

Journal for Peace and Nuclear Disarmament



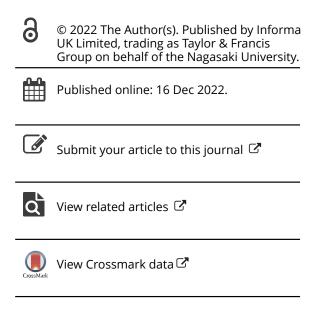
ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rpnd20

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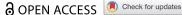
To cite this article: Toby Dalton (2022): Plus Ça Change? Prospects of a Nuclear Deterrence Multipolarity in Southern Asia, Journal for Peace and Nuclear Disarmament, DOI: 10.1080/25751654.2022.2158702

To link to this article: https://doi.org/10.1080/25751654.2022.2158702











Plus Ca Change? Prospects of a Nuclear Deterrence Multipolarity in Southern Asia

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ABSTRACT

Some scholars assess that Southern Asia comprises a nuclear chain or a deterrence trilemma. Although the region is home to three states with nuclear weapons, there is only one clear nuclear deterrence dyad. India and Pakistan have explored the contours of nuclear deterrence in several past military crises, while nuclear weapons have been notably absent from recent Sino-Indian border tensions. What factors or developments might push the region toward a nuclear deterrence multipolarity? The key variable is the India-China relationship and the extent to which nuclear weapons become more prominent in respective national security belief systems in New Delhi and Beijing. Notable trends already favor such a development, including changing geopolitics in the region, the rise of nationalist domestic politics, technology competition, and growing crisis escalation concerns. Two fulcrums that might tip the region from the status quo into a deterrence multipolarity are parallel nuclear posture changes in India and China that create nuclear coupling, and hardening of geopolitical alignments into more adversarial blocs. Preventing deterrence multipolarity through new nuclear confidence-building measures will be difficult owing to divergent interests, power and institutions in the region. Upgrades to existing nuclear CBMs may be more politically feasible. Even in the absence of new nuclear CBMs, however, China, India, and Pakistan could build predictability in the region and mitigate potential sources of conflict through new measures to manage common-pool resource competition, dangerous behaviours in space, and a range of crises and emergencies.

ARTICLE HISTORY

Received 28 June 2022 Accepted 11 December 2022

KEYWORDS

India: Pakistan: China: nuclear: deterrence: war

Introduction

Literature on nuclear matters in Southern Asia is coalescing around the concept of a multi-layered system of deterrence, but there is disagreement about how to characterize and model this system (Dalton 2021). For example, one approach describes a strategic chain, the central thesis of which is that "Pakistan responds strategically to India, India responds both to Pakistan and China, which in turn responds both to India and the United States" (Einhorn and Sidhu 2017, 1). Another suggests a "nuclear trilemma" in the region (Kulkarni 2022). Clearly, with profound changes underway in the regional



security environment, the prevalent view among scholars and analysts is of an evolution of the status quo toward a system of nuclear deterrence multipolarity.

Southern Asia is home to three states with nuclear weapons, but contrary to descriptions in the literature of a regional deterrence system, for now evidence indicates it is only in the India–Pakistan dyad that nuclear deterrence overtly influences conflict potential. It is possible that rapid geopolitical, technological and socio-political change will drive Pakistan, India and China to pioneer a new system of complex, multi-party nuclear deterrence relationships. It is also plausible, however, that the future may be closer to the present: differentiated deterrence dyads only loosely influenced by events occurring in either dyad. Which of these futures might cohere? What are the main trends and drivers that could tip the region into a system characterized by increased salience of nuclear deterrence? And if regional states wish to avoid such an order, how might existing or future confidence-building measures (CBMs) mitigate threats to stability?

The forces shaping the nuclear environment in Southern Asia come from multiple directions - within each state, in relations between them, by the increasing involvement of states outside the region, through spillover from major power competition between China, Russia and the United States, and from such developments as the military partnership between Australia, the UK, and the US (AUKUS) and Russia's 2022 military invasion of Ukraine. The complexity of the varied belief systems about the role of nuclear weapons in stabilizing the region and deterring conflict escalation complicates analysis of the contemporary picture, let alone prescient forecasting of what may come. Existing mental models of nuclear deterrence may occlude rather than add clarity to this situation in three distinct ways. First, there is a temptation to preference continuity despite the pace and magnitude of geopolitical, geoeconomic, social, and technological change. A second tendency – most acutely afflicting nuclear analysts – is to view security through the lens of nuclear deterrence, when in fact other lenses may be more revealing. And a third shortcut is to focus on technology as the great disruptor, when significant changes in ideational factors - nationalist leadership, for example - may be more causal. In other words, great analytic care is required in plotting a way through the puzzle of the future of nuclear deterrence in Southern Asia.

As a starting point, it is fair to assess that stability is not intrinsic to the region, and that the presence of nuclear weapons may not contribute to or threaten stability in the same ways as in the Cold War experience of the United States and Soviet Union. Instead, stability may be more an artifact of predictability in the political, military and economic relations among Pakistan, India and China, rather than a function of strategic deterrence. In this regional system, with varied power structures, military capabilities and domestic political systems, the presence of non-state actors, and persistent tensions over contested territories, nuclear deterrence may not be directly relevant to the most acute security challenges, almost all of which occur at levels at or below limited conflict.

Assuming that Pakistan and India remain a deterrence dyad, the key variable in an emergent Southern Asian nuclear multipolarity is the India–China relationship and the extent to which nuclear weapons become more prominent in respective national security belief systems in New Delhi and Beijing. This essay addresses the prospect of such a transition in Southern Asia. It first assesses the existing boundaries of nuclear deterrence, then evaluates four trends that are pushing the region towards deterrence multipolarity. Next, it identifies two possible fulcrums: developments that would tip the region



from the status quo into a new system. Finally, in thinking through how states might seek to shape the potential for deterrence multipolarity, it surveys the rather barren landscape of existing CBMs before identifying possible avenues to improve stability and reduce potential sources of conflict.

Evolving Boundaries of Nuclear Deterrence?

During periodic military crises over the last 20 years, India and Pakistan have charted the contours of what nuclear weapons are believed by political and military leaders to deter. In contrast, nuclear weapons have not featured (at least publicly) in China-India relations, despite the 2017 and 2020 spikes in military tensions over disputed territory along the Line of Actual Control (LAC) dotted across the Himalayan peaks and valleys. Whether a multipolar nuclear deterrence system in Southern Asia coheres or not will depend in great measure on the emergence of shared beliefs in all three capitals about the direct relevance of nuclear weapons in deterring acts that threaten the status quo or the ensuing conflict escalation.

