16. Zulfar Khan and Ahmad Khan, "Space Security Trilemma in South Asia," *Astropolitics* 17, no. 1 (2019): 4–22, <https://www.tandfonline.com/>.

17. Rajagopalan, "India's Changing Policy on Space Militarization."
18. Sameer Ali Khan and Irteza Imam, "Outer Space and Strategic Stability in South Asia," *Astropolitics* 17, no. 1 (2019): 70–76, <https://doi.org/10.1080/14777622.2019.1578936>.
19. Lele, "India's Policy for Outer Space."
20. Lele, "India's Policy for Outer Space."
21. Miqdad Mehdi and Jinyuan Su, "Pakistan Space Programme and International Cooperation: History and Prospects," *Space Policy* 47 (February 2019): 175–80, <https://doi.org/10.1016/j.spacepol.2018.12.002>.
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23. Lele, "India's Policy for Outer Space."
24. Some of these questions have been adapted from Karen Guttieri, *Gaps at the Seams of the Dayton Accords: A Role-Play Scenario*, Case 305 (Washington, DC: ISD, Georgetown University, 2005), <https://isd-georgetown-university.myshopify.com/>.

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