

WHY NUCLEAR RIVALS REJECT PEACE

A Thesis

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by

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Fletcher Security Review, Fletcher, Tufts University

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Georgetown Journal of International Affairs, Summer 2013.

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Foreign Affairs, March 24, 2010.

“Beefing Up COIN-lite in Afghanistan and Pakistan”

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“Lions and Jackals: Pakistan’s Emerging Counterinsurgency Strategy”

Foreign Affairs, July 15, 2009.

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U.S. Joint Special Operations University Press, Hurlburt Field, FL, 2009.

A detailed historical study of Pakistan’s policy to counter and foment insurgencies (1947 to 2008), based on field research in Pakistan.

South Asian Nuclear Deterrence Instability: Challenges and Opportunities

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A detailed study of the causes and policy implications of the India-Pakistan nuclear rivalry, based on field research in India and Pakistan.

Policy Reports and Analyses

“Al-Qa’ida and Pakistan: Current Role and Future Considerations”

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“The Pakistani Surge: The Way Forward for Counterinsurgency in Pakistan”

Australian Strategic Policy Institute, June 2010

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Presenter, U.S. Army and Marine Corps Counterinsurgency Center, Fort Leavenworth, KS, September 15, 2009.

“Pakistan’s Changing Counterinsurgency Strategy” Briefer, General David H. Petraeus, Commander, U.S. Central Command, Tampa, FL, August 29, 2009.

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Lecturer, Near East-South Asia Center for Strategic Studies, National Defense University, April 24, 2009.

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“Countering Militancy in Pakistan: Domestic, Regional and International Dimensions”

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Abstract

Why nuclear rivals reject peace? I argue, through my Nuclear Prison Theory, that the root cause of sustainable asymmetric nuclear rivalries is an active border dispute, which remains unresolved because nuclear weapons uniquely empower the weaker rival to reject the stronger rival's offer to convert control over territory into sovereignty over territory. The economically and militarily stronger rival has de facto control of most of the disputed territory and unsurprisingly prefers to keep that control; whereas the weaker rival, punching above its weight with newly acquired nuclear weapons, rejects the stronger power's offer, and wants more territory. Both stick to their positions and the rivalry persists within a 'Nuclear Prison', where nuclear rivals find themselves bouncing from brinkmanship (border skirmishes) short of war, and rapprochement (confidence buildings measures) short of peace, and periods of stalemate in between. This makes any negotiated territorial settlement a mutual capitulation.

By examining 31 episodes of war, brinkmanship, rapprochement, and peace (1947-2020) across the India-Pakistan and China-India nuclear rivalry cases I found empirical evidence for my Nuclear Prison Theory and demonstrated that these rivals had waged war and signed peace treaties that resolved their border disputes before – but not after – they acquired nuclear weapons. I also confirmed that a 'nuclear prison' emerges through a five-phase, self-perpetuating process. First, to maximize security and achieve power parity, states engage in rivalries based on border disputes and pursue and acquire nuclear weapons. Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures such as advanced delivery and missile defense systems. Third, adversaries trade provocative actions, such as military exercises and border skirmishes but stop short of war. Fourth, since war would mean mutual suicide, both states back off to a stalemate and then engage in rapprochement to resolve the disputed territory short of signing a peace treaty resolving the contested border. Fifth, when a peace treaty is not signed, the rivals revert to stalemate or engage in brinkmanship. Rival states find themselves in a vicious cycle of escalation short of war and de-escalation short of peace – war is perceived to be suicide and peace (border dispute resolution) is perceived to be surrender.

My Nuclear Prison Theory carves a new path in the research field of nuclear deterrence, the impact of nuclear proliferation, and conflict escalation. It introduces a new, original limitation of nuclear deterrence – a nuclear prison that keeps nuclear rivals, paradoxically, from both war and peace.

Dedication

To Fateh Ali Hussein Mullick – you are all my reasons

And

To Rabia Chowdhry, my love

Acknowledgements

I wrote this dissertation to find out why state adversaries with nuclear weapons reject peace knowing that war is no longer a viable option. Yet, the same rivals sign peace treaties that resolve territorial disputes before they acquire nuclear weapons. As I explored the answer and developed my Nuclear Prison Theory, I observed the awesome power of nuclear weapons to not only deter war but also peace. I hope this dissertation helps stop the spread of nuclear weapons, finds new ways to mitigate ongoing nuclear rivalries, and adds value to the discipline of International Relations, especially Nuclear Deterrence Theory. None of this would have been possible without the unwavering support of my dissertation committee: Karen Jacobsen, Jeffrey W. Taliaferro, and Antonia Handler Chayes. Each of them took precious time to review and propose measurable improvements to my theory. I thank them profusely for their help.

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My long-term mentors, Dighton Fiddner, James G. Stavridis, David H. Petraeus, Stephen P. Cohen, and Lawrence K. Pettit, provided essential encouragement when my Pentagon job, multiple U.S. Navy deployments, and dad-duties left almost no time to write the dissertation. There were also constant words of reassurance and praise from former Fletcher PhD Director, Jenifer Burckett-Picker, and my Pentagon colleague, Cynthia Williams. My friends, Jonathan Ruhe, Reza Akbari, Enver Majid, John W. Huey, Adam Wolf, Robert Getz, Alex Cornell du Houx, and Casper Manlangit constantly endured my musings on nuclear weapons and provided necessary feedback and comedic relief.

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Most important, I am grateful for the love and support of my wife, Rabia, and my son, Fateh Ali. My appreciation for your love, patience, and support over these years cannot be overstated—you are my *jaans*. This dissertation, and any success I have earned is as much yours as it is my own.

Haider Mullick
Washington, D.C. December 2020

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“Nuclear weapons are intrinsically neither moral nor immoral, though they are more prone to immoral use than most weapons.”
—Herman Kahn¹

“A world without nuclear weapons would be less stable and more dangerous for all of us.”
—Margaret Thatcher²

Chapter 1: Introduction

It wasn't yet summer, but the sun seemed closer that day. On May 28, 1998, I was seventeen years old. With awe and horror, I watched on TV the granite mountains of Chagai jiggle and turn to gold from the power of underground nuclear tests in Pakistan. This was two weeks after India's second nuclear tests. Amidst international condemnation eventually bluster gave way to reason and both sides started to talk about nuclear peace. Nine months later, India and Pakistan signed the Lahore Declaration pledging to resolve their disputed border pushed by the new reality of possessing mankind's deadliest weapon. "No war means honorable peace," was the mantra across the border. Yet, two months later Indian and Pakistani troops locked horns in Kargil's Tiger Hills killing hundreds on both sides. Enslaved by nuclear weapons both sides toyed with bluster and ceasefires, but peace never came.

Puzzle

Since the first use of nuclear weapons, in 1945, there is not a single case of full-scale war between nuclear rivals.³ Equally important is the fact that nuclear

¹ Herman Kahn, *Thinking About the Unthinkable in the 1980s: A Revisiting of the Classic Work on Nuclear War* (New York: Simon and Schuster, 1984): 31.

² Margaret Thatcher, "Speech at Soviet Official Banquet," March 30, 1987.

³ Full-scale war is hostilities between opposing national armed forces resulting in 1,000 battle deaths over a 12-month period as defined by the Correlates of War database. Under this definition the 1999 Kargil border conflict between nuclear-armed India and Pakistan was not a full-scale war.

rivals have never signed a peace treaty to resolve a border dispute.⁴ Why countries contesting borders sign peace treaties before acquiring nuclear weapons but eschew peace after developing nuclear weapons is my dissertation's central question.

I demonstrate, through my Nuclear Prison Theory, that the root cause of sustainable asymmetric nuclear rivalries is an active border dispute, which remains unresolved because nuclear weapons uniquely empower the weaker rival to reject the stronger rival's offer to convert control over territory into sovereignty over territory. The economically and militarily stronger rival has de facto control of most of the disputed territory and, unsurprisingly, prefers to keep it; whereas the weaker rival, punching above its weight with newly acquired nuclear weapons, rejects the stronger power's offer and wants more territory. Both stick to their positions and the rivalry persists, with nuclear rivals finding themselves bouncing from brinkmanship (border skirmishes) short of war, and rapprochement (confidence buildings measures) short of peace, punctuated by periods of stalemate in between. This makes any negotiated territorial settlement a mutual loss—what I call mutual capitulation. This purgatory, between war and peace, which I call the “Nuclear Prison,” is very difficult to break out of when the root cause of the rivalry is a border dispute. In the one *sui generis* case of Russia and

⁴ Peace is defined as a bilateral agreement to resolve the decisive cause of conflict, which in the case of nuclear rivalries is disputed territory. Database compiled by author of all nuclear-armed countries involved in active rivalries – United States, Russia, China, India, Pakistan, and North Korea – shows that nuclear rivals have never signed a peace treaty that resolves a disputed territory except for Zhenbao Island 1969 dispute between China and the Soviet Union that was resolved after in 1991, more on this later in the chapter.

China where the Nuclear Prison did break, the Soviet Union literally imploded, after which Russia settled its border disputes with China.

I make the case that nuclear weapons uniquely and decisively sustain these rivalries, because the same rivals without nuclear weapons behave differently by waging war and making peace (resolving border disputes). For example, India and Pakistan waged a full-scale war in 1948 over the contested territory of Kashmir. Yet, 10 years later, in 1958, both signed a peace treaty based on resolving a border dispute by dividing the state of Bengal (then West Pakistan, today Bangladesh), and later, in 1960, by dividing the river Indus.⁵ India and China signed a treaty in 1954 to surrender its claims on Tibet (inherited through British India), and waged war over contested territories in 1962.⁶

In the illustrative cases examined in this dissertation, when the same rivals acquire nuclear weapons, they tend to oscillate between brinkmanship short of war and rapprochement short of peace (border dispute resolution). For example, India and Pakistan formally pledged to resolve their border disputes in February 1999, engaged in a major skirmish two months later in Kargil, and went back to détente in 2011 when India granted Pakistan ‘Most Favored Nation Status’ related to bilateral trade.⁷ India and China engaged in brinkmanship, in 1987, on the

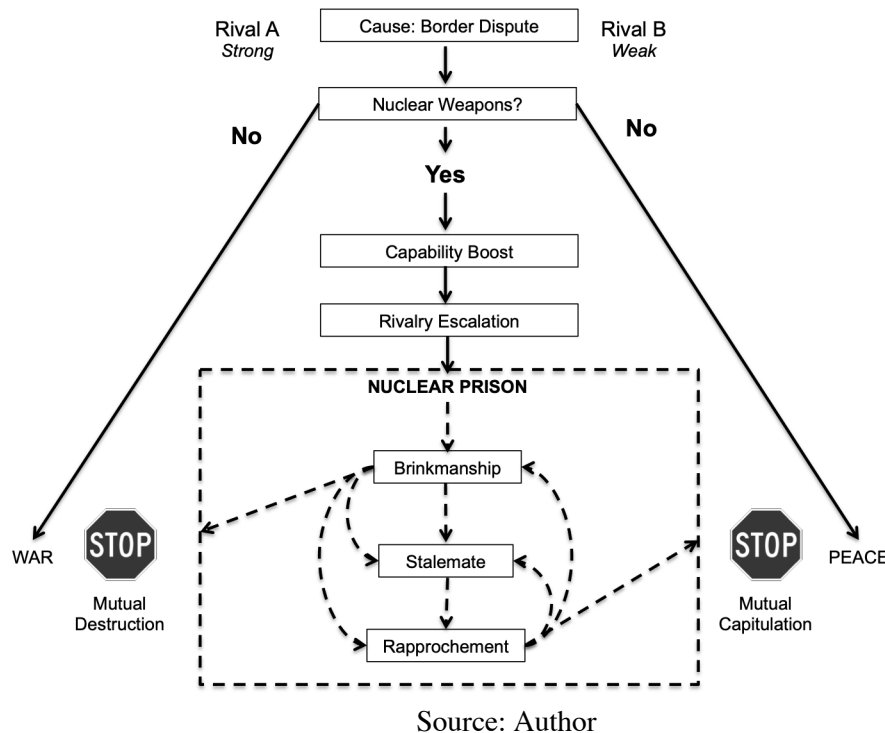
⁵ United Nations, “Agreement between India and Pakistan on Border Disputes (East Pakistan),” Peace Agreements Database, October 9, 1958, Shuja Nawaz, *Crossed Swords: Pakistan, Its Army, and the Wars Within* (London: Oxford University Press, 2008), 42-72, and Opangmeren Jamir, "Understanding India-Pakistan Water Politics since the Signing of the Indus Waters Treaty." *Water Policy* 18, no. 5 (2016): 1070-087.

⁶ Mahesh Shankar, “Territory and the China-India Competition,” in *The China-India Rivalry in the Globalization Era*, ed. T.V. Paul (Washington, D.C., Georgetown University Press, 2018), 29-47.

⁷ See for example, Graham Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis* (New York: Pearson, 1999), and Peter R. Lavoy ed., *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict*

disputed border, opened border talks in 2005, but were back to border clashes in 2017 in Doklam, near the trijunction of the India-Bhutan-China border.⁸

Figure 1 Sequential Path and Conditions for Nuclear Prison



Why didn't India and Pakistan or China and India sign a peace treaty to resolve their border disputes? Political scientists have long studied why nuclear rivals avoid war but they have largely ignored the question of why these adversaries avoid peace by resolving border disputes.⁹ For realists, fear of mutual

(London: Cambridge University Press, 2009), the Strategic Offensive Reductions Treaty of May 2002 between the United States and Russia, and Tirthankar Roy, *The Economy of South Asia: From 1950 to the Present* (London: Palgrave Macmillan, 2017): 234-35.

⁸ Jeff M. Smith, *Cold Peace: China-India Rivalry in the Twentieth-First Century* (NY: Lexington Books, 2014): 35-41, and Ivan Lidarev, "2017: A Tough Year for China-India Relations," *The Diplomat*, January 4, 2018.

⁹ See, for example, Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt Brace, 1946); Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, NY: Cornell University Press, 1989); Kenneth N. Waltz, "Nuclear Myths and Political Realities," *American Political Science Review* 84 (September 1990): 731-745; Herman Kahn, *On Thermonuclear War* (New York: Free Press, 1960); Henry Kissinger, *Nuclear Weapons and Foreign Policy* (New York: Harper and Row, 1957); and Vipin Narang, *Nuclear*

annihilation ensures the absence of war between nuclear rivals¹⁰; for liberals, rivals reject the use of nuclear weapons, favoring instead the mitigating effects of democracy, economic interdependence, international organizations, and norms¹¹; and for constructivists, nuclear war is less likely because of risk-averse leaders and domestic politics.¹²

However, as demonstrated in Figure 2, there are no parsimonious theories that lay out a clear causal mechanism to help solve the empirical and policy puzzle of why nuclear rivals reject peace. The realist Nuclear Deterrence theory of mutually assured destruction explains why nuclear rivals with a secure second-strike capability reject war, but it does not explain why nuclear rivals avoid peace (resolution of border dispute), especially those without a secure second-strike capability like India and Pakistan. Instead, there is a false assumption that because

Strategy in the Modern Era: Regional Powers and International Conflict (Princeton, NJ: Princeton University Press, 2014).

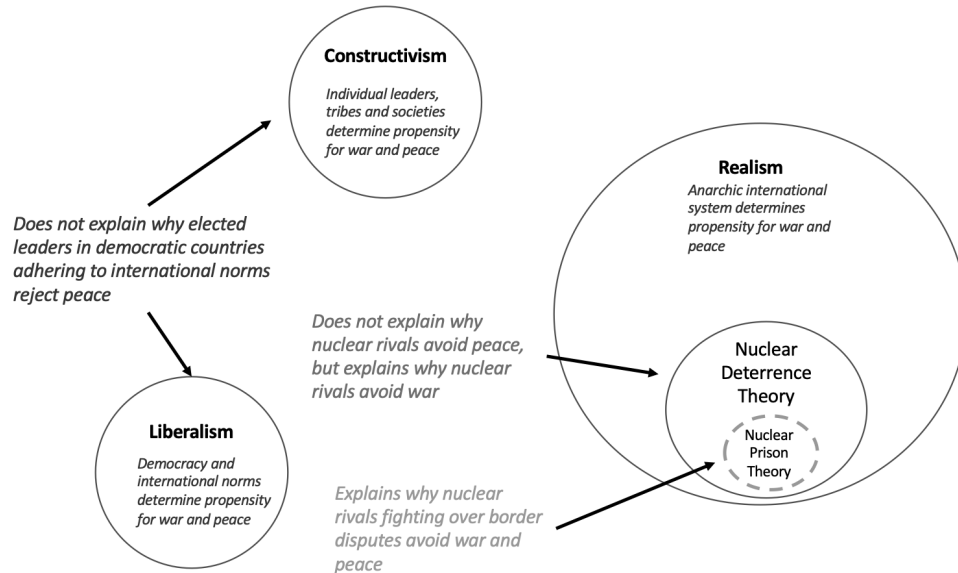
¹⁰ Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999): 240-254.

¹¹ Robert Keohane, "International Liberalism Reconsidered," in *The Economic Limits to Modern Politics*, ed. John Dunn (Cambridge: Cambridge University Press, 1990), 165-194.

¹² Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Organization* 53, no. 3 (Summer 1999): 433-468.

nuclear rivals avoid war, they ultimately want to forge peace. In other words, the absence of war is the existence of peace.

Figure 2 The Lacuna in International Relations Theories of War and Peace



Source: Author

Before delving into the mechanics of the Nuclear Prison Theory and hypothesis testing, below are key terms in this dissertation:

Key Terms

Nuclear State

A country becomes a nuclear state when it successfully tests at least one nuclear weapon. These weapons can be tested in the atmosphere (i.e., above ground), above the atmosphere, underground, or underwater. Since the passage of the Partial Test Ban Treaty in 1963, all tests have been underground, but there have also been “cold” tests, when nuclear weapons are tested using explosives that purposely result in no radioactive yield. As of December 2020, there were nine countries armed with nuclear weapons (United States, Russia, United

Kingdom, France, China, India, Pakistan, Israel, and North Korea), and two active nuclear rivalries based on border disputes (India-Pakistan and India-China).

China and Russia resolved their border disputes in 1991, but the India-Pakistan and China-India rivalries have not ended in a war or peace (border dispute resolution).¹³ Below is a table of each country's arsenal and the year each acquired nuclear weapons.

Table 1: Nuclear Weapons States

Country	Year Nuclear Weapons Acquired ¹⁴	Inventory in 2019 ¹⁵
United States	1945	5,800
Russia	1949	6,372
United Kingdom	1952	195
France	1960	290
China	1964	320
Israel	1967	90
India	1974	150
South Africa ¹⁶	1979*	-
Pakistan	1987	160
North Korea	2006	35

Source: Bulletin of the Atomic Scientists, Federation of American Scientists, and Stockholm International Peace Research Institute and SIPRI Yearbook 2019

Border Dispute

A border dispute is a contiguous territory (land and maritime), politically significant enough to conduct skirmishes over, at least 1,000 square miles in size,

¹³ Correlates of War, *Militarized Interstate Disputes* (v4.1) (accessed August 30, 2018); available from <http://www.correlatesofwar.org/data-sets/MIDs>, and United Nations Treaty Collection, *United Nations Treaty Series Online* (accessed November 9, 2017); available from <https://treaties.un.org>.

¹⁴ Data based on "Nuclear Notebook: Nuclear Arsenals of the World," *Bulletin of the Atomic Scientists*, October 2017; and Shannon N. Kile and Hans M. Kristensen, "Trends in World Nuclear Forces, 2017" *SIPRI Fact Sheet*, July 2017.

¹⁵ Hans M. Kristensen and Matt Korda, "Status of World Nuclear Forces," *Federation of American Scientists*, April 2020; and "World Nuclear Forces, January 2018," in *SIPRI Yearbook 2018, Armaments, Disarmament and International Security* (London: Oxford University Press, 2018), 236.

¹⁶ South Africa eliminated its nuclear weapons program in the early 1990s after the threat from the Soviet Union ended, South Africa abolished apartheid.

and claimed by two states seeking sovereignty or affirming their “preexisting sovereignty over that territory.”¹⁷ For example, India and Pakistan contest the Kashmir region (85,806 square miles) and parts of the Indus river (450,000 square miles drainage area), and India and China contest the Aksai Chin region (14,380 square miles) and parts of the Brahmaputra river (75,000 square miles drainage area).

Most militarized interstate disputes and wars involve border disputes, which are more likely than other causes of rivalry to lead to war and more likely to result in recurrent conflict.¹⁸ The territorial change dataset of the Correlates of War project identifies territorial changes involving at least one nation-state for the period between 1816 and 2018. Out of 843 cases of territorial changes between states, 236 (30 percent) were the result of conquest or annexation, and 358 (42 percent) were the result of cession defined as when “part of a political entity is yielded to another entity through plebiscite, purchase, compensating agreement, or as a consequence of hostilities.”¹⁹ However, in the CoW territorial database there is not a *single* case of change in territory between two nuclear rivals,

¹⁷ Brian Taylor Sumner, “Territorial Disputes at the International Court of Justice,” *Duke Law Journal* 53, no. 6 (2004): 1779-1812.

¹⁸ Kalevi J. Holsti, *Peace and War: Armed Conflicts and International Order, 1648-1989* (New York: Cambridge University Press, 1991); Paul R. Hensel, “Territory: Geography, Contentious Issues, and World Politics,” in John A. Vasquez, *What Do We Do About War?* (New York: Rowman and Littlefield, 2012); and Dominic D. P. Johnson and Monica Duffy Toft, “Grounds for War: The Evolution of Territorial Conflict,” *International Security* 38, no. 3 (Winter 2013): 11-12.

¹⁹ Correlates of War project, *Territorial Change v6* (accessed October 26, 2019); available from www.correlatesofwar.org.

strongly pointing to the power of nuclear weapon possession in predicting rivalry outcomes.²⁰

That said, Russia and China settled a border dispute when both possessed nuclear weapons, which is not represented in the CoW database. In March 1969, China's People's Liberation Army raided a Russian border post on Zhenbao Island in the eastern sector, bringing two nuclear competitors to the edge of war.²¹ The skirmish ended and, 22 years later in 1991, China and Russia signed comprehensive peace treaties to resolve all outstanding border disputes in the western and eastern areas of their respective countries.²²

Why did nuclear-armed China and Russia resolve their border dispute when India-Pakistan and China-India have not? The short answer is that unlike large swaths of disputed territory between India and Pakistan (Kashmir is 85,806 square miles) and China and India (Arunachal Pradesh is 32,333 square miles), Zhenbao Island carries minor strategic significance in terms of size (0.3 square miles), location, and socioeconomic potential. Moreover, unlike the India-Pakistan and China-India rivalries, Russia and China did not have an enduring rivalry and did not engage in a war before the acquisition of nuclear weapons.²³ This is explored in greater detail in Chapter Five.