The India-Pakistan nuclear dyad has matured to the point that Indian and Pakistani experts have contributed to volumes on nuclear learning (Khan, Jacobs, and Burke 2014). By no means is the nuclear relationship static, as each continues to evolve its means of nuclear delivery, force posture, and declaratory language in search of deterrence advantage. Accordingly, Pakistani nuclear planners have asserted the existence of nuclear deterrence at very low levels of conflict, while their Indian counterparts have described a much more expansive domain for conventional military options "under the nuclear threshold". Recent military crises provide some additional clarity, suggesting that nuclear weapons do not deter relatively discrete military operations, but they do appear to deter major operations and conflict escalation (Dalton 2020). Notably, Pakistan's nuclear weapons did not deter India from launching an air strike on a purported terrorist training facility near the Pakistani town of Balakot during a crisis in 2019, but the potential for nuclear escalation seems to have informed India's target, ordnance and mode of delivery choices. Put another way, nuclear weapons probably deter efforts by India or Pakistan to change the territorial status quo or significant movements of land forces over the border, but they do not deter violent exchanges of fire across the border, cross border raids or limited air strikes. This does not mean the chances of escalation beyond this narrow conflict band are zero, of course.

Despite the efforts by Indian and Pakistani planners to gain advantage and test escalation thresholds, their bilateral deterrence equation has changed only at the margin since they both tested nuclear weapons in 1998. Absent a major drive to escape the adversary's deterrence - which would require order of magnitude changes in arsenal size and missile defence capabilities, or fundamental changes to nuclear posture the basic character of their nuclear deterrence is likely to remain. Nuclear weapons will continue to have a significant dampening effect on the potential for conflict. That does not mean that relations between Islamabad and New Delhi are destined to be more pacific; most likely there will continue to be significant space for each side to damage the other, whether through covert action, support to terrorist groups, cyber operations or limited military conflict.

In the India–China dyad, mutual possession of nuclear weapons has not resulted in a tightly coupled and well-mapped deterrence relationship. Indeed, China does not recognize India's possession of nuclear weapons as legitimate, which precludes engagements that might help improve understanding of the deterrence equation (Dalton and Zhao 2020). The states' parallel no-first-use policies, orientation towards minimal nuclear arsenals focused on maintaining a survivable second strike capability, and generally more stable and interconnected political and economic relations have kept nuclear weapons in the background (Rajagopalan and Yao 2012). Notwithstanding a dramatic increase in military tensions and sharper engagements in specific contested border sectors, Indian and Chinese analysts tend not to identify nuclear weapons as an important factor that impacts the scope or probability of future border conflict.

Interestingly, some Indian analysts characterize the 2020 Ladakh crisis as a nuclear deterrence failure, arguing that India lacks sufficiently robust nuclear deterrence against China (Sawney 2021). This assessment presupposes that India's nuclear weapons were developed with this purpose in mind – to deter Chinese hostile conventional military acts in contested territory. Official Indian views on the role of nuclear weapons tend to be less expansive, however. For instance, former Indian National Security Advisor Shivshankar Menon argues that India's nuclear weapons are for "preventing others from attempting nuclear blackmail and coercion against India", and not "to redress a military balance, or to compensate for some perceived inferiority in conventional military terms, or to serve some tactical or operational military need on the battlefield" (Menon 2016, 107). In China, India's nuclear weapons do not appear to be a strong consideration in how Beijing approaches security issues, whether on the Sino-Indian border, in the maritime domain, or in the context of India's engagement with the Quad and other regional security arrangements. Some Chinese experts assert that "China's nuclear weapons are not directed at India" (Quoted in Dalton and Zhao 2020).

Despite some assessments in India, it seems doubtful that nuclear deterrence was a major factor in recent Sino-Indian border crises. Most Indian and Chinese analysts assess that border conflicts (for geographic, political and strategic reasons) are unlikely to escalate to limited war. For example, Indian scholar Debak Das argues, "The Sino-Indian security competition is not driven by nuclear weapons. Escalation to a higher level of conventional conflict is unlikely and further escalation to nuclear signalling or competition is extremely improbable" (Das 2021). Future maritime clashes are likely to have similar bounded escalation potential.

One hypothetical scenario that would constitute an interesting test of Indian and Chinese leaders' thinking about the limited role of nuclear weapons would be a major military campaign to change the territorial status quo away from the Line of Actual Control. For example, if China attempted to annex the top third of Arunachal Pradesh that it claims as its own and Indian forces were unable to expel them – or conversely if India made the opposite play to occupy Chinese-controlled Aksai Chin in Ladakh – might the defender be tempted to threaten limited nuclear use in an attempt to force the invader's withdrawal? In the Arunachal Pradesh scenario, given Prime Minister Narendra Modi's bluster after the Balakot crisis, stating that India was not saving its nuclear weapons for Diwali, might a more significant threat to India's territorial integrity by China warrant similar threats? Or might China, having seized territory controlled by India, threaten limited nuclear use to deter Indian conventional military escalation and



consolidate its fait accompli? If Indian and Chinese planners begin to engage in questions like these, especially about the potential role of nuclear weapons in restoring intra-war deterrence, the boundaries of nuclear deterrence in Southern Asia could quickly expand.

Sorting Among Relevant Deterrence Trendlines

The changes occurring in the Southern Asia strategic landscape can seem at times on cross currents. Not all developments clearly point in the direction of a profound shift away from the single nuclear deterrence dyad in the region - Pakistan and India towards a deterrence multipolarity. And seemingly unrelated events outside the region, especially Russia's February 2022 invasion of Ukraine, muddy the picture further with their impacts on traditional and emergent alignments among powers. If multipolar deterrence does emerge, however, the following four trends are likely to be key contributors.

Geopolitics

A rapid consolidation of a nascent geopolitical realignment in Southern Asia accelerated with the 2021 withdrawal of US military forces from Afghanistan and return of a Talibanled government. As a result, US-Pakistan relations lost the moorings brought by two decades of US involvement in conflict in Afghanistan. India's influence in Afghanistan (from which it sought to pressure Pakistan from the west) shrank. China's relative influence and investment in Afghanistan and Pakistan grew, along with its liabilities, adding a new dimension and solidity to the China-Pakistan "axis" (Small 2015). Apart from remaining concerns about terrorism emanating from Afghanistan (into Pakistan or elsewhere in the region), the western edge of Southern Asia appears to have new stability. Coupled with long-standing Chinese military support to Pakistan, including historical technology assistance to its nuclear and missile programs, this new stability could contribute to closer alignment in Sino-Pakistan security policy vis-à-vis India (Raman 2022).

In Washington, the Afghan withdrawal enabled redirection of US strategic and military focus toward China and the so-called pivot to Asia. The Biden administration accelerated initiatives under way since the Obama administration, sustained by the Trump administration, to thicken a regional coalition to balance China. One pillar of this project is the Quadrilateral Security Dialogue (Quad) framework involving India, Japan and Australia alongside the United States. A second pillar consists of efforts to engage South Korea and other countries in Southeast Asia in security-building initiatives that are less overtly anti-China. And a third pillar, announced in September 2021, is the enhanced AUKUS partnership between Australia, the United Kingdom and the United States, through which Australia will acquire nuclear-powered attack submarines to give it more reach into waters close to China. Although it will take years for all these efforts to mature, they suggest greater willingness to bandwagon among states located along the southern and eastern edges of Southern Asia, and with it the potential for sharper and more violent military interactions as China aims to consolidate control over disputed territories occupied or desired by Beijing.

With rival groupings possibly cohering in the region, the potential for destabilizing behaviours grows. Some could be aimed at sowing instability in an adversary's territory or driving wedges between partner states. Partner states might also coordinate actions in ways to keep adversaries off balance, or bog down a party along certain vectors so that it cannot develop comparative advantages in another. For example, purported Indian funding of militant groups such as the Tehreek-i-Taliban Pakistan that carry out attacks against the Pakistani military forces Islamabad to focus on insecurity along its western border, rather than India. Similarly, one interpretation of China's increase in aggressive posturing on the contested Sino-Indian border is to keep India distracted and to "prevent it from projecting influence across Asia. This could effectively be a competitive strategy where Beijing seeks to create and exploit asymmetric advantages by making India spend disproportionate resources defending its land borders, thereby diverting them from more threatening postures" (Lalwani 2020).

Domestic Drivers of Security Policy

The making and re-making of a state's security policy does not occur in a political vacuum, motivated solely by a rational assessment of threats and opportunities. Rather, politics – and belief systems channelled through politics – have a profound impact on how leaders characterize their nation's interests and decide on the security policies to pursue them. For more than seven decades after Indian and Pakistani independence and the roughly concurrent consolidation of power by the Communist Party over mainland China, leaders in all three countries were motivated primarily by national development objectives. Despite periodic military conflicts between them, by and large leaders preferred to avoid war and its associated toll on economic growth. While all three states invested in conventional military and nuclear weapon capabilities during this period, national leaders tended to see these capabilities in defensive terms. (There are obvious exceptions to this generalization, namely the wars that Pakistan launched against India in 1965 and 1971, both of which were disastrous for Pakistan, and the subsequent sponsorship of non-state groups by Pakistan to carry out attacks in India.)

This pattern began to change with the rise to leadership of Xi Jinping in China in 2012, and of Narendra Modi in India in 2014. Under these charismatic leaders, China and India are concurrently experiencing nationalist epochs driven by visions of greatness and (majoritarian) national unity. These epochs have also brought substantial changes in how the two leaders harness domestic support with more muscular security policies, at the same time amplifying foreign threats to highlight their political legitimacy as national protectors. By utilizing religious or ideological nationalism to link domestic politics and security policy, however, Indian and Chinese leaders may have also made it more difficult to manage future crises. With their political legitimacy increasingly tied to toughness and resolve in security matters (rather than delivering promised economic development), they may be more susceptible to pressures to escalate to gain advantage during military confrontations. Consistent with nationalist security policies, nuclear and other high-technology weaponry have become more important symbols of national might, and thus appear poised to grow in quantity and assume greater prominence.

For its part, Pakistan is caught in perpetual civil-military crisis and economic stasis. Its security policy will continue to be authored by military leaders according to a definition

of the national interest that suits the military's position and economic interests. Nuclear weapons have long played a very prominent role in Pakistan: as a symbol of national pride; as an equalizer of the power balance in South Asia; as a way to offset perceived conventional military weakness relative to India's military strength; and as a coercive tool to create space for unconventional operations against India (Durrani 2004; Fair 2014). These elements of Pakistan's security policy tend to favour risk taking with nuclear weapons, which is built into the contemporary India-Pakistan deterrence equation.

If Indian and Chinese leaders start to see greater utility in nuclear weapons for domestic political reasons, this could translate into new thinking in New Delhi and Beijing about the role of nuclear deterrence in future crises. Like counterparts in Pakistan, they, too, may be tempted by the risk-taking that nuclear deterrence affords in limited conflict. Thus, apart from what is happening in geopolitics or technology developments, there may be strong domestic political drivers favouring the emergence of overlapping nuclear deterrence relationships in the region.

Technology and Arms Racing

Chinese nuclear technology developments during 2021 made numerous headlines: tests of a hypersonic gliding delivery vehicle and an orbital bombardment system, construction of hundreds of new missile silos at three military bases and augmentation of its nuclear arsenal with estimates suggesting it could grow from some 200 to 1000 or more weapons by 2030 (Cooper 2021). These developments deserve attention, especially since they appear to mark a significant change in Chinese thinking about nuclear requirements vis-à-vis the United States (Cunningham and Fravel 2021). Notwithstanding the headlines generated by China's recent moves, estimates by nongovernmental experts (see Figure 1) indicate that India, Pakistan and China have all been slowly building out their

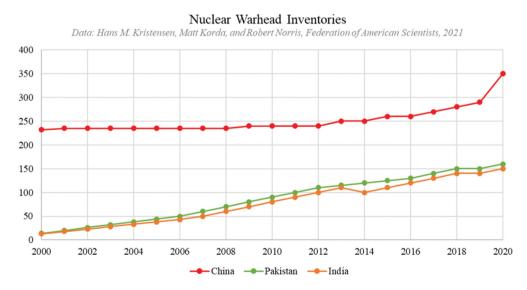


Figure 1. Estimated nuclear warhead inventories of China, Pakistan and India, 2000–2020.

nuclear arsenals over the last 15 years – increasing the numbers of warheads and the variety and quality of delivery vehicles (Kristensen, Korda, and Norris 2022).

Arsenal improvements are not monocausal, yet in Southern Asia, they appear to be symptomatic of security spirals, in which a state seeks to offset the perceived advantages of an adversary, stimulating reciprocal build-up. Unlike in the US-Soviet Cold War case of nuclear arms racing, however, in Southern Asia, there appears to be looser spillover effects, in which China responds to US developments; India responds to Chinese developments; and Pakistan responds to Indian developments. (This pattern is partially reflective of the strategic chain, but without the cross-linkage between dyads [Dalton 2021].)