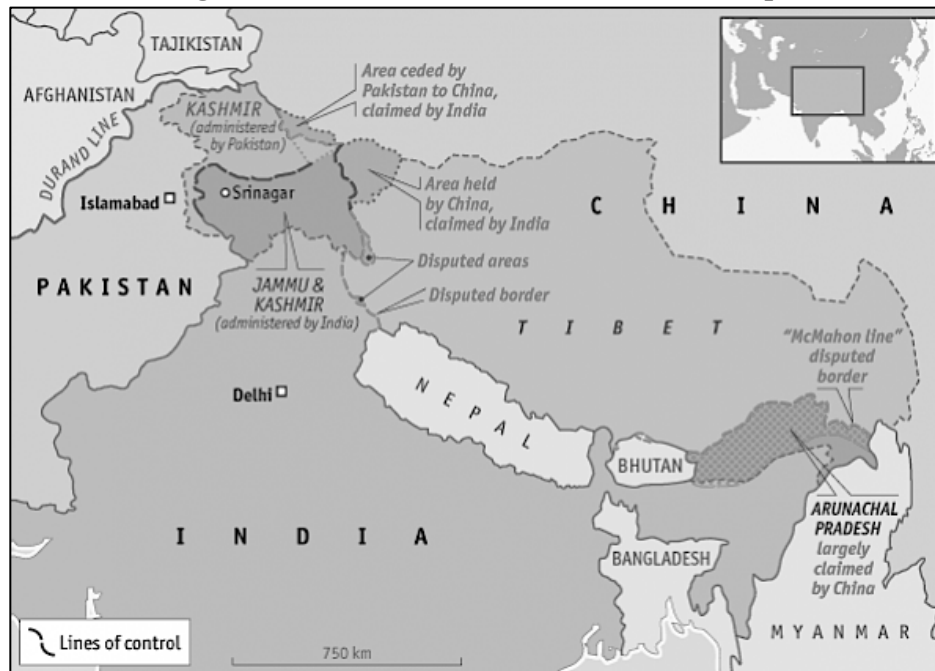
²⁰ Correlates of War project, *Territorial Change v6* (accessed October 26, 2019); available from www.correlatesofwar.org.

²¹ Robert Farley, "How the Soviet Union and China Almost Started World War III," *National Interest*, February 9, 2016.

²² M. Taylor Fravel, *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes* (Princeton: Princeton University Press, 2008), 137-142.

²³ Marcin Kaczmarski, *Russia-China Relations in the Post-Crisis International Order*, First Ed. (London: Routledge, 2015), 10.

Figure 3 China, India, and Pakistan Border Disputes



Source: The Economist, February 8, 2012.

Measuring National Power

While most political scientists and foreign policy practitioners agree on the importance of the role of power in international relations, there is considerable debate on definitions of power. Yet, power as a concept is defined by country A causing country B to do something that country B otherwise would not do or not do something it otherwise would. National power is primarily measured in two ways by international relations theorists and practitioners: resources and outcome.²⁴ Power-as-resources is the sum of a country's economic and military might, for example, Gross Domestic Product or Composite Indicator of National Capability (CINC). Power is also measured in outcomes, its "first and foremost

²⁴ Gregory F. Treverton and Seth G. Jones, "Measuring National Power," *RAND* (Washington, D.C.: RAND Press, 2005), 3-8.

about winning...ability of a country to prevail in a dispute.”²⁵ A variation of the power-as-resources is “power is a function of net resources,” which looks at a country’s capabilities minus its liabilities—a balance sheet approach.²⁶

This dissertation argues that, however one would decide to measure power, a country with nuclear weapons gains an unprecedented advantage that catapults it to an equal plane with its economically and militarily stronger rivals, for example Pakistan being able to hold its ground against the economically superior India.

For this dissertation, I use power-as-resources definition of power, by specifically using the Composite Indicator of National Capability and possession of nuclear weapons, as the least problematic and comprehensive indicators of a country’s power, to compare relative power between rival countries. Additionally, I use the Lowy Institute’s Asia Power Index to compare the comprehensive power of China, India, and Pakistan based on eight thematic measures: 1) diplomatic influence, 2) cultural influence, 3) economic capability, 4) military capability, 5) resilience, 6) future resources, 7) economic relationships, and 8) defense networks.²⁷

²⁵ Michael Beckley, “The Power of Nations: Measuring What Matters,” *International Security*, Vol. 43, No. 2 (Fall 2018): 12.

²⁶ Glenn-Marie Lange and Kevin Carey, eds., *The Changing Wealth of Nations 2018: Building a Sustainable Future* (Washington, D.C.: World Bank, 2018); United Nations University International Human Dimensions Programme on Global Environmental Change (UNU-IHDP), United Nations Environment Programme (UNEP), *Inclusive Wealth Report 2014: Measuring Progress toward Sustainability* (New York: Cambridge University Press, 2014), and Michael Beckley, “The Power of Nations: Measuring What Matters,” *International Security*, Vol. 43, No. 2 (Fall 2018): 18.

²⁷ Lowy Institute Asia Power Index, *2020 Edition*, (accessed November 12, 2020); available from www.power.lowyinstitute.org

Power Asymmetry: Stronger vs. Weaker States

From the dawn of the nuclear era in August 1945, every nuclear rivalry has been asymmetric between a stronger and weaker state. Stronger states are both militarily and economically superior to their weaker rivals, and uphold the established balance of power in a region.²⁸ For example, in South Asia, India is the stronger power with an economy producing a Gross Domestic Product (GDP) of \$2.9 trillion in 2019, more than ten times that of its weaker rival, Pakistan (\$278 billion).²⁹ It outspends Pakistan by seven times on its military (India's defense budget in 2019 was \$71 billion, whereas Pakistan's was \$10 billion).³⁰ In the China-India rivalry China is the stronger power with a GDP of \$14.3 trillion in 2019, nearly five times that of India's \$2.9 trillion. China also outspends India by nearly four times on its military (China's defense budget in 2019 was \$266 Billion, compared to India's \$71 billion)³¹. In 2020, the Lowy Institute Asia Power Index gave China a score of 92.5 for economic capability compared to a score of 25.3 for India; and a score of 66.8 to China for military capability compared to 44.3 to India.³²

²⁸ Robert Gilpin, "The Theory of Hegemonic War," *Journal of Interdisciplinary History* 18, no. 4 (1988): 601; and Alistair Iain Johnston, "Is China a Status Quo Power?" *International Security* 27, no. 4 (2003): 5-56.

²⁹ World Bank Data (accessed November 12, 2020); available from www.data.worldbank.org.

³⁰ SIPRI Military Expenditure Database 1949-2019 (accessed November 12, 2020); available from www.sipri.org; Laxman K. Behera, "India's Defense Budget 2017-18: An Analysis," *Institute for Defense Studies and Analyses*, February 3, 2017; and Franz-Stefan Gady, "Pakistan Raises Defense Spending," *The Diplomat*, June 5, 2017.

³¹ SIPRI Military Expenditure Database 1949-2019 (accessed November 12, 2020); available from www.sipri.org.

³² Lowy Institute Asia Power Index, *2020 Edition*, (accessed November 12, 2020); available from www.power.lowyinstitute.org

Stronger powers prefer resolving border disputes by following global consensus, which, in most cases, favors those same powers. For example, India has frequently proposed making the *Line of Control* that bifurcates the disputed region of Kashmir (two-thirds under India's control and less than one-third under Pakistan's control) the permanent border.³³

In most cases weaker states fighting over territory are willing to incur costs to change the international distribution of capabilities and strength, including territory.³⁴ For example, India has frequently engaged in brinkmanship with China by building roads that can transport large number of Indian troops inside the disputed territory of what China calls South Tibet and what India refers to as its 34th state, Arunachal Pradesh.³⁵ Pakistan has engaged in more intense brinkmanship including deploying troops and proxy forces to annex parts of the disputed territory of Kashmir. Before India and Pakistan acquired nuclear weapons in 1965, Pakistan waged a war with India and unsuccessfully attempted to seize territory in the Kashmir region.³⁶

³³ Steve Coll, "The Back Channel: India and Pakistan's Secret Kashmir Talks," *The New Yorker*, March 2, 2009.

³⁴ Arnold Wolfers, *Discord and Collaboration* (Baltimore, MD: Johns Hopkins Press, 1962), 125; and Jason Davidson, "The Roots of Revisionism: Fascist Italy, 1922–1939," *Security Studies* 11, no. 4 (2002): 125–159.

³⁵ Vasudevan Sridharan, "India Bolsters Defence on Border with China by Building 44 new roads," *South China Morning Post*, January 17, 2019, and Sutirtho Patranobis, "China says Amit Shah's Arunachal visit sabotaged trust," *Hindustan Times*, February 20, 2020.

³⁶ Rudra Chaudhuri, "Indian 'Strategic Restraint' Revisited: The Case of the 1965 India-Pakistan War," *India Review* 17, no. 1 (2018), 62–64.

Nuclear Deterrence

Deterrence stops an action of another through fear of dire consequences.

In the case of two nuclear rivals, deterrence *stops* adversaries from waging war by imposing prohibitive costs on the attacker. If the attacking state continues, it faces devastating retribution despite striking first because the defending country can retaliate. This assured destruction works so long as both sides reasonably believe that they cannot get away with an initial nuclear strike. Although Mutually Assured Destruction (MAD) is applicable to adversaries with secure, second-strike capabilities, rendering a first strike by one or the other akin to suicide (i.e., the U.S. vs. Russia³⁷), the prospect of having to withstand even a modest nuclear countermeasure has also proven to be a major deterrent to ordering a first strike elsewhere in a pattern similar, if not identical, to the situation under MAD. For example, China has a nascent nuclear triad capability with limited range, arsenal size, and operational experience, which includes land-based intercontinental ballistic missiles (ICBMs), long range bombers (50 H-6K bombers), and *Jin*-class submarines capable of submarine-launched ballistic missiles like U.S. Navy's Ohio Class nuclear-powered ballistic missile submarines, SSBNs. India tested its variant of SSBN (*INS Arihant*) in November 2018, possess land-based intermediate range ballistic missiles (Agni III), and has Mirage 2000H and Su-30MKI aircraft capable of carrying nuclear weapons. Pakistan also has land-based medium range ballistic missiles (Ghauri II), and F-16A/B aircraft capable of

³⁷ As of December 2020.

carrying nuclear weapons.³⁸ China is closest to developing a secured second-strike capability, then comes India, and finally Pakistan. That said, since China, India, and Pakistan share a border, their delivery systems don't require extensive range or sophistication to increase the probability of a second strike. Pakistan's possession and continued development of lower-yield tactical nuclear weapons makes the need for sophisticated delivery systems even less and the perils on the border exponentially more.³⁹

In some cases, nuclear deterrence can extend to a conventional attack. Pakistan, for example, has a conventional military dwarfed by its archenemy India, but has a "declared nuclear first use" policy against a conventional Indian military attack.⁴⁰ Pakistan's extended deterrence was tested after terrorists, trained and equipped in Pakistan, conducted the 2008 Mumbai attacks that brought the two rivals to the edge of war. Pakistan signaled to India that if it attacked with conventional forces Pakistan would use tactical nuclear weapons—India blinked.⁴¹

In other cases, nuclear weapons cannot deter limited conventional military attacks. For example, in February 2019, and in September 2016, India conducted

³⁸ International Institute for Strategic Studies, Chapter Six: Asia, *Military Balance 2019*, (London: IISS, Vol. 119, 2019): 256-260, 266-267, 296-297, and Yogesh Joshi, "Angels and Dangles: Arihant and the Dilemma of India's Undersea Nuclear Weapons," *War on the Rocks*, January 14, 2019.

³⁹ Kelsey Davenport and Kingston Reif, "Nuclear Weapons: Who has What at a Glance," *Arms Control Association*, July 2019, and Ben Barry, "Pakistan's Tactical Nuclear Weapons: Practical Drawbacks and Opportunity Costs," *Survival* 60, no.1 (2018): 75-77

⁴⁰ Sadia Tasleem, "Pakistan's Nuclear Use Doctrine," *Carnegie Endowment for International Peace*, June 30, 2016, and "Islamabad Refuses to Accept 'No First Strike' Doctrine," *Dawn*, May 31, 2002.

⁴¹ Amit Kapoor, "Game theoretic approach to India-Pakistan conflict," *The Economic Times*, September 28, 2019.

limited airstrikes in Pakistan-administered Kashmir after terrorist attacks in Indian-administered Kashmir.⁴² In both cases, skirmishes occurred but there was no full-scale war; the skirmish was limited to the disputed border region (line of control) and did not expand to the international border.⁴³ In short, India and Pakistan are engaged in direct nuclear deterrence. Both India and Pakistan have nuclear postures predicated on deterrence-by-punishment: crossing certain “red lines” will result in the other party inflicting unacceptable pain on the other’s civilian population due to proximity and radius of a nuclear explosion.⁴⁴

Brinkmanship

Brinkmanship, in the context of this dissertation, is a rivalry outcome resulting from a rival’s attempt to expand its respective stake in the border dispute without escalating to full-scale war. Brinkmanship is distinct from broad economic and security crisis initiation because it primarily focuses on the use of conventional and paramilitary forces under the threat of use of nuclear weapons. In most cases, the weaker nuclear rival initiates hostilities—betting on its superior opponent to exercise restraint. The stronger nuclear rival, however, does not concede but defends its position in the border dispute. Both rivals engage in hostilities, such as amassing troops on their borders and engaging in border

⁴² Maria Abi-Habib, “After India’s Strike on Pakistan, Both Sides Leave Room for De-escalation,” *New York Times*, February 26, 2019; and Toby Dalton and George Perkovich, “Is a Pakistan-India War Just One Terrorist Attack Away?” *Carnegie Endowment for International Peace*, January 24, 2017.

⁴³ Ellen Barry and Salman Masood, “India Claims ‘Surgical Strikes’ Across Line of Control in Kashmir,” *New York Times*, September 29, 2016, and Michael Kugelman, “India and Pakistan are Edging Closer to War in 2020,” *Foreign Policy*, December 31, 2019.

⁴⁴ George Perkovich and Toby Dalton, *Not War, Not Peace? Motivating Pakistan to Prevent Cross-Border Terrorism*, (New Delhi: Oxford University Press, 2016), 182-201.

skirmishes but avoid escalation to full-scale war because of the fear of mutual annihilation.

Rapprochement

Rapprochement is a rivalry outcome that occurs when rivals reduce hostilities short of resolving the border dispute. Rapprochement is a necessary but insufficient condition for the resolution of a border dispute that ends in long-term peace. In most cases, the stronger power usually initiates détente with the hopes that the weaker rival will concede to its demands to accept the de facto agreement on border disputes—each rival will keep what it controls, which is invariably in favor of the stronger power. The weaker power accepts temporary reduction in hostilities *without* resolving the border dispute, because conceding its claim—after acquiring nuclear weapons and the associated boast in power—is unacceptable. Whether one wishes to term reduction in risk of war as rapprochement or simply backing off, the salient point is that tensions are reduced short of border dispute resolution. The stronger power then rejects any further compromise because it too perceives it as surrendering its nonnegotiable stand on keeping the territory it already controls—this leads to a perception of “mutual capitulation” for both rivals. Rapprochement may include increased communication and confidence building measures, arms controls and arms reduction agreements, frequent use of military hotlines, and formal diplomatic exchanges.⁴⁵

⁴⁵ See, for example, Michael Krepon, “South Asia Confidence-Building Measures (CBMs) Timeline,” *Stimson*, April 17, 2017.

War (interstate and over border dispute)

International Relations literature is rich with numerous types and definitions of wars with the common denominator that war is a “special category of violence” that is collective, organized, instrumental, and sanctioned.⁴⁶ For the purposes of this dissertation, I build on the Correlates of War definition of interstate war by defining it as the use of violence by rival states through organized armed forces resulting in at least one thousand battle-related deaths. This definition of war does not include civil wars, proxy wars, genocide, or the use of violence by extra-state or intrastate actors, and focuses on the most pressing outcome of nuclear rivalries and adequately delineates it from other types of organized violence conducted by states or within states.⁴⁷ For example, China and India waged a war in 1962, which resulted in the deaths of approximately 1,300 Indian troops and 2,400 Chinese troops.⁴⁸

Peace (resolution of border dispute)

International Relations theories define peace as binary (negative peace is absence of war) and nominal (positive peace is the absence of war plus a long-term resolution of the root cause of conflict, such as a border dispute).⁴⁹ I am

⁴⁶ See, for example, Beer, Francis A, *How Much War in History: Definitions, Estimates, Extrapolations, and Trends*, (Beverly Hills, Calif.: Sage Publications, 1974), and Vasquez, John A., and Brandon Valeriano. "Classification of Interstate Wars." *The Journal of Politics* 72, no. 2 (2010): 292-309.

⁴⁷ Melvin Small and J. David Singer, *Resort to Arms: International and Civil War, 1816-1980* (CA: Sage, 1982), 205-206, and the Correlates of War project (accessed March 8, 2019), available from <http://www.correlatesofwar.org>.

⁴⁸ Bruce Riedel, *JFK's Forgotten Crisis: Tibet, the CIA, and Sino-Indian War* (Washington D.C., 2015), 114-123.

⁴⁹ See, for example, Johan Galtung, “Violence, Peace and Peace Research,” *Journal of Peace Research* 6, no. 3 (1969), 183; Kenneth E. Boulding, *Stable Peace* (Austin: University of Texas Press, 1978), 3-19; Glenn H. Snyder and Paul Diesnig, *Conflict*

interested in the latter, specifically peace as resolution of border disputes whereby the absence of war is necessary but not sufficient. Peace is a negotiated settlement of border disputes. Peace is *not* conflict-reducing accords, such as arms reduction and arms control agreements. Such confidence-building measures are necessary but inadequate steps toward peace (border dispute resolution). Examples of peace are India and Pakistan dividing the river Indus, in 1960, through a treaty and signing the Simla Agreement that bifurcated the disputed region of Kashmir in 1972.⁵⁰ Another example of peace is the China-India 1954 Panchsheel Treaty after which India recognized China's conquest of Tibet, which was previously India's protectorate. In all three cases, neither state possessed nuclear weapons. Since the acquisition of nuclear weapons, India and Pakistan and China and India have not resolved a single border dispute.

Existing Theories Fall Short in Explaining Why Nuclear Weapons Deter Peace

The above-mentioned terms are key to understanding why existing international relations theories do not explain why nuclear rivals eschew the act of terminating border disputes. It is here that I depart from the pervasive one-

Among Nations: Bargaining, Decision Making, and System Structure in International Crises (Princeton: Princeton University Press, 1977), 10; Richard Ned Lebow, *Between Peace and War: The Nature of International Crisis* (Baltimore: John Hopkins University Press, 1984); Norrin M. Ripsman, *Peacemaking from above, Peace from Below: Ending Conflict between Regional Rivals* (Ithaca: Cornell University Press, 2016); Felix E. Martin, "Critical Analysis of the Concept of Peace in International Relations," *Peace Research* 37, no. 2 (2005) 45-59; and Benjamin Miller, *International and Regional Security: The Causes of War and Peace* (London: Routledge, Taylor and Francis Group, 2017).

⁵⁰ "Fact Sheet: The Indus Waters Treaty 1960 and the Role of the World Bank," *World Bank*, June 11, 2018, and Stimson Center, *Simla Agreement, July 2, 1972* (accessed September 2, 2020); available from www.stimson.org/1972/simla-agreement.

directional and sticky bias in the nuclear deterrence stability literature, which assumes that the fear of assured destruction, nuclear learning and experience, and arms control and arms reduction treaties eventually lead to peace.

To the contrary, history shows nuclear rivals engaging in *multidirectional outcomes*—moving up and down the ladder of conflict escalation from brinkmanship to rapprochement and vice versa. Close calls, such as the 2019 India-Pakistan Pulwana Attacks crisis, did not lead to full-scale war, and reconciliation efforts, such as the 2013 Border Water Dispute Agreement between China and India have not led to peace (resolution of border dispute).

Moreover, there are many theories on the motivations behind the acquisition of nuclear weapons⁵¹ and deterrence stability⁵² but few explaining how nuclear weapons shape the outcome of peace between nuclear rivals. Additionally, literature specific to nuclear powers focuses on deep historical study but provides little comparative analysis of the impact of nuclear weapons on

⁵¹ See, for example, Scott D. Sagan, “Why Do States Build Nuclear Weapons? Three Models in Search of the Bomb,” *International Security* 21, no. 3 (Winter 1996-1997): 54-86; and Jacques Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy*, (Cambridge: Cambridge University Press, 2006); Etel Solinge, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton, NJ: Princeton University Press, 2007).

⁵² See, for example, Thomas Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966); John Lewis Gaddis, *The Long Peace: Inquiries into the History of the Cold War* (New York: Oxford University Press, 1987); and Robert Jervis, “The Political Effects of Nuclear Weapons: A Comment,” *International Security* 13, no. 2 (Autumn 1988): 80-90.

interstate rivalry termination. For example, studies on France,⁵³ Israel,⁵⁴ India,⁵⁵ China,⁵⁶ and Pakistan⁵⁷ delve exhaustively into the causes of acquiring nuclear weapons, but there is little exploration of how and why those weapons may deter these countries from making peace with their nuclear opponents. This is explored in greater details in Chapter Two.

The Argument in Brief

Conditions for Nuclear Prison Theory

My Nuclear Prison Theory (NPRT) is nested in Structural Realism, and its subordinate nuclear deterrence theory, and adheres to the major assertion that countries seek security as a primary goal in an anarchic international system. NPRT is based on four conditions: 1) presence of an entrenched interstate rivalry caused by border dispute(s) between two primary states, 2) rivalry is asymmetric between a strong and weak state, 3) rivalry predates the acquisition of nuclear weapons, and 4) both rivals possess nuclear weapons.

⁵³ See, for example, Wilfred L. Kohl, *French Nuclear Diplomacy* (Princeton, NJ: Princeton University Press, 1971); and Wolf Mendl, *Deterrence and Persuasion: French Nuclear Armament in the Context of National Policy, 1945-1969* (New York: Praeger, 1970).

⁵⁴ Avner Cohen, *Israel and the Bomb*, (New York: Columbia University Press, 1998) and Michael Karpin, *The Bomb in the Basement*, (New York: Simon and Schuster, 2006).

⁵⁵ Ashley Tellis, *India's Emerging Nuclear Posture* (Santa Monica, CA: RAND, 2001) and Rajesh Basrur, *Minimum Deterrence and India's Nuclear Security* (Stanford, CA: Stanford University Press, 2006).

⁵⁶ Alastair Iain Johnston, "China's New 'Old Thinking': The Concept of Limited Deterrence," *International Security* 20, no. 3 (Winter 1995-6): 5-42 and John Lewis and Xue Litai, *China Builds the Bomb* (Stanford, CA: Stanford University Press, 1988).

⁵⁷ Feroz Khan, *Eating Grass: The Making of the Pakistani Bomb* (Stanford, CA: Stanford University Press, 2012) and Samina Ahmed, "Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices," *International Security* 23, no. 4 (Spring 1999): 178-204.

Admittedly, the “n” of cases in which these four conditions exist is small, even when doubling that “n” through diachronic analysis (before and after acquisition of nuclear weapons), as well as through the analysis of numerous episodes of brinkmanship and rapprochement (further increasing the “n”). Yet the universe of nuclear rivalries and the time period (post 1945) is equally small; out of five active nuclear rivalries (India-Pakistan, China-India, U.S.-Russia, China-U.S., and U.S.-North Korea) *two* are based on contiguous border disputes, making case study analysis advantageous over statistical computation. In this dissertation, I cover those two rivalries—the India-Pakistan rivalry and the China-India rivalry—and briefly examine the unique case of the Russia-China border dispute resolution.⁵⁸

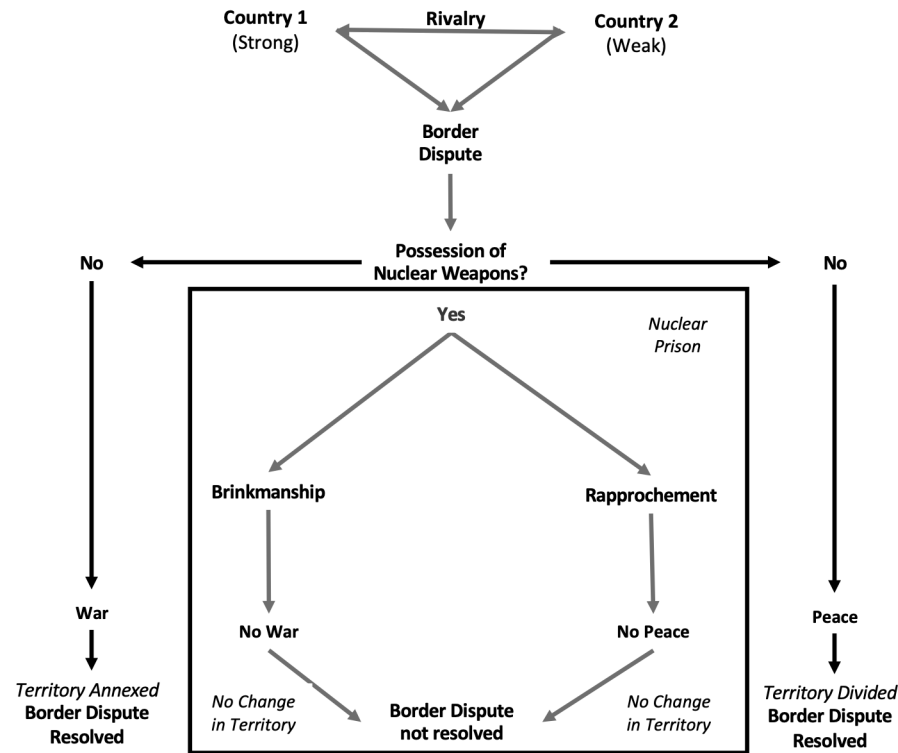
How and Why Nuclear Rivals Reject Peace

This dissertation demonstrates that asymmetric nuclear rivals avoid peace because nuclear weapons harden rivalries, therefore limiting rivalry outcomes to brinkmanship (short of war) and rapprochement (short of peace), which do not resolve border disputes—the underlying cause of the rivalry. Emboldened by nuclear weapons and wanting more territory, the weaker power refuses to resolve territorial disputes on the terms of the stronger rival. In response, the stronger power rejects any proposal that would change its position, rendering the dispute unresolved (see Figure 4 below) and making any compromise from the weaker or stronger rival a capitulation. This creates a “nuclear prison” of outcomes, offering

⁵⁸ The first two are ongoing and the last one terminated when China and Russia resolved their border disputes after the fall of the Soviet Union in 1991.

only brinkmanship and rapprochement, where war and peace are only achievable when the prison breaks.

Figure 4 Nuclear Prison Theory



Source: Author

Methodology

To operationalize, measure, and test NPRT, I follow a mixed-methods approach: two controlled comparative case studies of India-Pakistan and China-India focusing on *before* and *after* the acquisition of nuclear weapons, and statistical analysis to explore correlations between nuclear weapons, territorial change, power asymmetry, and rivalry termination.

I begin with a two-part process in Chapter Two. In Part One, I start by briefly highlighting the uniquely destructive nature of nuclear weapons and their impact on interstate rivalry outcomes. Then, I examine the historical record and

major relevant existing theories for answers to my central puzzle: *why nuclear rivals avoid peace*. I explore all three families of International Relations theories (Realism, Liberalism, and Constructivism). Realism and nuclear deterrence theories posit that, amidst international anarchy, nuclear weapons deter war due to a fear of assured destruction; yet it does not explain why nuclear rivals avoid peace. Liberalism does not explain prolonged nuclear rivalries despite adversaries adhering to democratic and international norms; and constructivism does not explain why terminating nuclear rivalries is difficult despite peace makers on both sides. I examine Realism, Liberalism, and Constructivism to establish specific gaps in explaining why nuclear rivals avoid peace.

Then, I zoom into middle-range nuclear deterrence theories under each family of international theories by specifically analyzing alternative explanations of Assured Destruction⁵⁹ (under Realism), Nuclear Binding (under Liberalism), and Nuclear Learning and Experience theories (under Constructivism). Assured Destruction explains why nuclear rivals avoid war but does not explain why they eschew peace, Nuclear Binding theory cannot explain why nuclear rivals fail to graduate from *détente* to peace (resolution of border dispute), and Nuclear Learning and Experience theories cannot explain why, despite learning and

⁵⁹ As discussed earlier, Mutually Assured Destruction (MAD) only applies to the USA vs. Russia case – from a technical point of view – because both sides have established secured second-strike capabilities should either suffer a first strike. That said, China, India and Pakistan, in order of maturity, are developing second strike capabilities. Furthermore, even if they do not have such a capability, the perception that they might is enough to deter, in most observable cases, initiation of nuclear aggression. Therefore, I use the term Assured Destruction to explain realist nuclear deterrence theory.

experience, nuclear rivals repeat the perilous cycle of brinkmanship to rapprochement and back.

Next, I assess international relations rivalry termination theories grouped under six broad explanations of why interstate rivalries terminate: 1) costs of rivalry outweighs the benefits, 2) external shock, 3) internal shock, 4) extreme power asymmetry, 5) domestic politics, and 6) third-party intervention. Rivalry termination theories argue that internal tremors (reformist leaders, economic collapse, civil war, etc.) and exogenous shocks (war, alliances, etc.) cause rivalry termination, but they cannot explain why nuclear rivalries persist despite the presence of these conditions.⁶⁰ Across all these theoretical frameworks, I test their respective explanatory ranges and predictions of interstate nuclear rivalry outcomes (see Figure 5 below).

Figure 5 Assessing Alternative Explanations

Why do nuclear rivals avoid peace?				
	<i>Alternative Explanations</i>			Hypothesis Tested
	Realism	Liberalism	Constructivism	
<i>Covering laws</i>				border dispute resolution is <i>less</i> likely when rivals possess nuclear weapons
<i>Nuclear Deterrence Theories</i>	Assured Destruction	Nuclear Binding	Nuclear Learning and Experience	border dispute resolution is <i>less</i> likely when rivals possess nuclear weapons
<i>Rivalry Termination Theories</i>	Costs>Benefits; External Shock; Extreme Power Asymmetry	Third Party Intervention	Internal Shock; Domestic Politics	border dispute resolution is <i>less</i> likely when rivals possess nuclear weapons

⁶⁰ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End* (Philadelphia: University of Pennsylvania Press, 2013), 195-227.

In the second part of Chapter Two, I explain my Nuclear Prison Theory and establish its explanatory power over alternative explanations to answer the question of why nuclear rivals eschew peace. I begin by explaining the sequential process of how nuclear rivals avoid peace and then explain “why” by asserting that nuclear weapons in an asymmetric interstate rivalry become an obstacle to resolving border disputes, which is the root cause of the rivalry. I also make the case that NPRT is a middle range theory, nested in Structural Realism, that adds to nuclear deterrence theory of assured destruction.

Case selection

In Chapter Three, I examine the India-Pakistan rivalry case. I explore three India-Pakistan wars and four outcomes of peace (resolution of border disputes) before the acquisition of nuclear weapons (1947–1987); and six outcomes of brinkmanship and five outcomes of rapprochement after both countries acquired nuclear weapons (1987–2020). While detailed information on the emergence of these outcomes is scarce, the outcome itself is clear on whether the rivalry was terminated or not, making the India-Pakistan case suitable for the heuristic case study approach.

In Chapter Three, I demonstrate that (1) India and Pakistan waged war and signed peace treaties (resolved border disputes) before acquiring nuclear weapons, and both (2) did not resolve border disputes after obtaining nuclear weapons.⁶¹

⁶¹ Gary Thomas and Kevin Myers, *The Anatomy of the Case Study* (London: Sage 2015), 60-62.

Table 2 India-Pakistan Rivalry Outcomes		
	Before Possession of Nuclear Weapons (1947–1987)	After Possession of Nuclear Weapons (1987–2020)
War	1. 1948 2. 1965 3. 1971	
Brinkmanship		1. 1990 Military Exercise 2. 1999 Kargil Crisis 3. 2001–2002 Twin Peak Crises 4. 2008 Mumbai Attacks 5. 2016 Uri Attacks 6. 2019 Pulwana Attacks
Rapprochement		1. 1988 India-Pakistan Non-Attack Agreement 2. 1997–2008 Composite Dialogue and Confidence-building Measures 3. 1999 Lahore Declaration 4. 2004–2007 Four Point Formula to Resolve Kashmir Border Dispute 5. 2011 Most Favored Nation Status
Peace (Border Dispute Resolution)	1. 1949 Karachi Agreement 2. 1950s India-Pakistan Border Dispute Resolutions 3. 1960 Indus Waters Treaty 4. 1966 Tashkent Agreement 5. 1972 Simla Agreement	

Similarly, in Chapter Four for the second case study, the China-India rivalry, I examine one outcome of China-India war and one outcome of peace agreement before the acquisition of nuclear weapons (1947–1974), and four outcomes of brinkmanship and six outcomes of rapprochement after the acquisition of nuclear weapons (1974–2020). As with the India-Pakistan case, there is no detailed information on the emergence of these outcomes, but the outcome itself is clear on whether the rivalry was terminated or not, which also makes the China-India case fit for the heuristic case study approach.

In Chapter Four I demonstrate that (1) China and India waged war and signed peace treaties before acquiring nuclear weapons, and (2) they did not resolve border disputes after acquiring nuclear weapons.⁶²

Table 3 China-India Rivalry Outcomes		
	Before Possession of Nuclear Weapons (1947–1974)	After Possession of Nuclear Weapons (1974–2020)
War	1. 1962 China-India War	
Brinkmanship		1. 1987 Sumdorong Chu Valley Crisis 2. 2013 Ladakh, Aksai Chin Crisis 3. 2017 Doklam, Bhutan Crisis 4. 2020 Galwan Valley, Ladakh Crisis
Rapprochement		1. 1993 Agreement on Resolving Border Dispute 2. 1996 Confidence Building Measures 3. 2005 Confidence Building Measures and Border Talks Agreement 4. 2012 Working Mechanism on China-India Border 5. 2013 Border Defense Cooperation Agreement 6. 2013 Border Water Dispute Agreements
Peace (Border Dispute Resolution)	1. 1954 Panchsheel Treaty	

In the concluding Chapter Five, I briefly examine the China-Russia case. The most important reason to examine this case is not the richness of outcomes (war, brinkmanship, rapprochement, and peace), but because of a single outcome of peace (border dispute resolution) after Russia and China acquired nuclear weapons. In fact, in the time period under study (1969–1991) Russia and China

⁶² Gary Thomas and Kevin Myers, *The Anatomy of the Case Study* (London: Sage 2015), 60–62.

were not rivals—they were competitors. The purpose of examining the China-Russia case is to determine the explanatory range of NRPT because, on the surface, it falsifies NRPT—both nuclear competitors decided to resolve border disputes that predated acquisition of nuclear weapons.

In March 1969, China's People's Liberation Army troops raided a Russian border post on Zhenbao Island (0.3 square miles) in the eastern sector bringing two nuclear rivals to the edge of war.⁶³ The skirmish ended soon after, and 22 years later China and Russia signed comprehensive peace treaties to resolve all outstanding border disputes in the western and eastern sectors.⁶⁴ Like India-Pakistan and China-India, Russia and China possessed nuclear weapons, and there was power asymmetry between them (in favor of Russia in 1969 and in favor of China after 1991). While Russia-China case does not meet the conditions of NRPT it is nonetheless important to examine it to ascertain why two nuclear armed competitors resolved their border dispute over an Island less than a mile long and when one rival literally disintegrated: the Soviet Union dissolved and its economy imploded.⁶⁵

I examine India-Pakistan and China-India rivalries as single longitudinal cases by dividing them into “before” and “after” their acquisition of nuclear weapons. The before-after method isolates the impact of nuclear weapons on interstate rivalries. I apply controlled comparison by dividing a single longitudinal

⁶³ Robert Farley, “How the Soviet Union and China Almost Started World War III,” *National Interest*, February 9, 2016.

⁶⁴ M. Taylor Fravel, *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes* (Princeton: Princeton University Press, 2008), 137-142.

⁶⁵ Marvin Suesse, “Breaking the Unbreakable Union: Nationalism, Disintegration and the Soviet Economic Collapse,” *The Economic Journal* 128, no. 615 (2018): 2933–2937

case into two, a “before” case and an “after” case, that follows a discontinuous change in an important variable—nuclear weapons. This provides a control for many factors and is often the most readily available or strongest version of a most-similar case design. This design aims to isolate the difference in the observed outcomes due to the influence of variance in the single independent variable (possession of nuclear weapons by rivals). The method of “structured, focused comparison provides a research strategy for single as well as comparative case studies.”⁶⁶ In this research approach, a “case” is a compilation of events. I refer to these events as outcomes.

I use controlled comparison method over detailed process tracing due to a lack of primary historical sources for the three cases, which makes it difficult to “establish an uninterrupted casual path linking the putative causes to the observed effects, at the appropriate level(s) of analysis as specified by the theory being tested.”⁶⁷ Specifically, there is a dearth of primary sources on Chinese, Indian, and Pakistani political leaders and military strategists’ deliberations. Second, as a tool of causal inference, process tracing “focuses on the unfolding of events” over time by taking “snapshots at a series of specific moments...[including] key steps in the process.”⁶⁸ These “key steps” are difficult to decode when primary sources are unavailable.

⁶⁶ Alexander L. George and Andrew Bennet, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 81, 166 and 275; and Arend Lijphart, “Comparative Politics and the Comparative Method,” *American Political Science Review* 65, no. 3 (1971): 682-693.

⁶⁷ Alexander L. George and Andrew Bennet, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 206, 2014, 222.

⁶⁸ David Collier, “Understanding Process Tracing,” *Political Science and Politics*, 44, no. 4 (2011): 824.

Moreover, my Nuclear Prison Theory is realist based on outcomes (war, brinkmanship, rapprochement, and peace) caused by decisive and tangible factors of the environment (relative distribution of material capabilities, such as nuclear weapons). To survive and thrive, states adapt to environmental changes, specifically, material distribution of capabilities including nuclear weapons.⁶⁹

Finally, process tracing offers an alternative way for making causal inferences when it is not possible to do so through the method of controlled comparison.⁷⁰ Therefore, NPRT is best examined through a controlled comparison.

In addition to the three cases, and to further isolate the impact of nuclear weapons, I also briefly examine a nuclear versus non-nuclear rivalry: the Russia-Ukraine rivalry, which is relevant and provides rich ground for testing the conditions for NPRT. After the fall of the Soviet Union, Ukraine inherited Russian nuclear weapons but gave them up after a pledge from the United States and European allies to defend Ukraine from Russia. In February 2014, Russia attacked and annexed Crimea and parts of Eastern Ukraine and Ukraine's allies did not decisively intervene to push out Russian forces.⁷¹ This is a strong case to study the impact of nuclear weapons on interstate rivalry. More on this in Chapter Two.

⁶⁹ Daniel H. Deudney, "Regrounding Realism: Anarchy, Security, and Changing Material Contexts," *Security Studies* 10, no. 1 (2000): 1-41.

⁷⁰ Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 206, 2014, 222.

⁷¹ Steven Pifer, "Crimea: Six Years After Illegal Annexation," *Brookings*, March 17, 2020.

In all cases and across all outcomes (war, brinkmanship, rapprochement, and peace), I ask the same question and test the same hypotheses so that the results are comparable and systematically analyzed.

Simple statistical analysis of variation in power asymmetry, rivalry termination, and border dispute resolution supports every case study (India-Pakistan, China-India, and Russia-China) to boost validity and minimize selection bias.⁷² Additionally, I use Correlates of War datasets to isolate outcomes of nuclear rivalries from the outcomes of non-nuclear rivalries. Specifically, the Correlates of War datasets on national material capabilities, and territorial change. Moreover, I use the Correlates of War dataset related to historic bilateral trade patterns and Freedom House's 1973–2019 Freedom in the World dataset to test Liberalism (specifically, democratic peace theory) as an alternative explanation for why nuclear rivals reject peace.

Together, a case study approach coupled with statistical analyses make up for their respective weaknesses. While a statistical study can deduce changes in power asymmetry among rivals and calculate frequency of war and peace before and after rival states acquired nuclear weapons, it identifies correlations to, but not casual mechanisms behind, the outcomes, which are better addressed through the case study approach.⁷³ Moreover, statistical analysis allows us to isolate the effect of nuclear weapons on rivalries, and the outcome of non-nuclear rivalries

⁷² I examine frequency and probability of outcomes correlated to possession of nuclear weapons and power asymmetry across time, but I do not apply regression analysis to attempt casual linkages.

⁷³ Roger Gomm, Martyn Hammersley and Peter Foster, *Case Study Method: Key Issues, Key Texts* (London: Sage 2009), 18-26.

establishes a basis for comparison. Statistical analysis also provides a check on biases in the historical record that state leaders have written. What leaders say is important but biased and not easily available across major nuclear rivalries beyond that of the U.S.-Russia. In these cases, state behavior and the observed outcome is the objective marker for analysis.

To test if nuclear rivalries are correlated with border disputes, and that nuclear rivals are less likely to resolve border disputes, I use Correlates of War Territorial Change (6.0) database, which tracks changes in territory among rival states from 1870 to 2018. I also use Correlates of War dataset Trade (4.0) to assess the impact of interdependence to the propensity for peace (Liberalism), and National Material Capabilities (5.0) dataset to assess the impact of variation in power asymmetry on nuclear rivalry outcomes. I attempt to confirm the observation that nuclear rivals are less likely to resolve border disputes by annexing or conceding territory.⁷⁴

In summary, methodology encompasses testing my question of why nuclear rivals avoid peace (border dispute resolution) across major international relations theories, middle-range nuclear deterrence theories, and rivalry termination theories.

⁷⁴ Correlates of War project, *National Material Capabilities v5*, *Militarized Interstate Dispute v4.3*, and *Territorial Change v6* (accessed October 10, 2019); available from www.correlatesofwar.org.

Figure 4 Nuclear Prison Theory Testing Strategy (Border Disputes)

Cases	Before Nuclear Weapons		After Nuclear Weapons		Primary Cause of Rivalry
	War	Peace	War	Peace	
India-Pakistan (1947-2020)	War (3)	Peace (5)	War (0) Brinkmanship (6)	Peace (0) Rapprochement (5)	Border Disputes
China-India (1947-2020)	War (1)	Peace (1)	War (0) Brinkmanship (4)	Peace (0) Rapprochement (6)	Border Disputes
Russia-China (1964-1991)	War (0)	Peace (0)	War (0) Brinkmanship (1)	Peace (1) Rapprochement (1)	Border Disputes

Next, I discuss dependent and independent variables:

Dependent Variables (Outcomes):

War, Brinkmanship, Rapprochement, and Peace

As mentioned earlier, the dependent variable of war is defined by interstate hostilities that result in at least 1,000 battle-related deaths of members of national militaries.⁷⁵ Brinkmanship occurs when nuclear rivals engage in skirmishes to coerce their adversaries to compromise on the border dispute in terms advantageous to them. Rapprochement occurs when nuclear rivals offer concessions short of a peace treaty resolving border disputes. Peace occurs when border disputes are resolved (root cause of rivalry). The following table demonstrates how I will measure dependent variables in the subsequent chapters.

⁷⁵ Melvin Small and J. David Singer, *Resort to Arms: International and Civil War, 1816-1980* (CA: Sage, 1982), 205-206; and the Correlates of War project (accessed November 6, 2019), available from <http://www.correlatesofwar.org>.

Table 4: Outcomes of Nuclear Rivalries (Dependent Variables)

	War	Brinkmanship	Rapprochement	Peace (Border Dispute Resolution)
Concept	Use of force to annex disputed territory	Threat of force to change disputed territory	Initiatives to reduce hostilities	Mutually agreed upon resolution of disputed territory
Measurement	Deployment of at least two military services against the adversary	Provocative military exercises, border clashes, troop deployment, converging nuclear warheads with delivery systems, etc.	confidence-building measures, such as withdrawing troops from borders, expanding trade, signing of arms control/arms reduction treaties, etc.	Demarcation of disputed territory
Result	Disputed territory annexed or conceded	Disputed territory unresolved	Disputed territory unresolved	Disputed territory negotiated and divided
Empirical Examples	<u>Yes, before both acquired nuclear weapons:</u> e.g. India-Pakistan 1971 War; China-India 1962 War	e.g. India-Pakistan Kargil crisis 1999; China-India 2017 Doklam, Bhutan crisis	e.g. India-Pakistan 2001 Agra Summit; 2012 Working Mechanism on China-India Border	<u>Yes, before both acquired nuclear weapons:</u> e.g. Indus Waters Treaty 1960, 1954 Panchsheel Agreement

Below are two main hypotheses related to NPRT that I test across nuclear rivalries in the subsequent chapters. I used three criteria to draft my main hypotheses: 1) significant explanatory power, which entails the importance, explanatory range, and its real-world applicability to critical questions of nuclear conflict and proliferation; 2) prescriptive richness of border dispute and possession of nuclear weapons as causes which can be manipulated to placate a nuclear rivalry; and 3) a high degree of satisfaction from a puzzle that is critical to current and future international stability.⁷⁶

The main question my dissertation asks is why do nuclear-armed rivals reject peace?

⁷⁶ Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, New York: Cornell University Press, 1999), 3-4.