Some of the links in this chain appear stronger than others, however, and growth in arsenals in Southern Asia may be stimulated by deterrence spirals unevenly. Some capabilities – e.g. Pakistan's tactical nuclear weapons – are clearly tied to and intended to redress developments by an adversary. Yet others – e.g. India's deployment of an SSBN with SLBMs – were planned two decades ago and are just reaching maturity. Domestic or bureaucratic drivers are clearly relevant to acquisition decisions and development timelines, independent of adversary developments. And some testing activity may be intended more to develop and demonstrate a capability without a corresponding decision for deployment. Thus, it is important not to overstate the role of spillover arms racing in stimulating continued nuclear developments, and in broader changes in the deterrence landscape.

Unsurprisingly, it is commonplace to see the India–Pakistan competition framed in terms of an arms race, even though the dynamics are not exactly reciprocal and well structured. Pakistani analysts linked development of nuclear cruise missiles, for example, to a need to counter prospective Indian ballistic missile defence systems. Indian military strategy and capabilities are alive to developments in Pakistan – meaning the strategic chain contains impulses in both directions, in this instance – as well as in China. In response to Pakistani posturing to use nuclear weapons early in a conflict, for instance, India may be considering development of counterforce capabilities to interdict Pakistani nuclear weapons (Clary and Narang 2019).

Indian and Chinese nuclear arsenal growth and related technology development are even less tightly connected. For example, revelations about a major increase in Chinese missile silo construction (Mizokami 2021) did not spur widespread calls in India for a response, while India's arsenal growth over the preceding 20 years occurred during periods in which China's nuclear arsenal did not see much increase. This is not to say there is an absence of security competition between India and China, rather that neither side has appeared to see nuclear weapons as a major pillar of that competition. One possible exception to this assessment is India's testing of a direct-ascent anti-satellite weapon in 2019, following China's test of a similar capability in 2007 (Tellis 2019). To the extent that some Chinese capability advances may spur Indian developments, but not vice versa, Sino-Indian nuclear relations could be characterized as "decoupled deterrence" (Dalton and Zhao 2020).

If perceptions of deterrence spiral pressures begin to have more even and reciprocal effects, then it seems plausible that technology acquisition may cross some threshold where it creates more-pronounced nuclear deterrence effects between India and China. In particular, increased deployment by China of medium-range ballistic missiles based in

the interior of the country might be interpreted as a nuclear threat by India, while Indian development of short-range nuclear weapons could be seen in China as evidence of intention to pursue limited nuclear options. Similarly, Chinese conventional overmatch of Indian land or sea forces might spur Indian consideration of nuclear weapons as an offset, while Chinese deployment of an expansive missile defence architecture could also be seen in India as an attempt to escape mutual vulnerability and India's nuclear deterrence.

Focusing solely on nuclear-related arms development may miss the forest for the trees, however. In parallel to nuclear weapons augmentation, all three countries are procuring more advanced conventional weaponry and intelligence, surveillance and reconnaissance systems and incorporating other emerging technologies into their militaries. These capabilities are vastly more likely to shape and be used in conflict than nuclear weapons. The effects of these acquisitions may cut in opposite directions: further pushing nuclear weapons to the margins of planning and reinforcing the sense that they are dissuasive tools rather than deterrent ones or, alternatively, greying escalation risks in ways that encourage tighter conventional-nuclear weapons integration in conflict planning and nuclear posture.

Crisis Escalation

The accumulation of nuclear and advanced conventional weaponry by China, India and Pakistan may also be accompanied by evolution in military strategies and doctrines to enable use (or threatened use) of these systems in a wider range of contingencies. More aggressive actions by China and India on their disputed border (Singh 2022), and by India and Pakistan in the wake of purported cross-border terror incidents, may signal an era of more frequent confrontation – over disputed territories, maritime areas, resources or other core interests. With increasing frequency of military crises between states, posturing by nationalist leaders aiming to use crises to bolster domestic support and development of weapons systems and associated doctrines that favour offensive initiatives, the potential for crisis escalation grows.

The introduction of more complex weapons systems and enabling infrastructure and the ensuing entanglement of nuclear and non-nuclear capabilities also increases the potential for inadvertent escalation (Acton 2018). For example, cyber attacks on command and control systems during a crisis may be interpreted as preparation for a nuclear attack, even if the attacker intended only to disrupt or degrade conventional military operations. Similarly, improvements in intelligence, surveillance and reconnaissance capabilities, including in space, will enable militaries in all three to operate with better situational awareness – especially critical if military plans involve attempted counterforce attacks on an adversary's mobile missiles. Yet these same capabilities also create new vulnerabilities and would likely be among priority targets for disruption or attack in an escalating conflict, compounding pressures on decision-makers to escalate before they might perceive high risks of losing their weapons in a disarming strike.

Crisis signalling also takes on new significance. Reports that a senior Indian official threatened missile strikes against Pakistan in the hours after the Balakot airstrike in 2019, for example, triggered a meeting of Pakistan's National Command Authority, turning what had been a relatively limited albeit serious military crisis into a nuclearized one

(Miglani and Jorgic 2019). Alerting of nuclear forces in future crises as a signal of resolve could easily be interpreted as preparations for use, a growing danger as counterforce capabilities improve.

Finally, the opportunity for accidents also increases. India deployed the Arihant nuclear-armed submarine during the 2020 military crisis with China in Ladakh a crisis over 1000 km away in the high Himalayan Mountains involving limited numbers of infantry fighting with clubs and sticks – in a move that likely was merely precautionary and not intended as a nuclear signal but which nevertheless created potential for inadvertent escalation (Sethi 2020). Had an incident occurred with that submarine, whether accidental or otherwise, it could have transformed a limited (albeit brutal) border clash into a nuclear crisis.

Fulcrums for Deterrence Multipolarity

These trends seem likely to accelerate in the future, but singularly or in combination may not be sufficient conditions to tip the region into multipolar deterrence. The tipping point, if it occurs, may not be sharp or obvious. Although analysts and officials may perceive changes, implications for policy are likely to be subject to protracted debate. It is a deeply political act to acknowledge, tacitly or officially, the existence of mutual deterrence. Yet the failure to accurately diagnose the state of deterrence could be highly dangerous. Indeed, it is plausible that only through a nuclearized crisis would the parties recognize the existence of a new deterrence paradigm.

Two potential fulcrums on which such tipping might occur are parallel nuclear posture changes in India and China that create nuclear coupling and hardening of loose geopolitical alignments into more adversarial blocs, especially a strategic Sino-Pakistan nexus.

India-China Nuclear Coupling

China and India maintain similar nuclear doctrines and postures. Leaders in both states appear to see nuclear weapons mainly as defensive in nature and political in purpose. The parallel no-first-use declarations that remain official policy in both states are an important conceptual barrier to nuclear deterrence becoming a more important facet of their bilateral relations and a constraint on their military tensions. Similarly, their minimum deterrence arsenals postured primarily for a survivable second-strike capability separate nuclear weapons from most likely conflict scenarios. There is no discussion of mutual nuclear vulnerability as such. Sharper military friction along the border and even more indications of direct arms racing might not be sufficient to disrupt this status quo. In the assessment of one Indian analyst, "neither country believes the other requires much attention in terms of nuclear deterrence" (Mohan 2020). Yet, the relative stability afforded by their similar nuclear postures and belief systems is not immutable, and several plausible developments could push both states towards a "coupled" nuclear deterrence relationship.

It is notable that security experts in New Delhi and Beijing have been debating sometimes quietly, sometimes publicly - the wisdom of their respective nuclear postures amidst changing security conditions. In China, the pressure for posture change comes from perceived threats from the United States. Former Chinese Arms Control Ambassador Sha Zukang argued in September 2021, for example, that China should clarify its no-first-use policy "may not apply to the US unless China and the US negotiate a mutual understanding on no first use of nuclear weapons, or unless the US ceases to take any negative measures that undermine the effectiveness of China's strategic forces" (Zhao 2021). In India, some retired senior military officers, including the former Strategic Forces Commander, Gen. (retired) B. S. Nagal, contend that a more ambiguous use policy would strengthen deterrence against Pakistan (Nagal 2014).

For now, neither state appears poised to adopt a new declaratory policy or offensive nuclear posture. Pakistan therefore continues to stand apart in the region for its undeclared (but assumed) first use posture and apparent readiness to threaten nuclear escalation to deter Indian conventional military aggression. Yet, if the forecasts are accurate, China's significant quantitative and qualitative expansion of its nuclear arsenal may be a leading indicator of nuclear posture changes intended to strengthen deterrence against the United States. Meanwhile, statements by Indian cabinet officials cast further doubt on continued adherence to No First Use (Philip 2019). Thus, for reasons having little to do with each other, China and India may end up in a situation where both adjust their declaratory policies and postures in relatively similar ways.

Attenuation of nuclear policies that have until now helped prevent the emergence of a coupled deterrence relationship between India and China could set a key building block of a multipolar nuclear deterrence system in Southern Asia. This would especially be the case if changes in nuclear posture spur either Chinese or Indian leaders to see nuclear deterrence as an enabler of more coercive conventional military actions. Russia's February 2022 attack on Ukraine and associated nuclear sabre-rattling to deter outside intervention are a poignant reminder of this possibility. Even if such thinking would not be directed towards the LAC, concerns that it might lead strategists in either capital to plan for that eventuality.

Opposing Blocs

For decades, China and India had managed their differences and enjoyed deep economic ties, but, beginning with the Doklam border standoff in 2017, a split in relations formed and began to harden. Indian strategists have begun to speak of the need for economic decoupling from Beijing (Menon 2021). In China, there appears to be two views on how to deal with India, argues Tanvi Madan: "one that this crisis will push India further into US arms and therefore should be resolved because it does not make sense to bolster the United States' countervailing coalition against China, and the other that India is already in the United States' embrace, an alignment that has 'emboldened' India, and so China should not hesitate to make tactical gains, demonstrate its strength to the United States and India, put India in its place, and expose the vulnerabilities of this U.S. partner" (Madan 2021, 24). However, between geopolitical shifts and changes in Indian attitudes about China, the United States and the value of nonalignment, the US-India security partnership seems likely to deepen, accelerated by spillover from US-China geopolitical competition. At the same time, China, Russia and Pakistan are growing closer in defence ties, while CPEC has solidified Sino-Pakistan ties. (Russia's relations with China and Pakistan are increasingly in tension with its long-time defence relationship with India,

while Russia's invasion of Ukraine highlights similar tensions in India's defence policies vis-à-vis the United States and Russia.) An acceleration of these trends and the decline in importance of regional groupings that enabled cooperation and shared interests in the region may produce a different fulcrum that enables multipolar nuclear deterrence: the coalescing of two opposing blocs in South Asia.

If they were to emerge, the blocs seem unlikely to resemble the consolidated, multinational, collective defence pacts that characterized Cold War Europe. Rather, Southern Asian blocs would probably comprise a patchwork of different types or levels of security partnership among a smaller group of states (the Quad and a China-Pakistan-Russia group), with varying commitments to mutual defence. Similarly, pan-regional groups and deep economic ties between states in opposing blocs may persist in ways that make the blocs more porous than those in Europe, even as geoeconomic competition among rival groups accelerates. The key issue is how these blocs would address question of mutual security, and the role of nuclear deterrence therein.

Nuclear deterrence (or extended nuclear deterrence) probably would not feature directly - there is unlikely to be an analogue to NATO's nuclear doctrine, for example. (It is possible, however, there could be deeper integration of Chinese and Pakistani nuclear capabilities, which Indian experts tend to believe "are so closely linked and have been for so long that they may effectively be treated as one". (Menon 2016, 214). This could drive India to consider, for instance, the potential for limited nuclear use as a means of deterring Chinese involvement in India-Pakistan contingencies.) More likely, there would be complex overlapping nuclear deterrence relationships involving different postures, declaratory policies, arsenal sizes and approaches to planning for nuclear use in escalating conventional conflicts. In other words, even if the blocs appear to have solidity, the conditions within and between each bloc are likely to be messy. And in the context of that uncertainty, with greater potential for misperception, it seems likely that nucleararmed states could opt to increase the salience of nuclear weapons to deter a broader range of threats.

For example, the coalescing of blocs could increase the potential for two-front wars in the region in ways that might broaden the boundaries of nuclear deterrence discussed above. Indian strategists have long been concerned that in a contingency with Pakistan, China would open a second front to aid Islamabad or prevent a Pakistani defeat (Singh 2021). The Ladakh crisis in 2020 raised new fears in New Delhi that Pakistan and China might coordinate border exertions to pressure India from both sides. In a scenario of solidified blocs, India might be able to count on support from the United States or other security partners - at the very least intelligence sharing, perhaps also logistics support or even defence in rear areas. The prospect of US engagement might discourage a coordinated China-Pakistan campaign. By the same token, with two blocs in the region, Chinese strategists may face two-front conflict concerns of their own - that in a contingency with India, the United States or others may seek to pressure Beijing in other areas (for example, the South China Sea).