Hypotheses

H1 War

Interstate war over border disputes is *less* likely when rival states possess nuclear weapons.

H2 Peace

Peace (border dispute resolution) is *less* likely when rival states possess nuclear weapons.

$\pm$ Nuclear Weapons

= **War** (*border dispute resolved*); **Brinkmanship** (*border dispute unresolved*); **Peace** (*border dispute resolved*); **Rapprochement** (*border dispute unresolved*)

In practical terms, rivalry, nuclear weapons, and border disputes are binary variables (1 or 0). For example, India and Pakistan are rivals (1), they both have had nuclear weapons since 1987 (1), but did not before that (0), their rivalry is based on border disputes, (1) the rivalry existed before both acquired nuclear weapons, and both have a varied power asymmetry depending on the time period under study (1947-2020).

Nuclear Weapons – The Independent Variable

The central independent variable of this dissertation is nuclear weapons – mankind’s deadliest weapon to date. The existence of a pre-nuclear rivalry based on a border dispute is the condition that may provide “leverage for policymakers to enable them to influence outcomes” of war, brinkmanship, rapprochement, and peace—the dependent variables.⁷⁷

⁷⁷ Alexander L. George and Andrew Bennet, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 69.

Theoretical and Policy Contributions

This dissertation carves a new path in the research field of nuclear deterrence, the impact of nuclear proliferation, and conflict escalation. It introduces a new, original limitation of nuclear deterrence—a *nuclear prison* that keeps nuclear rivals, paradoxically, from both war and peace. It helps bridge the theoretical gap between nuclear conflict escalation and de-escalation and the constricting effect of nuclear weapons on interstate rivalry termination. Both trends are underrepresented in the current literature.

My Nuclear Prison Theory (NPRT) contends that once rivals acquire nuclear weapons their rivalry is less likely to be terminated in war or peace. This explanation strongly supports nuclear nonproliferation efforts to strengthen regional and international stability. Second, even if peace—resolution of border disputes—is unlikely between nuclear rivals, international efforts can focus on decreasing the likelihood of brinkmanship and increasing the likelihood of rapprochement by increasing economic interdependence. In concrete terms, that means that the United States, along with international partners, should work assiduously to promote regional economic integration, but more importantly, stop Iran⁷⁸ and Saudi Arabia⁷⁹ (and to a lesser degree Japan⁸⁰ and Taiwan⁸¹) from acquiring nuclear weapons. NPRT predicts that once these countries have nuclear weapons their respective rivalries will get a long life and overall stability in their

⁷⁸ Farhad Rezaei, *Iran's Nuclear Program: A Study in Proliferation and Rollback* (Cham, Switzerland: Palgrave Macmillan, 2017), 245-248.

⁷⁹ Nicholas L. Miller and Tristan A. Volpe, "Abstinence or Tolerance: Managing Nuclear Ambitions in Saudi Arabia," *The Washington Quarterly* 41, no. 2, (2018): 27-46.

⁸⁰ Mark Fitzpatrick, "How Japan Could Go Nuclear," *Foreign Affairs*, October 3, 2019.

⁸¹ David Albright and Andrea Stricker, *Taiwan's Former Nuclear Weapons Program* (New York: Institute for Science and International Security, 2018), 223-226.

respective regions will decrease. For current nuclear rivalries, United States and allies should promote economic interdependence, which is likely to promote rapprochement and discourage brinkmanship. An important example of this is the India-Pakistan nuclear rivalry.

The U.S. National Security Strategy 2017 states, “the prospect for an Indo-Pakistani military conflict that could lead to a nuclear exchange remains a key concern requiring consistent diplomatic attention.”⁸² Moreover, it explains the importance of India and Pakistan to U.S. interests: India’s economic and military rise is positive for the United States because it balances China, yet Pakistan’s influence over the Taliban insurgency and counterterrorism support is crucial for U.S. success in Afghanistan. This is in recognition of the fact that Pakistan counters some terrorists and foments others.⁸³

The India-China rivalry has experienced fewer incidents of brinkmanship precisely because the power asymmetry—relative to India and Pakistan—has reduced over time due to increased bilateral trade. More on this in the China-India Chapter.

The nuclear prison theory not only explains the history of conflict frequency among nuclear rivals, but it also predicts the behavior of future nuclear rivalries like Iran-Israel, Japan-China and South Korea-North Korea.

⁸² “National Security Strategy of the United States,” *White House*, December 2017, 50.

⁸³ Bruce Riedel, “Trump is Right: Pakistan is a Terrorist Haven. But What Will he do about it?” *The Daily Beast*, January 4, 2018.

Limitations of This Study

The Nuclear Prison Theory does not explain when nuclear rivals end up engaging in rapprochement or brinkmanship, instead it explains the rationale behind the existence of the nuclear prison. Middle-range, parsimonious theories are a limited depiction of reality, as is my Nuclear Prison Theory, and therefore it should be judged through the prism of equifinality: there are several causes to a social phenomenon.⁸⁴ That said, I will demonstrate that NPRT has significant explanatory power and adds value to the academic and policy debate on nuclear rivalries and nuclear proliferation.

Organization of the Dissertation

In Chapter One, I lay out the puzzle of why nuclear rivals eschew peace, discuss the lacunae in international relations theories related to nuclear deterrence and rivalry termination, briefly present the Nuclear Prison Theory, and lay out my methodological roadmap to test NPRT by defining terms and hypotheses.

In Chapter Two, I explain the awesome power of nuclear weapons, systematically examine existing international relations theories, middle-range nuclear deterrence theories, and rivalry termination theories, and explain why they fail to answer the question of why nuclear rivals reject peace. I then present my Nuclear Prison theory, its conditions, limitations, explanations, and predictions. I also briefly examine Russia-Ukraine rivalry through NPRT. In Chapter Three, I test NPRT on the India-Pakistan nuclear rivalry, and in Chapter Four, I test it on the China-India nuclear rivalry.

⁸⁴ Alexander L. George and Andrew Bennet, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), 63.

In Chapter Five, I conclude by summarizing the results, and briefly examine an episode of brinkmanship (1969) between Russia and China, and an incident of rapprochement that grew into a border dispute resolution (1991). Additionally, I highlight NPRT's limitation and policy relevance. I specifically look at how NPRT adds to the international relations discipline and conclude with policy implications and tools to mitigate nuclear rivalries.

“The nuclear arms race is like two sworn enemies standing waist deep in gasoline, one with three matches, the other with five.”
—Carl Sagan⁸⁵

“In no way does this [Nuclear Posture Review 2018] approach lower the nuclear threshold. Rather, by convincing adversaries that even limited use of nuclear weapons will be more costly than they can tolerate, it in fact raises that threshold.”
—James Mattis, former U.S. Secretary of Defense⁸⁶

Chapter 2: Nuclear Prison Theory

Chapter Two is devoted to the presentation and critique of what this dissertation claims will offer theorists and public policy makers a helpful contribution to understanding and – most important – avoiding and placating nuclear rivalries. The tool examined is what this dissertation terms the Nuclear Prison Theory (NPRT). This chapter systematically examines the awesome power of nuclear weapons, existing international relations theories, middle range nuclear deterrence theories, and rivalry termination theories, and makes the case why they fail to answer the question of why nuclear rivals reject peace (border dispute resolution).

After examining alternative international relations theories, the chapter assesses border dispute as a major cause of nuclear rivalries. Building on realist nuclear deterrence theory the chapter concludes with a discussion of the Nuclear Prison Theory, its core assumptions, and limitations as well as the hypotheses posited for testing NPRT’s external validity and explanatory range.

⁸⁵ Quoted in the ABC News Viewpoint program *The Day After*, aired on November 20, 1983.

⁸⁶ Department of Defense, “Nuclear Posture Review 2018,” *Secretary’s Preface*, (accessed December 14, 2019); available from www.media.defense.gov.

Border Disputes and Nuclear Rivalries

As of this writing, in December 2020, there are two active nuclear-armed rivalries based on border disputes: India-Pakistan, and China-India, and one episode of border dispute resolution between Russia and China in 1991. A border dispute is based on a contiguous territory (land and maritime) claimed by two states seeking sovereignty or affirming their “preexisting sovereignty over that territory.”⁸⁷ For example, India and China both claim the eastern region of Arunachal Pradesh: a border dispute where, on June 16, 2017, Indian and Chinese soldiers locked horns for two months before reciprocally withdrawing.⁸⁸

Border disputes have a greater likelihood of escalating “to the threat or use of military force, [when] compared to other sources of conflict between states.”⁸⁹ In fact, border disputes cause most militarized interstate disputes and wars and are more likely than other causes of rivalry to result in recurrent conflict.⁹⁰ Moreover, civilian and military leaders alike widely believe that military force remains “an effective instrument for achieving territorial goals.”⁹¹ Countries with nuclear

⁸⁷ Brian Taylor Sumner, “Territorial Disputes at the International Court of Justice,” *Duke Law Journal* 53, no. 6 (2004): 1779-1812.

⁸⁸ Thomas Kellogg, “The China-India Standoff: What Does Beijing Want?” *Foreign Policy*, September 1, 2017.

⁸⁹ Paul K. Huth, *Standing Your Ground: Territorial Disputes and International Conflict* (Ann Arbor: University of Michigan Press, 1996), 6, and John A. Vasquez, *The War Puzzle* (Cambridge: Cambridge University Press, 1993).

⁹⁰ Kalevi J. Holsti, *Peace and War: Armed Conflicts and International Order, 1648-1989* (New York: Cambridge University Press, 1991); Paul R. Hensel, “Territory: Geography, Contentious Issues, and World Politics,” in John A. Vasquez, *What Do We Do About War?* (New York: Rowman and Littlefield, 2012); and Dominic D. P. Johnson and Monica Duffy Toft, “Grounds for War: The Evolution of Territorial Conflict,” *International Security* 38, no. 3 (Winter 2013): 11-12.

⁹¹ Paul K. Huth., and Todd L. Allee, *The Democratic Peace and Territorial Conflict in the Twentieth Century* (Cambridge: Cambridge University Press, 2002), 31.

weapons are likely to “attempt [nuclear] coercion only when they have important interests at stake,” most notably “control over territory.”⁹²

Resolution of border disputes has evolved since 1945. While cases of interstate wars that result in the winner taking control of the loser’s territory have decreased, there are cases of incremental annexation, for example, Russia’s annexation of parts of Georgia and Ukraine. In the past, the sequence of conquest often went as follows: war breaks out, and the winner takes control of territory. Today, the predominant sequence is: the winner seizes a small piece of territory; and the winner tries to avoid full-scale war long enough for the newly acquired territory to be completely under its control. This strategy, the *fait accompli*, is now the “primary strategy of conquest.”⁹³

However, even if we were to account for this change, we still do not find a single case of *fait accompli* amongst nuclear rivals. We can therefore infer, *a priori*, that the presence of nuclear arsenals at the disposal of adversaries engaged in border disputes halts the pattern of incremental territorial conquest.

John Vasquez’s study of war and territorial disputes found that 85 percent of the wars fought over the past 300 years involved territorial disputes. Vasquez argued that “territorial conflicts are unique in their propensity to escalate to armed

⁹² Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (New York: Cornell University Press, 1996), 16, 37, quoted in Todd S. Sechser and Mathew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (Cambridge: Cambridge University Press, 2017), 97.

⁹³ Ahmer Tarar, “A Strategic Logic of the Military *Fait Accompli*,” *International Studies Quarterly* 60, no. 4, (2016): 742-752, and Dan Altman “By *Fait Accompli*, Not Coercion: How States Wrest Territory from Their Adversaries,” *International Studies Quarterly*, Vol. 61, No. 4 (2017): 881-891.

conflict.”⁹⁴ This is like nuclear rivalries, such as India vs. Pakistan, that are primarily based on border disputes that predate the acquisition of nuclear weapons by both countries.

The territorial change dataset of the Correlates of War project identifies territorial changes involving at least one nation-state for the period between 1816 and 2018. Out of 843 cases of territorial changes between states, 236 (30 percent) were the result of conquest or annexation, and 358 (42 percent) were the result of cession defined as when “part of a political entity is yielded to another entity through plebiscite, purchase, compensating agreement, or as a consequence of hostilities.”⁹⁵ However, in the COW territorial database there is not a *single* case of change in territory between two nuclear rivals.⁹⁶ Given the relatively large “n” (843) and the extended timeframe, stretching over two centuries to the present, this finding is significant.

In summary, border disputes are highly correlated with interstate rivalries. Yet, the same rivals, when in possession of nuclear weapons, are less likely to end their territorial disputes through war or a negotiated demarcation of the border.

The unique destructive power of nuclear weapons and how they drastically level the playing field between a weaker and stronger opponent is essential to understanding why nuclear rivals eschew waging war and forging peace agreements to settle border disputes.

Nuclear Weapons are Uniquely Destructive and Power Equalizing

⁹⁴ John A. Vasquez, *The War Puzzle* (Cambridge: Cambridge University Press, 1993), 7.

⁹⁵ Correlates of War project, *Territorial Change v6* (accessed October 26, 2019); available from www.correlatesofwar.org.

⁹⁶ Correlates of War project, *Territorial Change v6*.

Before delving into the alternative explanations for the political and policy dynamics at work, it is critical to highlight the uniquely destructive nature of nuclear weapons, the awesome boost to military capabilities of a country that occurs after it acquires nuclear weapons, and the commonsensical reasons why countries seek nuclear weapons.

Nuclear weapons are the most destructive weapons mankind has created. They are “the ultimate trump card: if you can convince your enemy that you have a way to play the card and are actually prepared to go through with it, nothing is more powerful.”⁹⁷ Consider the hypothetical case of dropping the 20-kiloton “Fat Man” – the nuclear bomb that wiped out Nagasaki in 1945 – on Los Angeles.

Alex Wellerstein, a nuclear weapons expert, runs an online tool called NUKEMAP, which allows users to choose a city and a nuclear weapon to predict fatalities, injuries, radiation radius, and other factors. According to NUKEMAP a 20-kilton “Fat Man” nuclear weapon would kill over 107,000 people from a fireball radius of 200 meters and a radioactive fallout radius of 500 meters.⁹⁸

Far more pernicious nuclear weapons, such as the U.S.’ 300-kiloton B-61 Mod 7, which would instantly kill over 360,000 people in Los Angeles, long ago rendered the “Fat Man” obsolete. Even newcomers, like Pakistan, possess nuclear weapons with a yield of up to 45 kilotons.⁹⁹ Another shocking example is the

⁹⁷ Elbridge Colby, “If You Want Peace, Prepare for Nuclear War,” *Foreign Affairs*, 97, no. 6 (2018): 25-32.

⁹⁸ Alex Wellerstein, NUKEMAP, (accessed July 10, 2017), available from www.nuclearsecrecy.com.

⁹⁹ Hans M. Kristensen and Robert S. Norris, “Pakistani Nuclear Forces 2016,” *Bulletin of the Atomic Scientists* 72, no. 6 (2016): 368-376; Alex Wellerstein, NUKEMAP, (accessed July 10, 2017), available from www.nuclearsecrecy.com.

possible use of a North Korean hydrogen bomb (approximately 150 kilotons) on New York City. According to NUKEMAP, a direct hit on the city would cause the eventual death of 728,220 New Yorkers from radiation poisoning, while injuring over 1.6 million people.¹⁰⁰

Compare that to the largest conventional bombs in the world. The Russian Aviation Thermobaric Bomb of Increased Power, or “Father of All Bombs,” developed in response to the U.S.’ GBU-43/B Massive Ordnance Air Blast (MOAB), or “Mother of All Bombs,” is the largest conventional bomb in the Russian arsenal and has a blast radius of less than 150 meters and no radiation fallout.¹⁰¹ On April 14, 2017, the United States military dropped the most powerful non-nuclear bomb in Afghanistan, targeting a complex network of tunnels used by the Islamic State in Iraq and Syria’s (ISIS) Afghan affiliate, ISIS-Khorasan province. A GBU-43/B MOAB is 30 feet long and carries a non-nuclear, 21,600-pound payload. Despite its size and devastating power, former U.S. Secretary of Defense, William Perry emphasized its minuscule power when compared to a nuclear warhead. “The #MOAB explosive yield is 0.011 kilotons, typical nuclear yield is 10–180 kilotons...”¹⁰²

¹⁰⁰ Alex Wellerstein, NUKEMAP (accessed July 10, 2019), available from www.nuclearsecrecy.com.

¹⁰¹ Jane Lavender, “Russia Drops ‘Father of All Bombs’ on ISIS Senior Commanders,” *The Mirror*, September 9, 2017.

¹⁰² Barbara Starr and Ryan Browne, “US Drops Largest Non-Nuclear Bomb in Afghanistan,” *CNN*, April 14, 2017.

Figure 6: Prediction of the Destruction of New York City from a North Korean Hydrogen Bomb



Source: NUKEMAP, Alex Wellerstein.

Due to their exceptionally powerful attributes, nuclear weapons uniquely shape asymmetric rivalries. For example, in North Korea-South Korea border dispute South Korea has qualitative advantage – and significant U.S. support – over North Korea’s numerical advantage – and significant Chinese support – in ground, naval, and air forces. Yet, North Korea’s possession of nuclear weapons significantly tilts the balance in its favor and hasn’t stopped it from dangerous saber rattling against South Korea in terms of nuclear and missile tests that have violated South Korea’s airspace.¹⁰³ From January 2014 to March 2020, North Korea conducted 110 missile tests, including 67 short range missile tests, 17 medium range missile tests, and 3 Intercontinental Ballistic Missile tests.¹⁰⁴

¹⁰³ Kim Min-Seok, “The State of the North Korean Military,” *Carnegie Endowment for International Peace*, March 18, 2020.

¹⁰⁴ James Martin Center for Nonproliferation Studies (CNS), *North Korea Missile Test Database, Nuclear Threat Initiative*, March 31, 2020.

Another example (which I explore in detail in Chapter 3) is Lashkar-e-Taiba's, a Pakistan-based terrorist group, attack in Mumbai, India on November 26, 2008, which shut down India's economic hub for three days. Besides strong diplomatic condemnation, India did not act militarily. Pakistan had a "first use" nuclear weapons strategy and, if war broke out, Pakistan would have incentive to escalate it to the nuclear level, according to Indian military leaders.¹⁰⁵

Eight years later, Pakistan would test Indian resolve again, and this time India did conduct small-scale airstrikes in Pakistan: yet full-scale war was off the table due to Pakistani nuclear weapons. Also, Indian and Pakistani conventional military action was limited to the disputed territory (line of control) and did not expand to the international border. On September 29, 2016, in response to a Pakistan-linked terrorist attack, Indian troops briefly crossed the de facto India-Pakistan border—delineated by a "line of control" splitting the disputed Kashmir region—and attacked several Pakistani border posts, bringing again the two rivals to the brink of a nuclear showdown.¹⁰⁶ As a warning to India, the Pakistani defense minister said, "We haven't kept the [nuclear] devices that we have just as showpieces.... If our safety is threatened, we will annihilate them [India]."¹⁰⁷

¹⁰⁵ Zafar Khan, "Pakistan's Nuclear First-Use Doctrine: Obsessions and Obstacles," *Contemporary Security Policy*, (2015) 36:1, 149-170, and Sandeep Unnithan, "Why India Didn't Strike Pakistan After 26/11," *India Today*, October 14, 2015.

¹⁰⁶ Hari Kumar and Geeta Anand, "17 Indian Soldiers Killed by Militants in Kashmir," *New York Times*, September 18, 2016, and Ellen Barry and Salman Masood, "India Claims 'Surgical Strikes' Across Line of Control in Kashmir," *New York Times*, September 29, 2016.

¹⁰⁷ "Pakistan's Defense Minister Khawaja Muhammad Asif Threatens to Unleash Nukes Against India," *Times of India*, September 29, 2016.

In February 2019, a Pakistani suicide bomber belonging to the Kashmiri insurgent group Jaish-e-Mohammad killed more than a three dozen Indian security forces in Indian-administered Kashmir inviting Indian airstrikes across the border, which then led to Pakistani airstrikes in Indian-administered Kashmir including the shooting down of an Indian fighter jet. Imran Khan, Prime Minister of Pakistan, called for restraint saying that “history tells us that wars are full of miscalculation...given the [nuclear] weapons we have can we afford miscalculation?” As in 2016, the skirmish did not expand to the international border.¹⁰⁸

If we were to run a wargame and remove nuclear weapons from the India-Pakistan rivalry, Pakistan would objectively not stand a chance against Indian conventional military capabilities. According to the International Institute for Strategic Studies Military Balance 2019 study, India’s defense budget is \$58 billion supporting a 1.4 million strong military, compared to Pakistan \$11.2 billion defense budget supporting 653,000 military personnel.¹⁰⁹ Other estimates by SIPRI, for example, are even higher.¹¹⁰ Yet Pakistani nuclear weapons have repeatedly deterred India from launching a full-scale war across the international border.¹¹¹

¹⁰⁸ Joanna Slater, Niha Masih and Ishfaq Naseem, “At least 38 killed in deadliest attack on security forces in Indian-controlled Kashmir in 3 decades,” *Washington Post*, February 14, 2019, and “Pakistan says it shot down Indian jets, carried out air strikes in Kashmir,” *Reuters*, February 27, 2019.

¹⁰⁹ “Chapter Six: Asia,” in *The Military Balance 2019*, International Institute for Strategic Studies, 118, no. 1 (London, IISS Press, 2019), 266, 296.

¹¹⁰ SIPRI Military Expenditure Database (accessed December 10, 2020); available from www.sipri.org.

¹¹¹ Kevin James, “Can India or Pakistan Break Deterrence?” *The National Interest*, April 22, 2019.

The monumental addition to a country's capabilities from acquiring nuclear weapons is also observable in a nuclear state vs. non-nuclear state rivalry.

Russia-Ukraine Rivalry

The Russia-Ukraine rivalry is another example of how nuclear-weapons shape conflict between a strong and weak rival. If history is prologue Ukraine could have resisted Russian conquest of its eastern territories, had it not given up its nuclear weapons, on June 1, 1996, at the urging of the United States and NATO countries.¹¹² On March 17, 2014, Russia annexed Ukraine's southern region of Crimea and parts of Eastern Ukraine after Ukraine's pro-Russian president was ousted amid pro-European Union protests.¹¹³ When asked, in April 2016, about Ukraine's decision to give up two thousand nuclear warheads in 1996, former Ukrainian President Petro Poroshenko said that it was a major mistake and that if Russian aggression was not deterred by other methods, the international community should "forget about the [nuclear] non-proliferation process."¹¹⁴ While Ukraine had limited technological know-how or economic resources to successfully run a nuclear weapons program, the same was true of Pakistan in the 1980s. In short, Ukraine is a worthy counterfactual case of a country possessing nuclear weapons and deterring an adversary from annexing its territory.