A consequence of two-front war concerns for India and China is the potential for nuclear deterrence to creep in by virtue of involvement of other nuclear-armed parties. Even if China and India continue to avoid nuclear coupling, India's deterrence calculus with Pakistan affects how it would view Chinese involvement in an India-Pakistan contingency. Similarly, US-China deterrence dynamics might impact Beijing's thinking if Washington were to aid India in a future Sino-Indian contingency. In planning for such possibilities, Chinese and Indian strategists would need to consider how their or their adversary's nuclear capabilities might influence conflict escalation decisions and how to react accordingly. For example, if India were in an escalating crisis with Pakistan that involved nuclear threats and alerting of nuclear forces, and Chinese forces attacked Indian positions on the LAC, Indian leaders might be tempted to expand nuclear retaliation threats to China, or to consider limited nuclear options against Chinese forces in an escalate-to-deescalate strategy. These scenarios may seem far-fetched today, yet it is likely they are already being considered by military planners.

Can Nuclear CBMs Prevent a Shift toward Deterrence Multipolarity?

That Southern Asia could flip toward deterrence multipolarity in some respects seems overdetermined, given the drivers discussed above, yet it is an outcome over which states in the region retain considerable agency. If China and India, in particular, can manage their strategic relations in a way that mitigates the emergence of mutual nuclear deterrence, then a more complex and dangerous multipolarity may be avoided. How might they work to prevent such a development and to develop more stability and predictability in the region?

Pakistan and India and India and China have utilized different types of confidencebuilding measures to mitigate the potential for conflict and stabilize relations. Notably, border management agreements between China and India after their 1962 war helped temper tensions on the LAC and facilitated regular military-to-military contacts to manage potential encounters in disputed territory. As yet, there are no CBMs between China and India that address nuclear weapons or nuclear-adjacent matters, though the 1996 border agreement does restrict deployment of surface-to-surface missiles in agreed geographic zones near the border (China-India Agreement 1996). India and Pakistan have a deep history of military, economic, cultural and resource agreements and practices, many negotiated in the wake of periodic conflicts. As Indian and Pakistani nuclear weapon capabilities began to mature in the late 1980s, the two signed an agreement not to attack each other's nuclear facilities (which could have led to environmental and humanitarian disaster). And after both states conducted nuclear explosive tests in 1998, they negotiated several nuclear and missile CBMs to prevent miscalculation. The security communities in all three states thus have familiarity with CBMs and could endeavour to build on existing ones if there was sufficient political will. However, in the absence of sustained efforts to institutionalize normalized relations and, ultimately, peace, most existing measures have become obsolete, irrelevant or merely an end in themselves.

In some respects, just as there appears to be some top-down spillover arms racing effect in the region, there is something of a bottom-up phenomenon regarding interest and proposals for CBMs. In recent years, most of the initiatives for CBMs between Pakistan and India have come from Islamabad, which makes periodic proposals for a strategic restraint regime. While dismissing CBM proposals from Pakistan, Indian analysts have proposed convening official nuclear and stability talks with China. Beijing, however, appears to have no interest in engaging on nuclear issues with India and just begrudging willingness to engage the United States, albeit for disparate reasons - not wanting to "recognize" India as a nuclear-armed state, and seeking to avoid US interests

in arms limitations talks. Therefore, there seems to exist no common minimal interest or viable channels, whether on a bilateral or region-wide basis, to pursue additional nuclear CBMs to address changing security conditions and their impact on nuclear deterrence.

The reasons for the lack of mobility for nuclear CBMs are fairly clear. Prevalent nationalist domestic politics in all three countries tend not to favour accommodation with adversaries, apart from exceptional circumstances involving a willingness by apex leaders to take significant political risks (Dalton 2013). There are also apparent asymmetries of interest, power and institutions among the three states. Notably, China maintains that India is not a legitimate possessor of nuclear weapons (according to the terms of the Nuclear Non-Proliferation Treaty) and therefore aims to avoid frameworks that accord India nuclear status, let alone equivalency with China (Dalton and Zhao 2020). (This appears to be the primary basis for China's opposition to India becoming a member of the Nuclear Suppliers Group, for instance.) India, meanwhile, aspires to be seen as a global player and to avoid being "re-hyphenated" to Pakistan. Differences in civilmilitary relations between India and Pakistan (namely, civilian control of nuclear weapons in the case of India and military control in the case of Pakistan) are indicated by both sides as an obstacle to fruitful negotiations. Such divergent perceptions are a major obstacle to initiating new or repurposing existing CBMs.

Theoretically, some existing bilateral CBMs could form the basis of regional initiatives. Apart from politics, there is no technical reason China could not join the India-Pakistan missile flight test pre-notification regime, for example. Additionally, it is possible that some declaratory CBMs - such as the nuclear facility non-attack agreement - could be augmented with additional transparency or cooperative monitoring provisions. Practically, however, until circumstances or interests change, Beijing's view of India as a non-peer and New Delhi's inclination to see Pakistan's nuclear program as an outgrowth of China's significantly limits the potential fungibility of existing CBMs. It is perhaps more plausible that global nuclear frameworks - e.g. on counter nuclearsmuggling or export control - could provide an umbrella for new regional cooperation, though in practice that has not yet occurred, likely for similar reasons as those enumerated above. Even if it did, it is not clear that global frameworks would be useful or relevant to managing nuclear multipolarity in Southern Asia.

As existing CBMs in the region stagnated, new tensions and sources of conflict escalation grew unmitigated. The potential for maritime disputes to escalate is increasing, and there are no agreements among the parties on incidents at sea. Land borders, meanwhile, have experienced escalating violence. India's 2019 decision to revoke article 370 of the Indian constitution, which granted "temporary" special status and protections for permanent residents of Jammu and Kashmir, appeared to inflame border tensions with both Pakistan and China. Cross-border firings along the Line of Control reached a crescendo. So-called ceasefire violations – a euphemism for shelling and artillery fire on Indian and Pakistani positions along the LOC, which often also affects non-combatants in the area – increased from approximately 3500 incidents in 2019 to over 5000 in 2020 before declining in 2021, according to Indian data (Sandhu 2021). This violence can seemingly be turned on or off by military leaders and thus is viewed by analysts as relatively contained, with a low propensity to escalate (Jacob 2019). There appears to be no impetus in New Delhi or Islamabad to attempt a more ambitious effort to turn the LOC into a de jure border, as was explored in the early 2000s in backchannel negotiations between the two governments. Similarly, efforts to establish a sustained dialogue on terrorism - which remains a likely catalyst of conflict that could escalate rapidly - never took flight given pervasive distrust that precludes the type of information and analysis sharing that could diminish the probability or consequences of such attacks.