¹¹² Mariana Budjeryn and Polina Sinovets, "Denuclearization Again? Lessons from Ukraine's Decision to Disarm," *War on the Rocks*, April 18, 2018; Anthony Zurcher, "Ukraine's Nuclear Regret?" *BBC*, March 20, 2014, and Blake Fleetwood, "Too Bad Ukraine Didn't Keep its 2,000 Nuclear Weapons," *Huffpost*, December 16, 2017.

¹¹³ Tyler Cowen, "Crimea Through a Games-Theory Lens," *New York Times*, March 15, 2014.

¹¹⁴ "Ukraine president calls his country's 1994 decision to give up nukes a mistake," *Fox News*, April 5, 2016, interview transcript.

The Russian President, Vladimir Putin, also kept his nuclear coercion option open because he remained unsure if NATO countries would militarily support Ukraine. During the initial annexation of Crimea by the Russian military, Putin bluntly stated that nuclear weapons were on standby; “we were ready to do that,” he said.¹¹⁵

Why Do Countries Acquire Nuclear Weapons?

Unsurprisingly, given that nuclear weapons are uniquely destructive and have deterred war, most countries desire to acquire them for their national security. Domestic politics and prestige are two additional reasons, according to Scott Sagan. In our anarchic world where no one other than the state itself that controls a given territory can guarantee security, building nuclear weapons to deter conflict and protect against an economically superior adversary with a powerful conventional military is an attractive option.¹¹⁶

A case in point is the weaker conventional military of Pakistan against the stronger conventional military of India. Since both have acquired nuclear weapons, no major war has occurred between the two despite India’s obvious conventional military advantage over Pakistan’s. North Korea is another example of an economically weaker country that cannot feed its population but has successfully deterred war because of its successful acquisition of nuclear

¹¹⁵ “Putin says Russia was ready for nuclear confrontation over Crimea,” *Reuters*, March 15, 2015.

¹¹⁶ Scott D. Sagan, “The Causes of Nuclear Weapons Proliferation,” *Annual Review of Political Science* 14: 255-244; Jacques Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy* (Cambridge: Cambridge University Press, 2006); Scott D. Sagan, “Why Do States Build Nuclear Weapons? Three Models in Search of the Bomb,” *International Security* 21, no. 3 (Winter 1996-1997): 54-86; Mark S. Bell, “Examining Explanations for Nuclear Proliferation,” *International Studies Quarterly* 60 (2016): 520-529.

weapons. At the height of U.S.-North Korea nuclear tensions, in November 2017, North Korea's official media released a statement from the government stating that North Korea is developing nuclear weapons to avoid "the tragic situation of the war-torn non-nuclear countries which became the targets of invasion and plunder" by the United States.¹¹⁷ It worked. The United States and its allies placed economic sanctions but did not attack North Korean nuclear sites or weapons.¹¹⁸

Besides, national security nuclear weapons can also secure domestic regimes. To increase regime security or approval ratings of an otherwise corrupt or incompetent regime, political leaders are likely to pursue nuclear weapons, a policy direction which not only distracts their citizens but makes it harder for external democratizing efforts due to the fear that regime failure would lead to unsecured nukes.¹¹⁹ In Iran, after the Green Revolution threatened the regime in 2009, political leaders accelerated the country's nuclear program. Still, the Obama administration was reluctant to weaken a regime pursuing nuclear enrichment because the Iranian regime was also conducting secretive talks with the United States on freezing the nuclear program.¹²⁰

¹¹⁷ "North Korea: Nuclear Deterrent Prevents US Invasion," *Al Jazeera*, November 1, 2017.

¹¹⁸ Catherine Wong, "Five Reasons Why the US cannot Attack North Korea like it did Syria," *South China Morning Post*, April 15, 2017, and Eleanor Albert, "North Korea's Military Capabilities," *Council on Foreign Relations*, Backgrounder, November 16, 2020.

¹¹⁹ Toby Dalton and Michael Krepon, "A Normal Nuclear Pakistan," *Carnegie Endowment for International Peace and Stimson*, (2015) 7-11.

¹²⁰ Eli Lake, "Why Obama Let Iran's Green Revolution Fail," *Bloomberg*, August 24, 2016.

The third reason is international prestige and clout.¹²¹ Smaller countries like Pakistan, otherwise economically troubled, can astronomically increase leverage and influence by acquiring nuclear weapons. On top of that, if such countries, like Pakistan, are home to global terrorists, their importance is even further magnified. Numerous indicators suggest that Pakistan is like many developing countries because of its low socioeconomic achievements in healthcare, education, and employment; however, because of its nuclear weapons, international donors have little choice but to underwrite its stability. Simply put, Pakistan is “too nuclear to fail.”¹²²

Given the astounding power of nuclear weapons and the logical pursuit of these weapons by states let us now focus on the gap in international relations theories of conflict termination, specifically resolution of border disputes.

As mentioned in Chapter 1 and demonstrated in the figure below, there are no parsimonious theories that lay out a clear causal mechanism to help solve the empirical and policy puzzle of why nuclear rivals reject peace. Political scientists have long debated why nuclear rivals avoid war.¹²³ For realists, fear of mutual

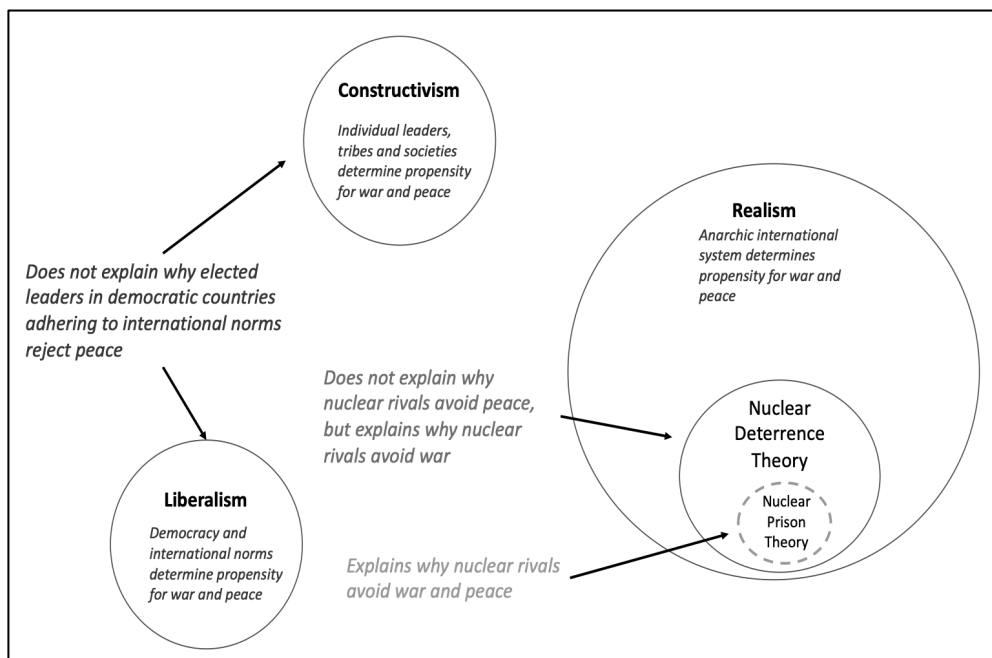
¹²¹ Scott D. Sagan, “Why Do States Build Nuclear Weapons? Three Models in Search of the Bomb,” *International Security* 21, no. 3 (Winter 1996-1997): 54-86.

¹²² Stephen P. Cohen, *Shooting for a Century: The India-Pakistan Conundrum* (Washington, DC: Brookings Institution Press, 2013), 103.

¹²³ See, for example, Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt Brace, 1946); Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, NY: Cornell University Press, 1989); Kenneth N. Waltz, “Nuclear Myths and Political Realities,” *American Political Science Review* 84 (September 1990): 731-745; Herman Kahn, *On Thermonuclear War* (New York: Free Press, 1960); Henry Kissinger, *Nuclear Weapons and Foreign Policy* (New York: Harper and Row, 1957); and Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton, NJ: Princeton University Press, 2014).

annihilation causes the absence of war between nuclear¹²⁴; for liberals, the use of nuclear weapons by one or both rivals is put aside because of the mitigating effects of democracy, economic interdependence, international organizations, and norms¹²⁵; and for constructivists, nuclear war is less likely because of risk-averse leaders and domestic politics.¹²⁶ These explanations of war have led to a theoretical fallacy that portends that because nuclear rivals deter war, they ultimately lead to peace. In other words, the absence of war is the existence of peace.

Figure 7 The Lacuna in International Relations Theories of War and Peace



Source: Author

¹²⁴ Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999): 240-254.

¹²⁵ Robert Keohane, "International Liberalism Reconsidered," in *The Economic Limits to Modern Politics*, John Dunn, ed. (Cambridge: Cambridge University Press, 1990): 165-194.

¹²⁶ Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Organization* 53, no. 3 (Summer 1999): 433-468.

Why Nuclear Rivals Reject War and Peace: Realism

Realists do not directly address why nuclear rivals avoid peace because they primarily focus on conflict as the logical outcome of an anarchic world with “no policeman.” Following is a summary of the realist school to situate my Nuclear Prison Theory.

Realism is not a single consistent theory, rather, it is a covering law that explains the world based on four major operating assumptions. The first is that human beings are organized into constellations, such as tribes, city-states, and modern nation-states. In a world where resources are scarce, these groups inevitably compete and engage in conflict. Second, the structure of the world, based on the interactive capacity of nation states is anarchic and has remained so since time immemorial. There has never been an omnipotent central world government.

The roots of realism reside in Thucydides’ seminal work, *The Peloponnesian War*, in which he argues that the primary reason for war between Athens and Sparta was the rise of Athens and the fear that its rise instilled in Sparta.¹²⁷ Similarly today, under world-wide de facto anarchy (at least for the realist school), modern day countries compete for power and security through a largely zero-sum game—one country’s security is another country’s insecurity. The third assumption is that all states operate under the principle of self-interest and self-help, which means trust between states is in short supply and countries compete to expand power and security. Fourth, power politics is the force behind

¹²⁷ Thucydides, *The Peloponnesian War* (London: Oxford University Press, 2009).

conflict, especially in the case of major powers like China, Russia, and the United States. Power politics renders, in turn, relations conflictual due to the normal state of finite resources against a growing desire for power and security.¹²⁸

Realist theory is divided into three chronological and ontological phases: classical realism, neorealism, and neoclassical realism. Hans Morgenthau, a classical realist, argues in *Politics Among Nations* that utopian ideas are counterproductive to understanding the reality of the world, in which conflict was not an aberration but the norm and unavoidable because human nature is primarily egotistical and power-hungry. States wage war when their core interests are at stake, and they were willing to ignore their values to achieve those interests.¹²⁹

Neorealism followed classical realism and, more specifically, structural realism. Kenneth Waltz, arguing in his magnum opus, *Theory of International Politics*, added to Morgenthau by emphasizing the structure of the international system, which he would maintain is anarchic. Waltz presented three images—the individual, the state, and the international system—and argued that the anarchic structure of the international system causes war because there is no referee and no world government.¹³⁰ States are unitary, rational actors, but their actions are

¹²⁸ For a sampling of essential work on realism, see Thomas Hobbes, *Leviathan* (London: Wordsworth, 2014); Machiavelli, *The Prince* (Cambridge: Cambridge University Press, 1998); Kenneth Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 1979); John Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001); Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1985); Stephen M. Walt, *The Origins of Alliances* (New York: Cornell University Press, 1987); and Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999).

¹²⁹ Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1985), 15-23.

¹³⁰ Kenneth Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 1979), 111-116.

shaped less by what happens inside them (i.e., domestic politics, culture and specific leaders) and more by the anarchic structure of the international system, which is based on the states' interactive capacity. All states are sovereign, but not equal, Waltz argued, and that they have varying degrees of economic, political, military, and geographic capabilities. All of these can be quantified and weighed, unlike intentions, which cannot.¹³¹

Waltz argues that anarchy is so powerful that individual leaders and domestic politics can hardly shape the propensity for war and peace in a world sans world government. As unitary, rational actors, states strive to survive and maximize their power, which inevitably leads to conflict with other states trying to do the same. In game theory terms, structural realism is a game of chicken—a zero-sum game whereby one state's gain is only possible by another state's loss.¹³²

Waltz's remedy to this inherent problem is a stable, bipolar system, which maintains a balance of power. Waltz argued that a bipolar world, over a unipolar or multipolar world, was more stable because, as was the case in the Cold War, superpowers, like the United States and Russia, could bring some hierarchy to the system, forcing their allies and partners to follow their lead, thereby limiting conflict. For example, during the Cold War, the United States and Russia could and did engage in proxy wars throughout Asia (e.g., Afghanistan, Vietnam) and Africa (e.g., Angola, Ethiopia) without escalating to a nuclear war.¹³³

¹³¹ Steven E. Lobell, Norrin M. Ripsman, and Jeffrey W. Taliaferro, *Neoclassical Realism, the State and Foreign Policy* (New York: Cambridge University Press, 2009).

¹³² Joseph Grieco, "Realist Theory and the Problem of International Cooperation: Analysis with an Amended Prisoner's Dilemma Model," *Journal of Politics* 50: 600-624.

¹³³ Robert M. Gates, *From the Shadows* (New York: Simon and Schuster, 1996), 349, 368.

In a unipolar world, there is imperial overreach, and other countries begin to team up against the hegemon. Teaming up against a common foe helps to balance power in the international system. Waltz argued that in a multipolar world, there would be too many states vying for power, which would increase the frequency of conflict.

Realist Robert Gilpin disagrees with Waltz and proposes the hegemonic stability theory, whereby a hegemon (a major power having dominant influence over other states) would bring stability to a unipolar system. Still, Gilpin stated that if that hegemon is threatened or declining in power, then it may be inclined to wage a preventative war against a rising competitor, making the system unstable.¹³⁴ This is not always the case, because as Pax Britannica (the Britain-led world order, prevailing through much of the 19th century) changed to Pax Americana (U.S.-led world order, from the inter-World War period to the present), the transition from one great power to the other was smooth and consensual.

Neoclassical realists challenged Waltz's structural realism by arguing that Waltz advocated structural determinism. They posited that what happens inside a state—such as circumstances involving individual leaders as well as domestic politics—matters as well. States, meanwhile, may act uniquely though shaped by the anarchic international system. For example, Stephen Walt's *Origins of Alliances* challenged Waltz's assumption that all states want to maximize power regardless of alliances. Walt made the case that during the Cold War during which

¹³⁴ Robert Gilpin, "The Theory of Hegemonic War," *Journal of Interdisciplinary History* 18, no. 4 (1988): 581-613.

time neither the United Kingdom nor France teamed up or balanced against the United States because they were not seeking a balance of power but a *balance of threats*. In the case of the United States and Europe, in the post-War period, the key problem was how to balance against the threat of the Soviet Army, not how to face up to growing American might. Barry Buzan argued that the structure of the international system was important in shaping events, but what happened inside a state mattered as well, if not more. He called it “deep structure”—a combination of domestic (hierarchical) and international (anarchical) structures.¹³⁵

Some neoclassical realists are subdivided into offensive and defensive realists. John Mearsheimer, in *The Tragedy of Great Power*, argued that superpowers like the United States, the USSR, and China want to maximize power and become regional hegemons. Like structural realists, Mearsheimer agrees that states are unitary, rational actors operating under anarchy and efforts to decrease anarchy (liberal institutionalism) fall short because international institutions, such as the United Nations or NATO, are shaped by the behavior of superpowers, not the other way around. A bipolar world or a balanced multipolar world is the surest way to achieve world stability, but the struggle for power is endless.¹³⁶

Defensive realists, like Stephen Van Evera and Robert Jervis, disagreed with Waltz; instead arguing that states are security maximizers. For example, Jervis argues that if a state were to develop offensive and defensive weapons that

¹³⁵ Barry Buzan, Charles A. Jones, and Richard Little, *The Logic of Anarchy* (New York: Columbia University Press, 1993), 165-168.

¹³⁶ John Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001).

are distinguishable and defense has the advantage, this action would lead to stability, not conflict.¹³⁷

Based on the assumptions of groupism, the anarchic international system, the principle of self-help, and power politics, realists posit that nuclear rivals reject war because it would lead to mutual annihilation. But current realists do not have a clear answer to why nuclear rivals reject peace (resolving border disputes). Intuitively, realists could argue that security-maximizing states would not compromise on border disputes if they had power parity with their rival, which they could achieve by possessing nuclear weapons. Consequently, realism provides a framework to nest nuclear deterrence theory based on assured annihilation. But realists fall short on explaining why nuclear rivals eschew a formal, enforceable peace agreement to resolve a border dispute.

Why Nuclear Rivals Reject War and Peace: Realist Nuclear Deterrence

Deterrence convinces one's enemy that the costs of a certain action outweigh its benefits, thereby stopping that action from happening. Nuclear-armed countries are deterred from full-scale war because of a fear of retaliation. This fear of mutual destruction is the organizing principle of nuclear deterrence theory which is intrinsically connected to U.S. nuclear strategy since 1945. In the 1950s under President Dwight Eisenhower United States implemented 'massive retaliation' which ensured a quick and massive strike against an adversary. This would lead, State Department strategist Paul Nitze argued, to a quick end to a

¹³⁷ Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999); and Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30 (1986): 167-214.

war, which required defense budgets with less emphasis on conventional forces, and a varied menu of nuclear weapons (long range strategic and short-range tactical weapons).¹³⁸

There were two major weaknesses, however, in the massive retaliation approach: Russians were quickly growing their nuclear stockpile, and they were skeptical of the credibility of the American threat to use nuclear weapons and risk the leveling of American cities. Consequently, Eisenhower administration supplanted ‘massive retaliation’ with ‘graduated deterrence’ whereby small Russian attacks would be thwarted using short-range tactical nuclear weapons restricted to the local theater. Critics argued that there was a slippery slope between tactical- to long-range strategic nuclear weapons and that escalation could not be controlled.

The nuclear strategy of ‘graduated deterrence’ evolved into ‘flexible response’ under President John F. Kennedy, giving the president more options to control escalation in warfare from the conventional to the nuclear levels. These strategies were built on the notion that fear of mutual destruction was driving nuclear rival behavior. But that fear for political theorists had to be measured and substantiated for it be a causal factor.

Consequently, strategists and theorists such as Paul Nitze, Henry Kissinger, Adam Wholstetter, Bernard Brodie, and Thomas Shelling drafted the conditions for realist nuclear theories based on game theory. In summary, they generally agreed that nuclear deterrence theory depends on five conditions:

¹³⁸ Paul Nitze, *NSC 162/2* (accessed November 2, 2016) available from www.nato.int.

capability (nuclear weapons and delivery systems), parity (scale of comparable arsenal of rivals), credibility of threat (nuclear rivals will use nuclear weapons if threatened), trackability of threat (clearly identified issuer of threat) and decisions based on bounded rationality, a practical cost-benefit analysis shaped by limited information.

Nuclear weapons astronomically increase the cost of war, thus reducing its likelihood as argued by nuclear proliferation supporters like Kenneth Waltz.¹³⁹ In contrast, those that oppose nuclear weapons proliferation, like Scott Sagan, argue that as the nuclear club inducts new and inexperienced nuclear powers (India, Pakistan, and North Korea), the new members are more aggressive, disorganized, and unpredictable and have questionable command and control safeguards, which increases the likelihood of preventative war, crisis escalation, support for proxy warfare, and accidental launches.¹⁴⁰

Part of the rational cost-benefit analysis is based on deterrence by punishment in terms of mutual destruction, or in the case of U.S.-Russia – mutually assured destruction. Once two rival countries gain nuclear weapons, they may choose to escalate conflict up to the nuclear threshold or, over time, lessen

¹³⁹ See, for example, Kenneth N. Waltz, “More May Be Better,” in Sagan and Waltz, *The Spread of Nuclear Weapons* (New York, W.W. Norton and Company, 2012); John J. Mearsheimer, “Back to the Future: Instability in Europe after the Cold War,” *International Security* 15, no. 1 (Summer 1990): 5-56; Steven Van Evera, “Primed for Peace: Europe after the Cold War,” *International Security* 15, no. 3 (Winter 1990/1991): 7-57; Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (New York: Cornell University Press, 1999), 240-243.

¹⁴⁰ See, for example, Scott D. Sagan, “More Will be Worse,” in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons* (New York, W.W. Norton and Company, 2012); Peter Douglas Feaver, “Neooptimists and the Enduring Problem of Nuclear Proliferation,” *Security Studies* 6, no. 4 (Summer 1997): 126-136; Dinshaw Mistry, “Tempering Optimism about Nuclear Deterrence in South Asia,” *Security Studies* 18, no. 1 (January 2009): 148-182.

tensions.¹⁴¹ After an initial phase of saber rattling and close calls, and under the conditions of nuclear parity and second-strike capability, adversaries acknowledge the reality of mutual destruction.¹⁴²

As rivals become mature, they voluntarily restrict the use, production, and deployment of nuclear weapons.¹⁴³ Historically, nuclear weapons proliferation has brought both stability and instability in international conflict. Stability comes from avoiding full-scale war due to the high likelihood of mutual annihilation, but that also leads to instability because it encourages rivals to engage in conflict below the nuclear threshold in terms of proxy wars.¹⁴⁴ Certainly, there are variations on the degree of mutual extinction based on, for example, misperceptions,¹⁴⁵ signaling, defense mechanisms against first strike (such as missile defense systems), or a secured second-strike capability.

Moreover, mutual annihilation is fear which causes Nuclear rivals to avoid war. It is one-directional and operates under the assumption that once Nuclear rivals employ the strategy of rapprochement, they *stick* with it. Mutual destruction assumes constant, static, and precise fear of mutual suicide.¹⁴⁶

¹⁴¹ Lewis A. Dunn, *Containing Nuclear Proliferation* (London: IISS, Adelphi Paper No. 263, Winter 1991), 1-10.

¹⁴² Michael Horowitz, "The Spread of Nuclear Weapons and International Conflict: Does Experience Matter?" *Journal of Conflict Resolution* 53, 234 (2009): 234-257.

¹⁴³ Joseph Nye, "Nuclear learning and US-Soviet security regimes," *International Organization* 41, no. 3 (1987): 371-402

¹⁴⁴ Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (New York: Cornell University Press, 1999), 242.

¹⁴⁵ See for example, Scott D. Sagan, "More Will Be Worse," in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons* (New York, W.W. Norton and Company, 2012).

¹⁴⁶ Paul Bracken, *The Second Nuclear Age: Strategy, Danger, and the New Power Politics* (New York: St. Martin's Griffin, 2013), 93-126.

Mutual destruction, however, neither explains nor predicts why nuclear rivals eschew resolution of border disputes. The Nuclear Prison Theory, put forward here, relies on the logic of mutual destruction, embedded in realist nuclear deterrence theory which asserts that nuclear rivals are deterred from peace due to mutual capitulation. Both countries perceive any compromise on disputed territory as a surrender to the rival's demands, making any border dispute resolution nearly impossible. I test this further in Chapters 3, 4 and 5.

Why Nuclear Rivals Reject War and Peace: Liberalism

Why do nuclear rivals reject peace? Is it because they do not have democratic regimes, or not enough trade; or do they lack memberships in international organizations that promote peace? This section examines the roots of Liberalism and its limits in explaining the absence of border dispute resolution between nuclear rivals.

Unlike realism, liberalism, along with its numerous variants and revisions, is a normative theory that looks at the world as it ought to be. It is a combination of eighteenth-century enlightenment, nineteenth century utopianism, and early twentieth century Wilsonianism.¹⁴⁷ Immanuel Kant's *Perpetual Peace* is the basis for modern liberalism. Kant argued that, over time, a harmony of interest over

¹⁴⁷ For essential writings on Liberalism see Immanuel Kant, *Perpetual Peace: A Philosophical Essay* (London: George Allen and Unwin, 1917); John G. Ikenberry, *After Victory* (Princeton, NJ: Princeton University Press, 2001); Michael Doyle, *Ways of War and Peace: Realism, Liberalism, and Socialism* (New York: Norton, 1997); Francis Fukuyama, *The End of History and the Last Man* (New York: Free, 1992); Robert Gilpin, *The Political Economy of International Relations* (Princeton, NJ: Princeton University Press, 1987); Louis Hartz, *The Liberal Tradition in America* (New York: Harcourt Brace, 1955); and David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2007).

individual liberties (democracy) and coexistence of a community of nations (international governing institutions) would develop making war obsolete and peace perpetual.¹⁴⁸ In liberalism, unlike the realist's focus on states as unitary and rational actors operating in anarchy, what happens inside a state matters more, so characteristics such as regime type (e.g., autocracy, democracy, theocracy, etc.) significantly shape interstate interactions.

Liberalism theorists argue that, while states do operate under anarchy, this anarchy can be mitigated and the propensity for conflict reduced, if not all together eliminated. Utopianism¹⁴⁹ rests on the assumptions that economic interdependence,¹⁵⁰ democratic values,¹⁵¹ and the power of conflict-reducing institutions,¹⁵² such as the League of Nations and United Nations, can reduce anarchy and conflict. Robert Keohane argues that these institutions reduce conflict because they reduce transaction costs and cheating, create norms, push social elites toward cooperation, do not discount the future, and set the agenda. This contrasts with realists, who cannot tell what is most important or when: a strong economy or a strong military.

For example, neoliberalism advocates collective security over the balance of power. The balance of power, as previously stated, is the distribution of states'

¹⁴⁸ Immanuel Kant, *Perpetual Peace: A Philosophical Essay* (London: George Allen and Unwin, 1917).

¹⁴⁹ E.H. Carr, *The Twenty Years' Crisis 1919-1939* (London: Palgrave Macmillan, 1981), 13-14.

¹⁵⁰ Robert O. Keohane and Joseph S. Nye, "Power and Interdependence in the Information Age," *Foreign Affairs* 77, no. 5 (1998): 81-94.

¹⁵¹ Bruce Russett, Christopher Layne, David Spiro, and Michael Doyle. "The Democratic Peace." *International Security* 19, no. 4 (1995): 164.

¹⁵² Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University Press, 1984).

capabilities that creates a unipolar, bipolar, or multipolar world in which countries constantly balance (internally and externally), endeavoring to remain on the winning team.¹⁵³ Neoliberal institutionalists argue against such balance-of-power theory by proposing collective security—which, in the 1990s, prompted the emergence of the concept of *responsibility to protect*, advocating a halt to crimes against humanity, such as the Rwandan genocide.¹⁵⁴

Neoliberal institutionalists argue that institutions like the World Bank and international regimes like the World Trade Organization promote and strengthen norms and customs that decrease anarchy and encourage stability, allowing states to reduce transaction costs. The realist rebuttal is that institutions cannot prevent cheating and focus on absolute over relative gains, which is an important part of realism. Realists assert that conflict is inevitable and a normal part of the international system operating under anarchy, which can be mitigated and paused for a while (through balance of power, polarity, alliances, treaties, etc.) but not stopped. Liberal theorists assert that the security dilemma can be mitigated for an extended time under anarchy by making states democratic and constrained by international institutions (the World Bank, the United Nations, the International Monetary Fund, etc.).

In summary, democracy and international institutions cause countries to avoid conflict in an anarchic world according to liberalism. Yet this does not

¹⁵³ T.V. Paul, Wirtz, James J., and Fortmann, Michel, *Balance of Power: Theory and Practice in the 21st Century* (Stanford, CA: Stanford University Press, 2004).

¹⁵⁴ United Nations Office on Genocide Prevention and the Responsibility to Protect (accessed November 11, 2017); available from <http://www.un.org/en/genocideprevention/about-responsibility-to-protect.html>.

explain the persistence of nuclear rivalries. India and Pakistan and China and India are members of numerous regional and international organizations but have frequently engaged in brinkmanship. For example, India and Pakistan were active members of the South Asian Association for Regional Cooperation and were both in democratic phases when they engaged in brinkmanship over Kashmir in 2008: a time when Freedom House rated India as “free” and Pakistan as “partially free” — a fledgling democracy.¹⁵⁵

Liberalism does not explain why nuclear-armed rivalries do not end in peace. While democracy, international norms, and organizations temper the propensity for conflict, they are insufficient to end nuclear-armed rivalries through peace treaties. Nuclear rivalries, such as India-Pakistan and India-China, have engaged in rapprochement short of signing a peace treaty. One of these rivalries was, for a time, between two democratic states, India and Pakistan, but they have not resolved a single border dispute since they acquired nuclear weapons. This has put into serious question the explanatory power of Liberalism in explaining why nuclear rivals do not resolve border disputes.

Nuclear Binding

Steven Pifer and Michael O’Hanlon argue that arms control and reduction treaties best explain why Nuclear rivals employ various nuclear strategies.¹⁵⁶ Once

¹⁵⁵ “Freedom in the World 2009: Progress in South Asia,” *Freedom House* (accessed November 11, 2017); available from <https://freedomhouse.org/report/freedom-world/freedom-world-2009>

¹⁵⁶ See, for example, Steven Pifer and Michael O’Hanlon, *The Opportunity: Next Steps in Reducing Nuclear Arms* (Washington, D.C.: Brookings Press: 2012); Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012).

Nuclear rivals are “binded,” they employ rapprochement and stick with it—arms control and reduction is the only sure way to peace. The research data gathered here suggest otherwise. Nuclear rivals employ rapprochement without arms control and reduction—or nuclear binding—as in the China-India and India-Pakistan cases, they have bounced from rapprochement to brinkmanship and back.¹⁵⁷

Nuclear Learning

In part to deal with this problem of lack of parsimony and targeting, Joseph Nye argues that, as time passes and Nuclear rivals survive close calls, such as the Cuban Missile Crisis of 1962 between the U.S. and the USSR, cooler heads prevail, and nuclear rivals eventually opt for rapprochement. The causal mechanism is the process of learning. Nye’s operating assumption is similar to that of the mutual destruction thesis—once Nuclear rivals move toward peace; they do not turn around. Nye does not mention any possibility of “unlearning.”¹⁵⁸ Therefore, Nye’s nuclear learning cannot predict why Nuclear rivals would seek brinkmanship after “learning” that rapprochement is ostensibly better. More important, nuclear learning does not explain the absence of border dispute resolution between nuclear rivals.

¹⁵⁷ See, for example, Steven Pifer and Michael O’Hanlon, *The Opportunity: Next Steps in Reducing Nuclear Arms* (Washington, D.C.: Brookings Press: 2012); Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012).

¹⁵⁸ Joseph Nye, “Nuclear learning and US-Soviet security regimes,” *International Organization* 41, no. 3, (1987): 371-402.

Why Nuclear Rivals Reject War and Peace: Constructivism

Realists cannot explain the lack of peace, but they can explain lack of war due to the fear of mutual suicide amongst nuclear rivals. Meanwhile, Liberal theorists cannot explain why despite democratic norms, trade and international organizations, nuclear rivals eschew peace. Let us now examine constructivism's explanatory range in explaining the lack of border dispute resolution amongst nuclear rivals.

Unlike realists and liberal institutionalists, constructivists argue that groups and individuals within the state determine its behavior through their ideas, which shape the international system and its anarchic attributes, rather than the other way around.

Constructivism, more an approach than a theory, is put forth by Alexander Wendt in his seminal work *Anarchy Is What You Make of It*. Wendt and other constructivists argue that individuals, societies, and states create identities based on preferences and shape how much anarchy or hierarchy they want in a state or in the world. The degree of anarchy in the system is not a given (a realist assumption) but, rather, it is created socially.¹⁵⁹ Constructivism explains how

¹⁵⁹ For essential writings on constructivism, see Alexander Wendt, "Anarchy is what states make of it: the social construction of power politics," *International Organization* 46, (1992): 391-425; Dale C. Copeland, "The Constructivist Challenge to Structural Realism: A Review Essay," *International Security* 25, no. 2 (Fall 2000): 187-212; John Gerard Ruggie, *Constructing the World Polity: Essays on International Institutionalization* (New York: Routledge, 1998), 1-39, 172-197; Emanuel Adler and M. Barnett, "Security Communities in Theoretical Perspective," in *Security Communities*, ed. Emanuel Adler and M. Barnett (Cambridge: Cambridge University Press, 1998), 3-28; Alexander Wendt, "Constructing International Politics," *International Security* 20 (1995): 71-81; and Nicholas Greenwood Onuf, *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia, S.C.: University of South Carolina Press, 1989).

leaders and societies construct reality and then give objects (such as international order) meaning depending on specific normative ideas, such as justice and equality.

The constructivist answer to why nuclear rivals reject war and peace is that both war and peace are socially constructed ideas of elites in both countries; and whichever outcome the country aims for will depend on a mix of domestic and international politics. While nuanced, this explanation is neither parsimonious nor targeted when it comes to ending nuclear rivalries.

Nuclear Experience

Michael Horowitz argues that, for most Nuclear rivals, the period immediately following the acquisition of nuclear weapons encourages risk taking, especially for weaker opponents who have newfound military power against their stronger rivals. The longer these parties have nuclear weapons, the more likely they are to realize the dangers of escalation and, over time, they then initiate cross-border military hotline communications, arms control and disarmament measures to ease tensions.¹⁶⁰ They learn that such weapons do not solve all their problems, only some of them, while generating new challenges that enjoin them to find answers.

In 2020, the India-Pakistan dyad was over thirty years old and had experienced six major crises without signing a single test ban treaty (e.g., Nuclear Proliferation Treaty and Comprehensive Test Ban Treaty) or arms control treaty;

¹⁶⁰ Michael Horowitz, "The Spread of Nuclear Weapons and International Conflict: Does Experience Matter?" *Journal of Conflict Resolution* 53, 234 (2009): 234-257.

essentially making little progress toward rapprochement let alone resolving a border dispute.¹⁶¹ Historical records shows that nuclear weapons equally limited war and resolution of border disputes between nuclear rivals.

Horowitz's prediction that "late adopters may have a faster learning curve due to vicarious learning" does not seem to apply to India and Pakistan. Instead, these countries waged a major skirmish in Kargil (1999), and India retaliated to Pakistan-linked terrorist attacks in 2016 and 2019 by sending special forces into a Pakistan-administered area of Kashmir.¹⁶² All indications are that India-Pakistan have not grown out of their risk-prone stage as Horowitz predicts. Yet, unlike Horowitz prediction that once nuclear rivals graduate from risk taking to mitigating tensions phase, they stay there is not true for nuclear rivals fighting over contested contiguous borders, such as India-Pakistan and China-India.

Why Nuclear Rivals Reject War and Peace: Rivalry Termination Theories

In addition to the uber international relations theories, deterrence, and learning theories, there is a rich body of interstate-rivalry-termination literature.¹⁶³ From a total of fifteen theories explaining the causes of interstate-rivalry termination, six are based on a cost-benefit analysis of actors. If the cost of rivalry is greater than the benefit of maintaining that rivalry—as Maoz, Armstrong,

¹⁶¹ In 1987 India and Pakistan had nuclear weapons capability.

¹⁶² Jayita Sarkar, "Managing nuclear risk in South Asia," *Bulletin of the Atomic Scientists*, 73:1 (2017), 59-61, and Jeffrey Gettleman, "Tensions Over Kashmir Rise but India Says No Plans for War," *New York Times*, August 30, 2019.

¹⁶³ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End* (Philadelphia: University of Pennsylvania Press, 2013), 195-227.

Pervin, and Womack argue—then adversaries begin to negotiate, engage in détente, and eventually terminate their rivalry.¹⁶⁴ These theorists, however, do not explain why *nuclear* rivals fail to end competition that, from time to time, rises to dangerous levels. The major reason is that the primary cause of a nuclear-armed rivalry—disputed borders—remains unresolved, a factor not discussed in these theories.¹⁶⁵

Rivalry termination theories are grouped under six broad explanations of why interstate rivalries terminate:

- 1) costs of rivalry outweigh the benefits
- 2) external shock causes rivalry termination
- 3) internal shock causes rivalry termination
- 4) extreme power asymmetry
- 5) domestic politics

¹⁶⁴ Zeev Maoz and Ben D. Mor, *Bound by Struggle: Strategic Evolution of Enduring International Rivalries* (Ann Arbor, M.I.: University of Michigan Press, 2002); Tony Armstrong, *Breaking the Ice: Rapprochement between East and West Germany, the United States and China, and Israel and Egypt* (Washington, D.C.: U.S. Institute of Peace, 1993); David J. Pervin, “Building Order in Arab-Israeli Relations: From Balance to Concert?” in David A. Lake and Patrick M. Morgan, eds., *Regional Orders: Building Security in a New World* (University Park: Pennsylvania State University Press, 1997); and “Asymmetric Rivals: China and Vietnam” in Sumit Ganguly and William R. Thompson, eds., *Asian Rivalries: Conflict, Escalation and Limitation on Two-Level Games* (Stanford, CA: Stanford University Press, 2011).

¹⁶⁵ Jerel A. Rosati, “Cycles in Foreign Policy Restructuring: Politics of Continuity and Change in U.S. Foreign Policy,” in Jerel A. Rosati, Joe D. Hagan, and Martin W. Sampson III, eds., *Foreign Policy Restructuring: How Governments Respond to Global Change* (Columbia, S.C.: University of South Carolina Press, 1994); Jeffrey W. Legro, *Rethinking the World: Great Power Strategies and International Order* (Ithaca, N.Y.: Cornell University Press, 2005); and Paul Diehl and Gary Goertz, *War and Peace in International Rivalry* (Ann Arbor, M.I.: University of Michigan Press, 2000).

6) third party intervention¹⁶⁶

Rivalry termination theories make the case that internal tremors (reformist leaders, economic collapse, civil war, etc.) and exogenous shocks (war, alliances, super-power interventions, etc.) cause rivalry termination, but they cannot explain why nuclear rivalries persist despite the presence of these conditions.¹⁶⁷

Several rivalry-termination theorists like Rosati, Legro, and Diehl argue that rivalries may end due to a catastrophic external shock or crisis that forces one or both rivals to reconsider the costs of their rivalry, leading to compromise and eventual peace based on resolving the underlying cause of conflict. This, however, does not explain the continuation of nuclear rivals despite external shocks. For example, Pakistan was slapped with international sanctions after it hot-tested nuclear weapons in 1998, but instead of resolving its disputed territory with India, it engaged in brinkmanship during the 1999 Kargil crisis. The Pakistanis were emboldened and less interested in calming tensions. This elicited a similar response from the Indians that also hot-tested nuclear weapons in 1999, creating a vicious cycle of continuous saber rattling short of war and détente short of resolving border disputes. Sanctions on India after the 1998 nuclear tests also did not make India resolve its border disputes with China.

Other rivalry termination theorists like Cos, Rock, and Lebow argue that domestic politics – shaped by doves overpowering hawks, presence of an acute

¹⁶⁶ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End* (Philadelphia: University of Pennsylvania Press, 2013), 195-227.

¹⁶⁷ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End*.

crisis, or the success of internal policies dependent on ending rivalry, respectively — explain why rivalries terminate. These models, however, do not offer answers on the puzzling persistence of nuclear rivalries in the presence of stronger doves (2001 Agra Summit between India and Pakistan, 1993 Agreement on Resolving Border Dispute between China and India), presence of acute crisis (Pakistan's economy in 2007, India's economy in 2020), and internal policy success depending on rivalry termination (Pakistan and India's economic policies from 1999-present specifically related to trade in South Asia). Again, regrettably, rivalry termination theories appear to fall well short of mitigating against the escalation of nuclear tensions.

More details are summarized in the table below:

Table 5 Limits of Rivalry Termination Theories

Model	Assumptions/ Conditions	How Rivalry Ends?	Why Rivalry Ends?	Fails to Explain	Fails to Predict
Rosati (1994)	Competing domestic forces sustain/challenge status quo	Positive/negative crisis occurs, foreign policy changes, rivalry escalates/de-escalates	Type of crises (acting as catalyst) causes foreign policy reorientation toward rivalry termination	Why India and Pakistan post-nuclear continue to escalate rivalry, e.g., 2019 Pulwana Attacks	When will China-India rivalry escalate or de-escalate?
Welch (2006)	Foreign policy institutions designed to resist change (inertia over innovation)	Painful cost of not changing is higher than changing foreign policy toward rivalry termination	Painful cost of not changing causes the end of rivalry as foreign policy goal	Leaders who stayed the course despite painful costs of not changing foreign policy (e.g., Nawaz Sharif)	When painful cost of not changing foreign policy did not terminate rivalry (e.g. Pakistan post 2008 Mumbai did not terminate rivalry with India)
Checkel (1997)	External uncertainty; foreign policy crisis	Great external uncertainty/crisis creates opportunities for policy entrepreneurs to change foreign policy to end rivalry	External uncertainty causes foreign policy change to end rivalry	What kind of external uncertainty, crises, or shocks cause termination of rivalry?	When will nuclear rivalry terminate?

Model	Assumptions/ Conditions	How Rivalry Ends?	Why Rivalry Ends?	Fails to Explain	Fails to Predict
Legro (2005)	External shocks	External shocks create opportunity for change in dominant foreign policy institutions and orthodoxies: 1) orthodoxies fail, 2) new direction/option must be consolidated, 3) new option must yield positive results, including the end of rivalry	Policies in support of orthodoxy fail causing end of rivalry	Nuclear rivalries	Nuclear rivalries: orthodox policies stay even when their results are negative (Pakistan's support for insurgents in India increases after nukes, even with continuously high cost).
Diehl and Goertz (2000)	External and internal shocks; shocks less related to rivalry termination than initiation	External (interstate war) or internal (civil war) shock leads to rivalry initiation or termination	Negative shock causes rivalry termination	Rivalry escalation or de-escalation	How will nuclear rivals react to external and internal shocks?
Maoz and Mor (2002)	Variance in state satisfaction and capabilities	Peaceful dyads are mutually satisfied states, or the dissatisfied state cannot do anything about its grievances vis-à-vis rival	One rival is too weak to do anything about grievances	Weak nuclear rivals believe they have grievances, and they can do something about it. No clear victor or vanquished in a nuclear rivalry	When does the unsatisfied rival with nukes decide to give up?
Cox (2010)	Hawks, doves, and moderates make up foreign policy elite. Foreign policy must be connected to domestic policy. Failure of both causes change	When hawks are weak, doves are strong, and moderates calculate a higher cost of rivalry over rivalry termination	Higher cost of rivalry determined by moderates causes rivalry termination	How hawks, doves, and moderates operate in nuclear rivalries?	When do hawks, doves, and moderates have most influence in nuclear rivalries?

Model	Assumptions/ Conditions	How Rivalry Ends?	Why Rivalry Ends?	Fails to Explain	Fails to Predict
Rock (1989)	Decision makers reject war when 1) new/greater threat, 2) economic connections threatened, 3) avoiding civil war. Rivals have little zone of security overlap, economic rivalry, and similar social political attributes	Reject war, acute crisis, facilitating factors (e.g., one rival hit hard by crisis)	New threat, acute crisis, and one rival's defeat causes rivalry termination	Nuclear rivalries	Nuclear rivalries: Rejection of war, acute crisis, and one rival's defeat does not end rivalry. It instead lessens rivalry (rapprochement), e.g., India-Pakistan post 2016 Uri Attacks, and post China-India 2020 Galwan Valley crisis
Armstrong (1993)	Continued hostility not good for government's ability to address critical domestic problems, and faith in the stability of the opponent's government	Hostility costly, expectations change about stability of rival's regime, rivalry ends	Costly hostility and belief in regime stability of rival causes rivalry termination	Why costly hostility and stable regimes of rivals fail to end rivalries	Nuclear rivalries
Kupchan (2010)	External threat other than rival	External threat other than rival, unilateral accommodation, rivalry dampens	Unilateral accommodation dampens rivalry	Why unilateral accommodation doesn't dampen nuclear rivalries	When unilateral accommodation can dampen nuclear rivalries
Lebow (1995)	Internal and external policies codependent	Internal reforms require better relations with rival, confrontation counterproductive, and adversary welcomes conciliatory overtures—rivalry ends	Multicausal: internal reforms, anti-hostility, and pro-reconciliatory environment causes rivalry termination	Persistent nuclear rivalries	Nuclear rivalries

Model	Assumptions/ Conditions	How Rivalry Ends?	Why Rivalry Ends?	Fails to Explain	Fails to Predict
Pervin (1997)	Decision makers are rational actors that pursue staying power. They need resources to do that and whatever gets them those resources wins as policy, including rivalry termination.	Overtime, rational decision makers find the cost of rivalry too high to continue, especially if it threatens their hold on power	Time and rational decision makers conduct cost-benefit analysis causing rivalries to dampen	Regime change/time having no impact on nuclear rivalries	When do nuclear rivalries end?
Orme (2004)	Statesmen matter	Statesmen determine tractable and intractable issues with rivals.	Statesmen need a bogeyman, but if bogeyman is too costly, rivalry ends to strengthen regime.	Variance in statesmen perceptions in a nuclear rivalry	Nuclear rivalries: statesmen are captured by the sheer power of nuclear weapons and their repercussions on propensity for war and peace
Womack (2006)	Asymmetrical rivalry	Stalemate between strong and weak rival is too costly for both, negotiating becomes attractive, and rivalry ends.	Costly stalemate causes strong-weak rivalry to end.	Why costly stalemate does not end nuclear rivalries	When does costly stalemate end nuclear rivalries
Rassler, Thompson and Ganguly (2013)	Shocks, third-party pressures	Decision makers make policy based on expectations of their enemy's behavior (entrenched overtime), shocks change that, third party intervention can support détente, rivalry ends/dampens	Shocks, expectational change, reciprocity, and reinforcement cause rivalry termination.	Why shocks, expectational change, reciprocity and reinforcement do not end nuclear rivalries?	When shocks, expectational change, reciprocity, and reinforcement end nuclear rivalries

Why Nuclear Rivals Reject War and Peace: Nuclear Prison Theory

The answer to why nuclear rivals reject war and peace (border dispute resolution) is that neither outcome can resolve satisfactorily, to both sides, the

major cause of the conflict: contested borders. By December 2020, there were five active nuclear rivalries: U.S.-Russia, U.S.-North Korea, U.S.-China, India-Pakistan, and India-China. Two conflicts are directly linked to territorial disputes, related to contiguous and noncontiguous borders, on land and sea. India and Pakistan lock horns over Kashmir,¹⁶⁸ and India and China dispute Aksai Chin and Arunachal Pradesh.¹⁶⁹

Conflict based on territorial disputes, according to several studies, is more likely to result in war than other types of disputes, “more likely to lead to recurrent conflict, and more likely to result in high fatalities should war occur.”¹⁷⁰ Moreover, conflict between contiguous states is significantly correlated with territorial disputes.¹⁷¹

For example, according to the Correlates of War data set on militarized interstate disputes in 1816–2010, there were 585 cases of disputes that ended with threats to occupy territory and the occupation of territory, of which 575 cases (98 percent) ended with a “use of force” as the highest hostility level.¹⁷² In another

¹⁶⁸ Stephen P. Cohen, *Shooting for a Century: The India-Pakistan Conundrum* (Washington, D.C.: Brookings Institution Press, 2013), 44–52.