China-India border tensions also increased following India's move to change the constitutional status of Jammu and Kashmir, though whether there is a causal relationship between the two is a matter of dispute among analysts (Tellis 2020). The 2020 violence in the Galwan valley produced significant casualties and deaths, breaking a period of non-violence that had held since the 1962 border conflict. Both states are rapidly building infrastructure along the LAC (which many analysts believe instigated the 2020 conflicts) to create more literal "facts on the ground" in territory they claim and occupy. In a different sector, China even built villages in disputed territory to create the appearance that its military activities are in service of protecting Chinese citizens (Pubby 2021). Neither side appears eager to cede territorial claims of the other, and it seems plausible there will be further violent efforts to redraw the LAC. Even though analysts in China and India appear to believe that border violence is unlikely to escalate to a limited conflict, the mechanisms and thresholds of escalation control are less well conceived than in the India-Pakistan dyad. Unless new border management practices or a broader political modus vivendi are negotiated, further violence seems likely, even if that violence is unlikely to reach a magnitude or threaten interests that would be seen to require nuclear responses.

New Mechanisms to Manage Nuclear Deterrence Multipolarity

The necessity of new mechanisms to manage possible nuclear deterrence multipolarity in Asia ties to the perceived likelihood that such a system evolves from the current system in which India and Pakistan remain the focal point of nuclear deterrence in the region. If nuclear weapons serve mostly dissuasive purposes, nuclear-related CBMs may not be especially relevant to tempering the potential for conflict or facilitating normalized relations. Alternatively, if opposing blocs harden or China-India nuclear deterrence become more coupled, then nuclear-related CBMs could become a more relevant means of mitigating misperceptions, tempering arms race pressures and avoiding inadvertent escalation. However, given the complex security relationships in the region and the role of emerging and disruptive technologies in the conflict spectrum, among other factors, a traditional "bean-counting" approach to arms control is unlikely to work as a means to build stability and predictability in Southern Asia. New frameworks and approaches to addressing emerging threats, varied sources of tensions and escalation pathways in the region are needed.

Realistically, it may be difficult to build on or around existing nuclear CBMs as an expedient path toward new frameworks. Notwithstanding the many good studies and creative ideas on CBMs put forward over the years, for the reasons cited above it is unlikely that China would join existing regional agreements or negotiate new ones directly with India (Khan 2021; Saalman and Topychkanov 2021; Krepon and Wheeler 2017). Unless, that is, there is a change in conditions or a crisis that unexpectedly brings in nuclear threats, such that leaders in all three states realize the wisdom of measures to improve stability and predictability. CBMs in this vein could start from simple, three-way dedicated communication links or incidents at sea agreements, all the way up to more complex arms control-type limits on force deployments near borders. These types of measures could be quite impactful, but the perceived sensitivity makes the politics of such negotiations very difficult.

Short of such developments, CBMs should aim instead at cushioning or building guardrails around predictability in relations. In a multipolar nuclear future, non-nuclear CBMs may be more negotiable and could still prove valuable in developing such predictability. These could be usefully targeted at sources of tension that might spark conflict, or likely avenues of conflict escalation. Indeed, to the extent that they avoid the neuralgia and status hang-ups that tend to frustrate nuclear-specific CBMs, some of these options could be negotiable today.

One plausible category of measures could address common pool resource issues that could catalyse future conflict, especially given the compounding impacts of climate change. Water management is a top concern, as periodic Indian threats to withhold water in the upper riparian of the Indus River make clear. China also controls watersheds that feed India, especially the Brahmaputra River, creating water frictions in Sino-Indian relations (Singh and Tembey 2020). Although water issues are entangled in border issues, initial behavioural agreements could constitute a good first step. For example, the parties could agree to freeze construction of additional dams or water diversions in upper riparian areas for a certain period to give time for diplomats to work on more durable solutions. Fisheries is another resource issue also tied to disputed territory. India and Pakistan periodically capture boats accused of illegal fishing in the Sir Creek estuary. Meanwhile, Chinese fishing fleets have become more common in the Indian Ocean, accompanied by Indian accusations of illegal fishing (Bhatt 2020). Here, too, initial agreements on proscribed behaviours and procedures for dealing with boats and fishermen accused of illegal fishing could help manage the potential for escalating maritime disputes.

A second category of measures could comprise nuclear-adjacent security topics, such as behaviours regarding space capabilities. National space assets for communications and other military missions are already relevant today for India and China and will be increasingly important to all three states in the future. Whether on a regional or global basis (via the relevant United Nations Open-Ended Working Group), a process to clarify views on acceptable and unacceptable behaviours could serve as a potential basis for agreements on limiting behaviours deemed to be threatening or destabilizing (Skibba 2021). Regular communications on space behaviour could also identify potential sources of dangerous misperception, e.g. interference with certain types of assets or during certain periods, around which CBMs could be developed. Eventually, the parties could seek agreement on non-interference with space assets utilizing either orbital or groundbased capabilities. A more specific agreement could also be tailored to satellites in geosynchronous orbits, which tend to be more closely associated with military and nuclear command and control systems.

A third approach to improving stability could be to develop region-wide crisis and emergency management mechanisms for a range of contingencies. Climate-related and other natural disasters with trans-border effects would be an obvious and relatively safe topic which military, civilian and law enforcement officials could discuss, conduct exercises, and ultimately put in place standing coordination mechanisms. With such a foundation, the governments could broach more difficult types of crises, such as those spurred by misperceptions of military exercises or instigated by terrorist attacks. These may prove to be more difficult topics, and perhaps track two discussions led by former practitioners could be an easier way to develop shared ideas and concepts.

These measures could anchor an approach to build greater predictability in relations, which could diminish the salience of nuclear weapons as politico-military tools perceived as relevant to challenges in the region. Pursuing this approach may yield greater success than attempting to overcome the status and political hurdles to securing regional nuclear-related CBMs. Although it may not be possible to prevent a more dangerous and unstable deterrence multipolarity from emerging, these or other types of CBMs may help China, India and Pakistan build stability into their relationships such that nuclear weapons gradually fade into the background.

* This article is based on a Working Paper submitted for APLN-Toda Peace Institute's Collaborative Project "Managing the China-India-Pakistan Nuclear Trilemma".

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

Acton, J. M. 2018. "Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Raises the Risks of an Inadvertent Nuclear War." International Security 43 (1): 56-99. doi:10.1162/isec a 00320.

Bhatt, P. 2020. "China's Gray-Zone Tactics in the Indian Ocean," South Asian Voices, 19 March 2020.

China-India Agreement.1996. Agreement Between the Government of the Republic of India and the Government of the People's Republic of China on Confidence-Building Measures in the Military Field Along the Line of Actual Control in the India-China Border Areas https://peacemaker.un. org/sites/peacemaker.un.org/files/CN%20IN 961129 Agreement%20between%20China% 20and%20India.pdf.

Clary, C., and V. Narang. 2019. "India's Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities." International Security 43 (3): 7-52. doi:10.1162/isec_a_00340.

Cooper, H. 2021. "China Could Have 1,000 Nuclear Warheads by 2030, Pentagon Says," New York Times, 3 November 2021.

Cunningham, F., and T. Fravel. 2021. "China's Nuclear Arsenal Is Growing. What Does that Mean for U.S.-China Relations?" Washington Post. 11 November 2021.

Dalton, Toby. 2013. Beyond Incrementalism: Rethinking Approaches to CBMs and Stability in South Asia. Washington, DC: Stimson Center. 31 January, 2013.

Dalton, T. 2020. "How Different Is the 'New Normal' from the Old Normal in South Asian Crises?" Strafasia, 8 May 2020.

Dalton, T. 2021. "Competitive Deterrence? The United States, China, and South Asia." In US-China Nuclear Relations: The Impact of Strategic Triangles, edited by D. Santoro, 161-198. Boulder, CO: Lynne Rienner.

Dalton, T., and T. Zhao. 2020. At a Crossroads? China-India Nuclear Relations after the Border Clash. Washington, DC: Carnegie Endowment for International Peace. 19 August 2020.

Das, D. 2021. "China's Missile Silos and the Sino-Indian Nuclear Competition." War on the Rocks, 13 October 2021.

Durrani, M. A. 2004. "Pakistan's Strategic Thinking and the Role of Nuclear Weapons," Cooperative Monitoring Center Occasional Paper, Sandia National Laboratories.

Einhorn, R., and W. P. S. Sidhu. 2017. "The Strategic Chain: Linking Pakistan, India, China and the United States." Brookings Institution Arms Control and Non-Proliferation Series, Paper 14. 2017,

Fair, C. 2014. Fighting to the End: The Pakistan Army's Way of War. Oxford: Oxford University

Jacob, H. 2019. Line on Fire: Ceasefire Violations and India-Pakistan Escalation Dynamics. New Delhi: Oxford University Press.

Khan, F. H. 2021. "Trilateral Strategic Confidence Building Measures in Southern Asia." Asia Pacific Leadership Network, 28 October 2021.

Khan, F. H., R. Jacobs, and E. Burke, eds. 2014. Nuclear Learning in South Asia: The Next Decade. Monterey CA: Naval Postgraduate School.

Krepon, M., and T. Wheeler, eds. 2017. Off Ramps from Confrontation in Southern Asia. Washington, DC: Stimson Center.

Kristensen, H., M. Korda, and R. Norris. 2022. "Estimated Global Nuclear Warhead Inventories 1945-2021." Federation of American Scientists. https://fas.org/issues/nuclear-weapons/statusworld-nuclear-forces/.

Kulkarni, T. 2022. "Managing the China, India, and Pakistan Nuclear Trilemma." Asia Pacific Leadership Network Special Report 2022 (July).

Lalwani, S. 2020. "Revelations and Opportunities: What the United States Can Learn from the Sino-Indian Crisis." War on the Rocks, 10 July 2020.

Madan, T. 2021. "Major Power Rivalry in South Asia." Council on Foreign Relations 2021.

Menon, S. 2016. Choices: Inside the Making of Indian Foreign Policy. Washington, DC: Brookings Institution.

Menon, S. 2021. "Economic Decoupling to Self-Strengthening, How India Can Rise to China Challenge." Times of India, 16 October 2021.

Miglani, S., and D. Jorgic. 2019. "India, Pakistan Threatened to Unleash Missiles at Each Other: Sources." Reuters, 17 March 2019.

Mizokami, K. 2021. "The India-Pakistan Nuclear Arms Race Should Concern You," The National Interest, 4 November 2021.

Mohan, P. 2020. Is Nuclear Deterrence in the Cards for India and China. Observer Research Foundation, 11 September 2020.

Nagal, B. S. 2014. "Checks and Balances." Force. June 2014.

Philip, S. A. 2019. "India Committed to No First Use Nuke Policy, but 'Future Depends on Circumstances': Rajnath." The Print, 16 August 2019.

Pubby, M. 2021. "China Has Built a Village in Arunachal Pradesh: Pentagon." Economic Times, 6 November 2021.

Rajagopalan, R. P., and Y. Yao. 2012. "Linking Strategic Stability and Ballistic Missile Defense." In The China-India Nuclear Crossroads, edited by L. Saalman, 65-76. Washington, DC: Carnegie Endowment for International Peace.

Raman, B. 2022. "The China-Pak Nexus." Outlook India, 3 February 2022.

Saalman, L., and P. Topychkanov. 2021. "Reinvigorating South Asian Nuclear Transparency and Confidence-Building Measures." SIPRI 2021 (September).

Sandhu, K. K. 2021. "Sharpest Decline in Ceasefire Violation Along LOC: MHA Tells Parliament." India Today, 3 August 2021.



Sawney, P. 2021. "Ladakh Stand-off Has Exposed India's Failed Nuclear Deterrence against China. Now What?" The Wire, 1 September 2021.

Sethi, M. 2020. "Why India and China Haven't Used the 'N' Word Throughout the Ladakh Crisis." The Print, 3 August 2020.

Singh, S. 2021. "The Challenge of a Two-Front War: India's China-Pakistan Dilemma." Stimson Center, 19 April 2021.

Singh, S. 2022. "China Has India Trapped on Their Disputed Border." Foreign Policy, 1 December 2022.

Singh, A. P., and U. Tembey. 2020. "India-China Relations and the Geopolitics of Water." The Interpreter (Lowy Institute), 23 July 2020.

Skibba, R. 2021. "The United Nations Could Finally Create New Rules for Space." Wired, 3 November 2021.

Small, A. 2015. The China-Pakistan Axis: Asia's New Geopolitics. London: Hurst.

Tellis, A. 2019. India's ASAT Test: An Incomplete Success. Washington, DC: Carnegie Endowment for International Peace. 15 April 2019.

Tellis, A. 2020. Hustling in the Himalayas: The Sino-Indian Border Confrontation. Washington, DC: Carnegie Endowment for International Peace. 4 June 2020.

Zhao, L. 2021. "China Should 'Fine-Tune' Nuclear Weapons Policy Amid US Pressure, Ex-Diplomat Says." South China Morning Post, 22 September 2021.