¹⁶⁹ Jeff F. Smith, *Cold Peace: China-India Rivalry in the Twenty-First Century* (New York: Lexington Books, 2014), 19–28.

¹⁷⁰ Dominic D. P. Johnson and Monica Duffy Toft, “Grounds of War: The Evolution of Territorial Conflict,” *International Security* 38, no. 3 (2013): 12; J. Vasquez and M.T. Henahan, “Territorial Disputes and the Probability of War, 1816–1992,” *Journal of Peace Research* 38, no. 2 (2001): 123–138; Hensel, “Territory: Theory and Evidence on Geography and Conflict”; Monica Duffy Toft, *The Geography of Ethnic Violence* (Princeton, N.J.: Princeton University Press, 2010); Paul Domenic Senese and John A. Vasquez, *The Steps to War: An Empirical Study* (Princeton, N.J.: Princeton University Press, 2008); and John A. Vasquez and Marie T. Henahan, *Territory, War, and Peace* (London: Routledge, 2001).

¹⁷¹ Dominic D. P. Johnson and Monica Duffy Toft, “Grounds of War: The Evolution of Territorial Conflict,” *International Security* 38, no. 3 (2013): 12.

¹⁷² The Correlates of War project, *Militarized Interstate Disputes* (v4.1) 1816–2010 (accessed August 1, 2017); available from www.correlatesofwar.org.

updated Correlates of War data set that identifies and codes all territorial changes involving at least one nation-state for the period between 1816 and 2014, over 70 percent of cases (592 out of 837) involved territorial changes brought about through conquest, annexation, and cession.¹⁷³ In both of these Correlates of War data sets, there is not a single case of nuclear rivals waging a full-scale war.

Conditions for Nuclear Prison Theory

The Nuclear Prison Theory (NPRT) is nested in Structural Realism and adheres to its major argument that states seek security as a prime goal due to an anarchic international system. NPRT is based on four conditions: 1) presence of an entrenched interstate rivalry caused by border dispute(s) between two primary states, 2) rivalry is asymmetric between a strong and weak state, 3) rivalry predates the acquisition of nuclear weapons, and 4) both rivals possess nuclear weapons.

The NPRT posits that nuclear rivalries, based on disputed territories, do not escalate to war or peace; instead, they experience bouts of brinkmanship and rapprochement with long periods of stalemate in between. This theory is best housed under realism because, unlike liberalism and constructivism, the power gained from nuclear weapons can influence institutional and ideational factors more than the reverse.

The NPRT shares major assumptions with realism. First, states are unitary actors operating under anarchy and competing with other states over finite

¹⁷³ The Correlates of War project, *Territorial Changes* (v5) 1816–2014 (accessed August 1, 2017); available from www.correlatesofwar.org.

resources to increase their security, which leads to an increased probability of conflict. Second, nuclear weapons possessed by both rivals act as power equalizers that make economic and conventional military power inferior to nuclear parity. In other words, an otherwise economically weaker power (e.g., North Korea and Pakistan) can challenge a much stronger adversary (e.g., United States and India). Third, Nuclear rivals reject war because it would lead to mutual destruction, which would obviously not resolve the issue of border disputes. Additionally, I argue that, according to the NPRT, nuclear rivals reject peace as it does not resolve disputed territory because the weaker power rejects the stronger power's stance. In the end, only capitulation by both rivals would resolve a border dispute, which is mutually unacceptable.

How and Why Nuclear-armed Rivals Reject War and Peace

A nuclear prison emerges through a five-phase, self-perpetuating process. First, to maximize security and achieve power parity, states engage in rivalries based on border disputes and pursue and acquire nuclear weapons. For example, after the loss of India to China in the 1962 war, and China's subsequent acquisition of nuclear weapons, India initiated a nuclear weapons program and tested its first nuclear device in 1974.¹⁷⁴ Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures such as advanced delivery and missile defense systems. For example, after Pakistan obtained a nuclear device in 1986, it

¹⁷⁴“India: Nuclear,” *Nuclear Threat Initiative*, (accessed November 11, 2017); available from <http://www.nti.org/learn/countries/india/nuclear/>; and Kyle Mizokami, “This is Why the World Should Fear India’s Nuclear Weapons,” *The National Interest*, May 27, 2017.

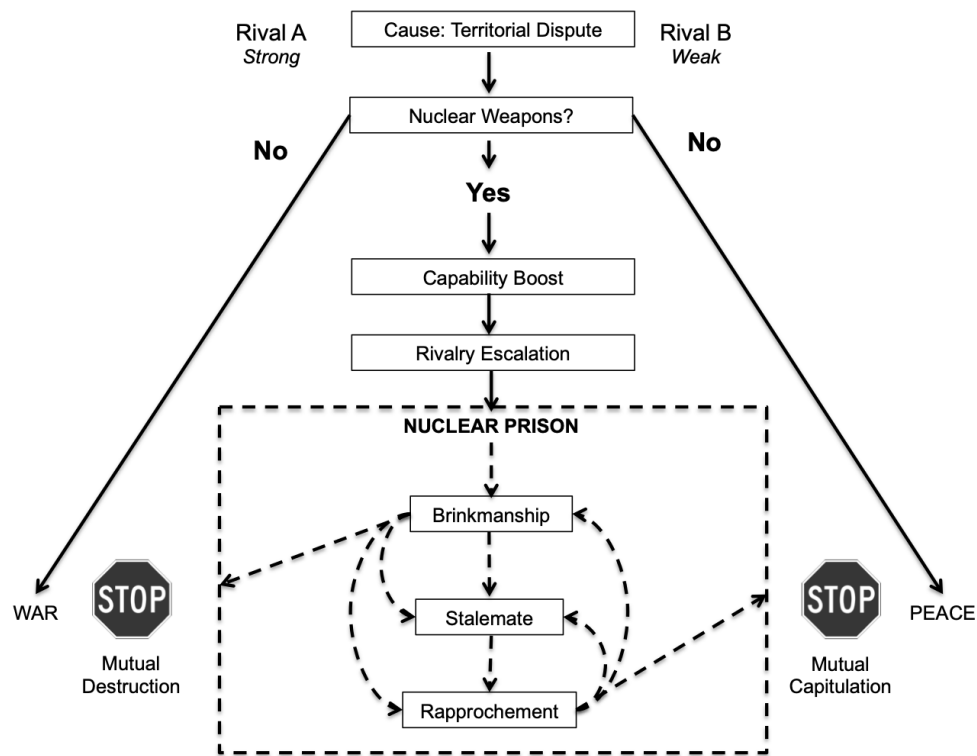
gained significant military power against its rival, India, which increased India's efforts to build a missile defense system.¹⁷⁵ Third, then adversaries trade provocative actions, such as military exercises and border skirmishes but stop short of war. For example, Pakistan, militarily and economically inferior to India, used limited force against India, short of full-scale war, in the Kargil region of the disputed territory of Kashmir.¹⁷⁶ Fourth, since war would mean mutual suicide, both states backed off to a stalemate and then engage in rapprochement to resolve the disputed territory short of signing a peace treaty resolving the contested border. After Kargil, partly in fear of how close India and Pakistan came to engaging in a nuclear war, both rivals engaged in rapprochement, something akin to what the Russians and Americans did following the Cuban Missile Crisis: both sides were horrified at how close they had come to thermonuclear war.¹⁷⁷ Fifth, when a peace treaty is not signed, the rivals revert to stalemate or engage in brinkmanship. Rival states find themselves in a vicious cycle of escalation short of war and de-escalation short of peace—war is perceived to be suicide and peace (border dispute resolution) is perceived to be surrender.

¹⁷⁵ Frank O' Donnell and Yogesh Joshi, "India's Missile Defense: Is the Game Worth the Candle?" *The Diplomat*, August 2, 2013.

¹⁷⁶ Peter R. Lavoy, *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict* (New York: Cambridge University Press, 2009).

¹⁷⁷ Mohammed Badrul Alam, "In Pursuit of Peace: A Micro Study of Confidence-Building Measures between India and Pakistan," *Indian Journal of Asian Affairs* 23, no. (2010): 41-60.

Figure 8 How Nuclear Rivals Avoid War and Peace

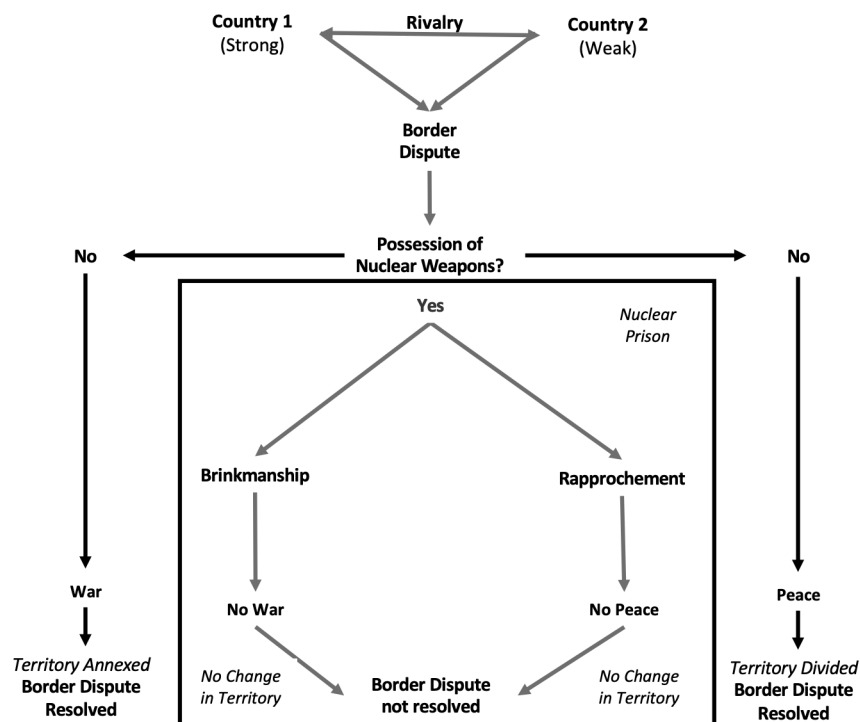


Source: Author

Why does a nuclear prison emerge? The answer is the acquisition of nuclear weapons by both rivals, because the same rivals sans nuclear weapons wage war and resolve border disputes. Neither war nor peace can terminate such an interstate rivalry and is akin to a nuclear “prison.” Inside this nuclear prison, the weaker of the two adversaries initiates brinkmanship—aiming to coerce its economically stronger adversary into conceding territory. The economically stronger rival, preferring rapprochement, aims to incentivize the weaker adversary to accept the stronger rival’s position whereby sovereignty is established over territory controlled by each rival.

Rival states with nuclear weapons reject war and peace because the equalizing power of the nuclear weapons circumvents any change in disputed territory that would be advantageous to either rival. It is like being in a mutual death grip. Rival states are unable to annex or concede disputed territory, which is the root cause of the conflict. Instead, nuclear rivals are stuck in a prison where attempts to change disputed territory in their favor often lead to aggression short of war and reconciliation short of peace.

Figure 9 Why Nuclear Rivals Avoid Peace: Nuclear Prison Theory



Source: Author

Ukraine and the Nuclear Prison Theory

The case of Russia-Ukraine border conflict provides strong evidence for NPRT. A hypothetically nuclear-armed Ukraine would be less likely to sign a peace treaty with a nuclear-armed Russia to settle disputed territory (Crimea and

East Ukraine) because either side would need to compromise, which would be perceived as mutual capitulation. Therefore, Ukraine and Russia would engage in brinkmanship and rapprochement short of waging war or signing a peace treaty. On the other hand, nuclear weapons on both sides would avert full scale war. All things being equal, if one were to create a counterfactual of the Russia-Ukraine war of 2014, with Ukraine in possession of 10 percent of its nuclear arsenal from 1994 (two hundred nuclear warheads), the NPRT would predict that there would be no full-scale war. Russia and Ukraine would still have engaged in border skirmishes and support for proxies (Russia would likely, and more covertly, support eastern Ukrainian separatists, for example), but brinkmanship would have stopped short of war. However, Ukraine did not have nuclear weapons and was not a member of NATO (devoid of Article 5 protection), and its conflict with Russia was based on disputed territory. These circumstances escalated to war and ended with Russia annexing Crimea and greatly controlling eastern Ukraine.¹⁷⁸ From April 2014 to January 2019, 4,000 members of the Ukrainian security forces and 5,500 members of the Russian-backed security forces were killed in the ongoing war between Russia and Ukraine.¹⁷⁹

The question then remains: would oscillating between brinksmanship and rapprochement be ‘better’ or ‘worse’ from the perspective of either side? It is quite clear that, for the Russians, maintaining their nuclear arsenal has not

¹⁷⁸ Maria Rost Rublee, “Fantasy Counterfactual: A Nuclear-Armed Ukraine,” *Survival* 57, no. 2 (2015): 145-156; and Andreas Umland, “The Ukraine Example: Nuclear Disarmament Doesn’t Pay,” *World Affairs* (Winter 2016).

¹⁷⁹ “Death Toll Up To 13,000 In Ukraine Conflict, Says UN Rights Office,” *Radio Free Europe*, February 26, 2019.

hindered them, as their successful annexation of the Crimea and their decisive advance into eastern Ukraine shows. The Ukrainians, by contrast, have lost territory and are in danger of losing more.¹⁸⁰

In summary, existing international relations theories fall short in explaining why nuclear rivals avoid resolving border disputes. In the next chapter I test the major assertions of my Nuclear Prison Theory through the India-Pakistan nuclear rivalry case. If theoretically sound and practically useful NPRT should explain why India and Pakistan waged war and resolved border disputes before developing nuclear weapons and why they stopped doing it after they acquired nuclear weapons.

¹⁸⁰ “Conflict in Ukraine,” Global Conflict Tracker, *Council on Foreign Relations*, February 28, 2020.

“If a conventional war starts between two countries – nuclear countries – anything could happen. Supposing a country seven times smaller than its neighbor; faced with a question. Either you surrender, or you fight till the end.”
– Imran Khan, Prime Minister of Pakistan, September 27, 2019¹⁸¹

“Why should I bind myself [to no first-use of nuclear weapons policy]? I should say I am a responsible nuclear power and I will not use [nuclear weapons] irresponsibly.”
– Manohar Parrikar, former defense minister of India, November 10, 2016¹⁸²

“There will be cautious movements toward dialogue [rapprochement], punctuated by attempts [brinkmanship] on both sides to press unilaterally their advantage in Kashmir... This is a conflict Pakistan cannot win and India cannot lose.”
– Stephen P. Cohen, *South Asia Scholar*, 2013¹⁸³

Chapter 3: India-Pakistan Rivalry

In this chapter, I test my Nuclear Prison Theory and assess its explanatory and predictive range. If NPRT holds water the India-Pakistan rivalry based on border disputes is a strong test case. Both countries waged war and settled border disputes before they acquired nuclear weapons and eschewed war and peace based on terminating border disputes after acquiring nuclear weapons. That they didn't wage war after gaining nuclear weapons is well studied so I'll keep the focus on why they rejected peace. Specifically, I examine three episodes of war, five episodes of peace, six episodes of brinkmanship, and five episodes of rapprochement, with special focus on H2 (*India-Pakistan border dispute resolution is less likely when rival states possess nuclear weapons*). Additionally, in this chapter I examine the India-Pakistan nuclear rivalry case through the lenses

¹⁸¹ “Speech to the United Nations General Assembly,” Imran Khan, Prime Minister of Pakistan, September 27, 2019.

¹⁸² “Uri Attack: Pakistani Defense Minister Khawaja M Asif ‘threatens’ to use nuclear weapons against India,” *Financial Express*, September 19, 2016.

¹⁸³ Stephen P. Cohen, *Shooting for a Century: The India-Pakistan Conundrum* (Washington, D.C.: Brookings Institution Press, 2013), 167-68.

of other international relation theories and establish why they do not adequately explain why nuclear rivals reject peace. Collectively, this methodology assesses the value of NPRT in predicting and explaining nuclear rivalries based on border disputes.

H1 War

India-Pakistan Interstate war over border disputes is *less* likely when rival states possess nuclear weapons.

H2 Peace

India-Pakistan Peace (border dispute resolution) is *less* likely when rival states possess nuclear weapons.

±Nuclear Weapons

= **War** (border dispute resolved); **Brinkmanship** (border dispute unresolved); **Peace** (border dispute resolved); **Rapprochement** (border dispute unresolved)

Table 6: India-Pakistan Rivalry Outcomes

	Before Possession of Nuclear Weapons (1947–1987)	After Possession of Nuclear Weapons (1986–2020)
War	1. 1948 2. 1965 3. 1971	
Brinkmanship		1. 1990 Military Exercise 2. 1999 Kargil Crisis 3. 2001–2002 Twin Peak Crises 4. 2008 Mumbai Attacks 5. 2016 Uri Attacks 6. 2019 Pulwana Attacks
Rapprochement		1. 1988 India-Pakistan Non-Attack Agreement 2. 1997–2008 Composite Dialogue and Confidence-building Measures 3. 1999 Lahore Declaration 4. 2004–2007 Four Point Formula to Resolve Kashmir Border Dispute 5. 2011 Most Favored Nation Status
Peace (Border Dispute Resolution)	1. 1949 Karachi Agreement 2. 1950s India-Pakistan Border Dispute Resolution Agreements 3. 1960 Indus Waters Treaty 4. 1966 Tashkent Agreement 5. 1972 Simla Agreement	

The India-Pakistan rivalry, a deep and decades-long animosity, is based on several territorial disputes, most notable Kashmir, Siachen Glacier, and Sir Creek. The most vexing border dispute is related to Kashmir. Both countries are actively developing second-strike nuclear capability, and both, after covertly achieving nuclear weapons capability, in 1987, and demonstrating their nuclear capability with tests in 1998, have avoided a nuclear war.¹⁸⁴ Yet, the lack of a nuclear exchange has not deterred India and Pakistan from fighting proxy conflicts or engaging in a major skirmish in 1999 (Kargil).¹⁸⁵ Most important, India and Pakistan have not resolved a single border dispute after acquiring nuclear weapons.

¹⁸⁴ International Institute for Strategic Studies, Chapter Six: Asia, *Military Balance 2019*, (London: IISS, Vol. 119, 2019): 256-260, 266-267, 296-297, and Yogesh Joshi, "Angels and Dangles: Arihant and the Dilemma of India's Undersea Nuclear Weapons," *War on the Rocks*, January 14, 2019. India's second strike capability is confirmed by the head of Indian Navy, Admiral Nirmal Verma in "Admiral Nirmal Verma's Remarks on INS Arihant completing the Triad for second-strike capability," *Stratpost.com*, December 3, 2010; and Pakistan's second strike capability confirmed in Ahmed Rashid, *Pakistan on the Brink: The Future of America, Pakistan, and Afghanistan*, (New York: Viking, 2012), 61.

¹⁸⁵ P.R. Char, "Reflections on the Kargil War," *Strategic Analysis* 33, no. 3 (2009): 360-364; Marcus P. Acosta, "The Kargil Conflict: Waging war in the Himalayas," *Small Wars and Insurgencies* 18, no. 3 (2007): 397-415; Note: proxy conflicts are fought via clients (proxies), such as when a state supports irredentist insurgent groups against its rival's homeland.

Figure 10 India-Pakistan Border Disputes



Source: BCC and Wall Street Journal

Historically, India and Pakistan have supported insurgent groups on their rival's homeland. Pakistan supports Kashmiri insurgents in India, and to a lesser degree India supports Baluchi insurgents in Pakistan.¹⁸⁶ India and Pakistan have also fought proxy wars in other countries in the region, specifically in

¹⁸⁶ Sunaina Kumar and Angela Stanzel, "The Balochistan Tinderbox," *European Council on Foreign Relations*, October 5, 2016.

Afghanistan and Sri Lanka.¹⁸⁷ In 1947, when the British divided the Indian subcontinent into the independent states of India (majority Hindu) and Pakistan (majority Muslim), Kashmir was a predominantly Muslim princely state (a semi-autonomous region under the British Empire).¹⁸⁸ However, Kashmir's ruler was a Hindu who signed the instrument of accession to India, opting to join India over Pakistan.¹⁸⁹ War broke out three times (1948, 1965, and 1971), and Kashmir was divided into Pakistan-administered Azad Kashmir and Indian-administered state of Jammu and Kashmir along the line of control.¹⁹⁰ In August 2019, India increased its control over Jammu and Kashmir by scrapping its constitutional autonomy, dividing and downgrading it into two "union territories" of Jammu and Kashmir, and Ladakh.¹⁹¹

Pakistan also supported Sikh insurgents in Indian Punjab in the 1980s.¹⁹² In turn, India armed and trained Balochi insurgents and encouraged Sindhi separatism in Pakistan.¹⁹³ Though both sides supported insurgents, the scale of

¹⁸⁷ For more information about Tamils living in India (many as Indian citizens) and their support to the Tamil Tigers (insurgent group that fought the Pakistani-supported Sri Lankan government), read "Tigers and Tamil Nadu Politics," *The Statesman*, February 5, 2008. For more about Pakistan proxy conflict in Afghanistan, read Seth G. Jones, *In the Graveyard of Empires: America's War in Afghanistan*, (New York, W.W. Norton, 2009), 256-266.

¹⁸⁸ Navnita Chadha Behera, *Demystifying Kashmir* (Washington, DC: Brookings Institution Press, 2006), 145-156.

¹⁸⁹ Read text of the instrument of accession at http://www.jammu-kashmir.com/documents/instrument_of_accession.html.

¹⁹⁰ Husain Haqqani, *Pakistan: Between Mosque and Military* (Washington, DC: Carnegie Endowment for International Peace Press, 2005), 268-273.

¹⁹¹ Sameer Lalwani and Gillian Gayner, "India's Kashmir Conundrum: Before and After the Abrogation of Article 370," *United States Institute of Peace*, August 2020.

¹⁹² "LeT, ISI bid to revive [Indian] Punjab Militancy," *The Statesman*, May 3, 2007.

¹⁹³ Saba Imtiaz, "MPs told Russia, India and UAE involved in Baloch Insurgency," *The Express Tribune* [Pakistan], December 3, 2010, "Balochistan Liberation Army," *Mapping Militant Organizations*, Center for International Security and Cooperation, Stanford University.

Pakistani support to Kashmiri and Sikh insurgents was significantly greater than Indian support to Balochi and Sindh separatists.¹⁹⁴

After failing to change the status quo through conventional military might and losing East Pakistan (present-day Bangladesh) to India in 1971, Pakistan increased its efforts to build a nuclear weapon, a goal that would become even more urgent after India tested a nuclear device in 1974.¹⁹⁵ For India, the impetus behind wanting nuclear weapons was its defeat by China in the India-China War of 1962. By the mid-1980s, both India and Pakistan had covertly acquired nuclear weapons.¹⁹⁶ In 1998, India and Pakistan publicly declared themselves as nuclear-armed countries by hot testing several nuclear devices underground.¹⁹⁷ Facing an increasing disparity of conventional forces vis-à-vis India, Pakistan linked its nuclear deterrence with conventional deterrence—Pakistan would use nuclear weapons even if India wanted to limit war to non-nuclear weapons.¹⁹⁸ Additionally, Pakistan would continue to support anti-India insurgents under the nuclear umbrella.¹⁹⁹

¹⁹⁴ Husain Haqqani, *Pakistan: Between Mosque and Military* (Washington, DC: Carnegie Endowment for International Peace Press, 2005), 270.

¹⁹⁵ Adrian Levy and Catherine Scott-Clark, *Deception: Pakistan, the United States, and the Secret Trade in Nuclear Weapons* (New York: Walker Publishing, 2007), 3.

¹⁹⁶ Marie Izuyama and Shinichi Ogawa, “The Nuclear Policy of India and Pakistan,” *NIDS [National Institute for Defense Studies, Japan] Security Reports*, no. 4 (March 2003): 59-89.

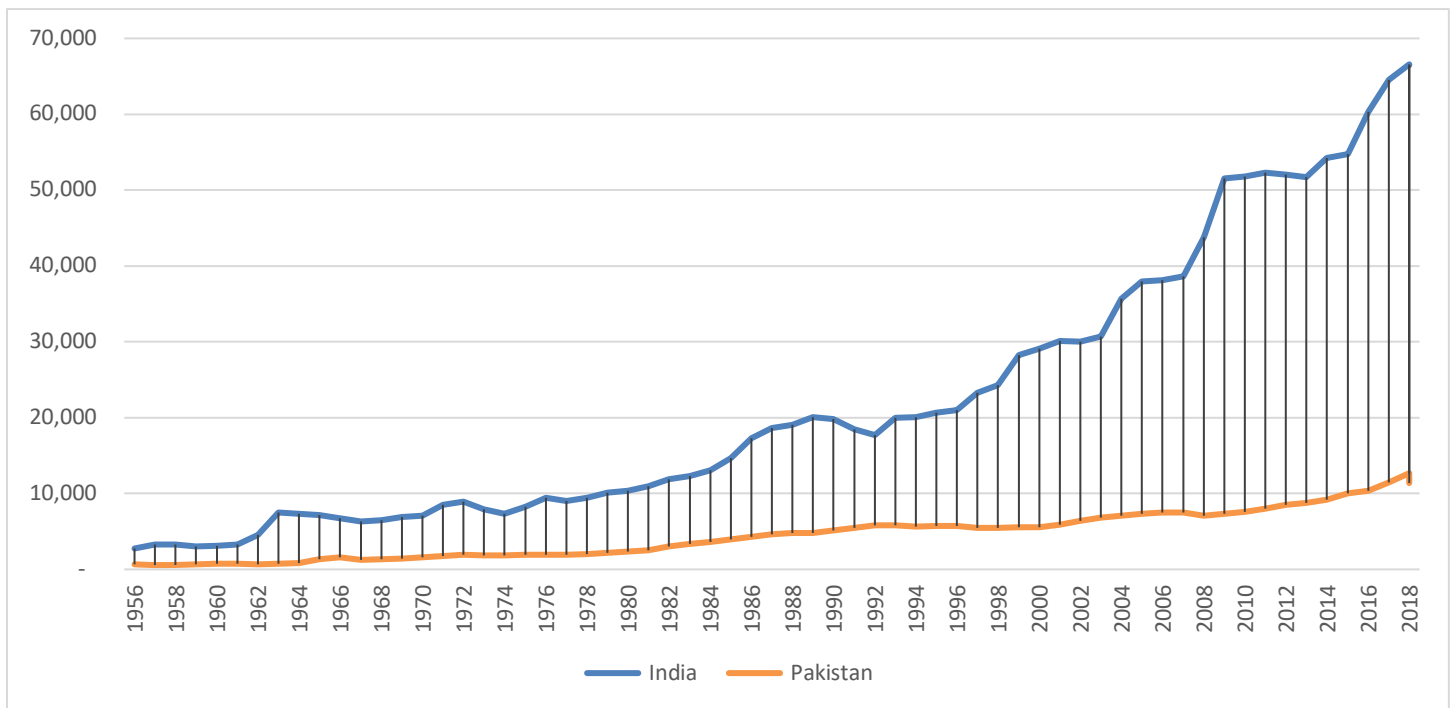
¹⁹⁷ “Pakistan Nuclear Weapons: A Brief History of Pakistan’s Nuclear Program,” *Federation of American Scientists Backgrounder* (accessed June 2, 2015); available from <http://www.fas.org/nuke/guide/pakistan/nuke/>.

¹⁹⁸ Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb* (Stanford, CA: Stanford University Press, 2012), 351-352; and Bruce Riedel, *Avoiding Armageddon: America, India and Pakistan to the Brink and Back* (Washington, DC: Brookings Institution Press, 2013), 133.

¹⁹⁹ Hassan Abbas, *Pakistan’s Drift into Extremism: Allah, the Army, and America’s War on Terror*, (New York: M.E. Sharpe, 2005), 201-206.

Since 1947, India and Pakistan rivalry has been asymmetric before and after the acquisition of nuclear weapons. A suitable proxy of asymmetry is military spending and is demonstrated below in a graph. Another proxy is Lowy Institute Asia Power Index which gives a score of 44.3 to India and 25 to Pakistan in terms of military capabilities.²⁰⁰ While nuclear weapons have deterred major conflict, they have also emboldened both sides to reject any border dispute resolution; and yet, both countries lost and gained territory through war and peace before gaining nuclear weapons.

Figure 11 India and Pakistan Military Spending in \$ Millions 1956-2019



Source: SIPRI

²⁰⁰ Lowy Institute Asia Power Index, 2020 Edition, (accessed November 12, 2020); available from www.power.lowyinstitute.org

Next, I systematically examine cases of war and peace (border dispute resolution) before India and Pakistan acquired nuclear weapons, and major incidents of brinkmanship and rapprochement (short of border dispute resolution) after they developed nuclear weapons. Since political scientists have rigorously studied why nuclear rivals avoid war for decades, I briefly describe incidents of brinkmanship, leaving a deeper analysis for episodes of détente and why they didn't end in border dispute termination, which is the main question of my dissertation.

India-Pakistan Rivalry: War and Peace Before Nuclear Weapons (1947–1987)

1947–1948 War

After World War II, the British, amidst a strong Indian independence movement, divided the Indian subcontinent into two countries separated by religion but without contiguous borders. India was primarily Hindu, and Pakistan, bifurcated into east and west, was primarily Muslim. East Pakistan, present-day Bangladesh, was situated on India's east border, and West Pakistan was located on India's western border.²⁰¹

At the time of independence, there were four hundred Indian princely states; those states with Muslim majorities were expected to choose Pakistan, just as those with Hindu majorities were predicted to choose India, if the leaders of those states agreed, and the states were near the countries. For example,

²⁰¹ Larry Collins and Dominique Lapierre, *Freedom at Midnight*, (New York: Harper Collins, 1975).

predominantly Muslim Hyderabad, in the middle of India proper, chose to remain independent because it was not close to West or East Pakistan and did not want to join India. The state of Punjab, with a diverse Muslim and Sikh population, was divided in two. Kashmir was predominantly Muslim, but its leader, Maharaja Hari Singh, a Hindu under threat from the Pakistani incursion of irregular troops, pleaded with India for help. India would only help if Kashmir agreed to join the Indian dominion, and Singh agreed.²⁰²

In October 1947, only two months after India and Pakistan declared their independence, Pakistani military and tribal forces entered and captured parts of Kashmir. The United Nations (UN) Security Council passed Resolution 47 in January 1949, which led to Pakistan controlling approximately one-third of Kashmir, including Azad Kashmir and Gilgit-Baltistan. India ended up governing two-thirds of the state, including the Kashmir valley, Jammu, and Ladakh. The territorial dispute was not resolved by the UN, but a ceasefire was imposed, and Kashmir was divided by a Line of Control (LoC). India and Pakistan accepted the LoC, but never as the international border. The UN resolution proposed a plebiscite, a vote by Kashmiris to choose whether to become an independent country or carry on as part of India or Pakistan. The UN resolution and LoC did not resolve the border dispute; in fact, as a major point of contention between

²⁰² Chitrlekha Zutshi, Ed., *Kashmir: History, Politics, Representation*, (London: Cambridge University Press, 2017), 89-112, and Shuja Nawaz, *Crossed Swords: Pakistan, Its Army, and the Wars Within* (London: Oxford University Press, 2008), 42-72.

India and Pakistan, it resulted in two more wars and a major skirmish in Kargil, Kashmir.²⁰³

Figure 12 Disputed Territory of Kashmir



Source: BBC

1965 War

Less than twenty years after the 1947 war, in 1965 Pakistani troops entered Indian-administered Kashmir, during Operation Gibraltar, with the aim of stirring up a political uprising and an armed insurgency against Indian troops. India had lost a war to China in 1962, and the Pakistani military was hoping to take advantage of perceived Indian military weakness. India retaliated by attacking Pakistani troops in Indian-administered Kashmir and, later, opened a front across the international border. The conflict lasted for seventeen days and stopped only after the United States imposed a trade embargo on both countries

²⁰³ Subrata K. Mitra, "War and Peace in South Asia: A Revisionist View of India-Pakistan Relations," *Contemporary South Asia* 10, no. 3 (2001): 361-379.

and the UN Security Council pushed India and Pakistan toward a ceasefire. After the war, Pakistan held 220 square miles of Indian territory, and India controlled 720 square miles of Pakistani territory. Both eventually gave back captured land as part of the Tashkent agreement. Pakistan failed to capture Indian-administered Kashmir, and because India pushed back the Pakistani troops, it was unable to expand its territory.²⁰⁴ That said, India and Pakistan sans nuclear weapons swapped contested territories during the war and after the Tashkent agreement in 1966.

1971 Bangladesh Liberation War

Unlike the previous two wars, primarily fought in the disputed region of Kashmir, the 1971 war between India and Pakistan began as a Pakistani civil war between its two geographical parts: West Pakistan bordering Afghanistan and East Pakistan, bordering Myanmar and Nepal.

Figure 13 South Asia in 1970



Source: Author

²⁰⁴ Farooq Naseem Bajwa, *From Kutch to Tashkent: The Indo-Pakistan War of 1965* (London, England: Hurst, 2013), 97-128.

Pakistan's refusal to accept legitimate demands for political autonomy in East Pakistan, in 1970, led to secessionist demands. In March 1971, Pakistan's military began using brute force against the resistance movement, but many East Pakistani (Bangla) soldiers and police officers did not obey orders, instead they joined the armed resistance against West Pakistan.

Resistance fighters and nearly 10 million refugees fled to sanctuary in West Bengal, the adjacent Indian state. Taking advantage of Pakistan's civil war and overwhelmed by the economic cost of millions of refugees from East Pakistan, the Indian leadership decided to intervene militarily. India supported the East Pakistani secessionists, *Mukti Bahini*, with arms, training, and regular Indian troops who began to make incursions into East Pakistan with support from the Indian Navy, which imposed a virtual naval blockade to stop West Pakistani military from resupplying and rearming.

In response, West Pakistani military opened a second in Kashmir and across the international border in Punjab to divert Indian resources to its western border. The attacks were not successful, and the Indian army continued to defeat the remaining West Pakistani troops. On December 16, 1971, India accepted Pakistan's complete surrender, which led to the creation of the state of Bangladesh. Pakistan lost 57,000 square miles of territory inhabited by 64 million people. While India did not annex Bangladesh it made it an ally and effectively neutralized threat from Pakistan on its eastern border.²⁰⁵

²⁰⁵ Onkar Marwah, "India's Military Intervention in East Pakistan, 1971–1972," *Modern Asian Studies* 13, no. 4 (1979): 549–580; and Jagmohan Meher, "Dynamics of Pakistan's Disintegration: The Case of East Pakistan 1947–1971," *India Quarterly* 71, no. 4 (2015): 300–317.

Besides territorial changes caused by India-Pakistan wars there were significant border dispute resolution before both countries acquired nuclear weapons.

Peace (Border Dispute Resolution) Before Nuclear Weapons (1947–1987)

Karachi Agreement 1949—Establishment of the Ceasefire Line

After the first India-Pakistan war over Kashmir, leaders on both sides agreed to establish a ceasefire line in Kashmir and signed a UN-supervised agreement on July 27, 1949. The agreement covered a 517-mile-long border between Indian- and Pakistani-administered areas of Kashmir but did not account for the Siachen glacier or the 124-mile-long border between Pakistan's Punjab province and the Indian-administered Ladakh region. This ceasefire line would eventually become the LoC after the 1965 war. The Siachen glacier in the Aksai Chin region continues to be a contested territory. While this border dispute agreement was essentially a ceasefire agreement in practice it divided the disputed territory of Kashmir between India and Pakistan. According to the agreement India gained two thirds of Kashmir and Pakistan established control over one third of Kashmir.

1950s India-Pakistan Border Dispute Resolutions

In the next decade India and Pakistan resolved several border disputes related to East Pakistan (present day Bangladesh) and India's eastern states of West Bengal, Assam, and Tripura. Much like the state of Punjab that was divided at the partition of India in 1947 between India and Pakistan, on the eastern side a Muslim majority state was divided into East and West Bengal, between India and

Pakistan, respectively. East Bengal was called West Pakistan and it had border disputes with India's West Bengal, Assam and Tripura states, which were resolved during the 1950s through a series of bilateral border dispute resolution treaties.

Specifically, the East-West Bengal Boundary Alignment agreement of August 1952 (signed in New Delhi), and in January 1954 (signed in Karachi) established the mutually agreed upon border between India's West Bengal and East Pakistan.²⁰⁶ Four years later, under the auspices of the "Agreement Between Pakistan and India on Border Disputes," in September 1958 India and Pakistan finalized the division of West Bengal and West Pakistan, whereby Pakistan gave up its claim to town of Hilli and the Barubar Union No. 2 and Old Coch Behar (along the river) regions were divided equally amongst India and Pakistan. Moreover, additional territories in Assam were divided, whereby Pakistan gave up its claim on Bholaganj, Assam (India), and India gave up its claim to parts of its Tripura state in Bhagalpur, which had a railway system and river close to West Pakistan.²⁰⁷

²⁰⁶ East-West Bengal Boundary Alignment Agreement Between Pakistan and India. August 21, 1952 and January 22, 1954, *United Nations Treaty Series*, UNTS Vol No. 207, 161.

²⁰⁷ "Agreement on border disputes (with joint communique)." Signed at New Delhi, on 10 September 1958, *United Nations Treaty Series*, UNTS Vol No. 369, 81.

Figure 14 India-Pakistan Border Disputes 1950s



Source: Author

1960 Indus Waters Treaty

Besides settling parts of their land border India and Pakistan (before acquiring nuclear weapons) also settled an important and equally vexing water dispute. India and Pakistan are beneficiaries of the Indus River, which flows down from China (western Tibet) into the two countries, splits into five tributaries, and then combines in one capillary that flows into the Indian Ocean. Since the Indus flows from Indian-administered Kashmir, Pakistan and India sought the World Bank's help to find a mutually acceptable water sharing formula and restrictions.

Pakistanis were concerned that India might block the river during war by building dams, which could ruin the Pakistani economy and cause a famine. After nine years of negotiation, with the help of the U.S.-led World Bank, India and Pakistan signed the Indus Waters Treaty in 1960. This treaty was signed before

India and Pakistan acquired nuclear weapons and decisively resolved a territorial dispute.

The treaty stipulated that India would retain control over Sutlej, Beas, and Ravi and that Pakistan would get unimpeded access to Chenab and Jhelum tributaries of Indus. However, India was permitted to use Chenab and Jhelum for irrigation, transport, and power generation with some restrictions. All water-sharing disputes between India and Pakistan were to be settled by the Permanent Indus Commission by referring them to a seven-member arbitral tribunal called the Court of Arbitration. The World Bank would designate members to the board as requested by the two countries.²⁰⁸

The Indus Waters Treaty is considered a noteworthy territorial dispute resolution mechanism and remains in effect today despite Pakistani concerns over India's construction of the Kishenganga and Ratle hydroelectric power plants, which, according to India, do not violate the treaty.²⁰⁹

²⁰⁸ Opangmeren Jamir, "Understanding India-Pakistan Water Politics since the Signing of the Indus Waters Treaty." *Water Policy* 18, no. 5 (2016): 1070-1087.

²⁰⁹ The Permanent Indus Commission was reviewing the case from summer of 2017 in December 2020.

Figure 15 Division of Five Rivers Between India and Pakistan



Source: BBC

1966 Tashkent Agreement

The 1965 war between India and Pakistan ended with the Tashkent Agreement, one that acknowledged the change in disputed territory and marked a clear Line of Control between the two adversaries. Brokered by the Soviet Union on January 10, 1966, the agreement stated that “both sides will exert all efforts to create good neighborly relations between India and Pakistan in accordance with the United Nations Charter... and that all armed personnel of the two countries shall be withdrawn no later than 24 February 1966 to the positions they held prior to August 5, 1965, and both sides shall observe the cease-fire terms on the cease-fire line.” After the war, Pakistan held 220 square miles of Indian territory, and India controlled 720 square miles of Pakistani territory. Both eventually gave

back captured land as part of agreement.²¹⁰ Additionally, both sides agreed to “non-interference in the internal affairs of each other” and to “carry out the repatriation of the prisoners of war.”²¹¹

1972 Simla Agreement

After the end of the 1971 India-Pakistan war, which resulted in the creation of the nation-state of Bangladesh, both parties signed the Simla Agreement on July 2, 1972. The agreement laid out a roadmap toward normalizing India-Pakistan relations. Both sides agreed to reinforce the charter of the UN, take steps “to resume communications, postal, telegraphic, sea, land including border posts and air links including over-flights... trade and cooperation”; move their armed forces to their side of the international border; respect the December 17, 1971 LoC in the Kashmir region”; resolve the question of prisoners of war (POWs) and find “a final settlement of Jammu and Kashmir.”²¹²

In 1973, representatives from India, Pakistan, and Bangladesh signed the Delhi Agreement following the Simla Agreement, which permitted the repatriation of POWs. India released more than 6,500 Pakistani POWs in 1974.

²¹⁰ Farooq Naseem Bajwa, *From Kutch to Tashkent: The Indo-Pakistan War of 1965* (London, England: Hurst, 2013), 97-128.

²¹¹ United Nations, “Text of the Taskent Agreement,” (accessed October 1, 2017); available from https://peacemaker.un.org/sites/peacemaker.un.org/files/IN%20PK_660110_TashkentDeclaration.pdf; and Farooq Naseem Bajwa, *From Kutch to Tashkent: The Indo-Pakistan War of 1965* (London, England: Hurst, 2013), 341-350.

²¹² Text of the “Agreement Between Government of India and Government of the Islamic Republic of Pakistan on Bilateral Relations (Simla Agreement),” (accessed October 1, 2020); available from https://www.usip.org/sites/default/files/file/resources/collections/peace_agreements/ip_simla_07021972.pdf

These two agreements were in earnest a Pakistani surrender of 54,000 square miles of East Pakistan to newly independent Bangladesh, which would not have occurred without decisive Indian military intervention. In fact, Pakistani troops surrendered to the Indian Army – and not the separatists – in Dhakka, Bangladesh at the end of the war, also known as the Bangladesh Liberation War.²¹³

Table 7: India and Pakistan Signatories of Border-Dispute Agreements 1947-1973

	Title	Conclusion Date	Type
1	Inter-Dominion Agreement between the government of India and Pakistan on the canal water dispute between East and West Punjab	Apr 1948	Bilateral
2	Agreement between Military Representatives of India and Pakistan regarding the establishment of ceasefire line in the state of Jammu and Kashmir	Jul 1949	Bilateral
3	East-West Bengal Boundary Alignment Agreement between Pakistan and India	Aug 1952	Bilateral
4	Agreement on border disputes (with joint communique), signed at New Delhi on September 10, 1958	Oct 1958	Bilateral
5	Indo-Pakistan Agreement on East Pakistan border disputes, signed at New Delhi on October 23, 1959	Oct 1959	Bilateral
6	Agreement on West Pakistan-India border disputes, signed at New Delhi on January 11, 1960	Nov 1960	Bilateral
7	Agreement relating to a ceasefire and the restoration of the status quo at January 1, 1965 in the area of Gujarat/West Pakistan border and concerning the arrangements for the determination of the border in that area; signed at New Delhi on June 30, 1965	Jun 1965	Bilateral
8	Tashkent Declaration, signed at Tashkent on January 10, 1966	Oct 1966	Bilateral
9	Agreement Between the Government of India and the Government of the Islamic Republic of Pakistan on Bilateral Relations (Simla Agreement) July 2, 1972	July 1972	Bilateral

The war and border resolution outcomes of the India-Pakistan rivalry (before the acquisition of nuclear weapons) strongly support the Nuclear Prison Theory assertion that before acquiring nuclear weapons countries contesting

²¹³ G. S. Bhargava, “The Simla Agreement – An Overview,” *India Quarterly* 29, no. 1 (1973): 26-31.

border disputes do resolve them. India and Pakistan engaged in three wars based on border disputes before they acquired nuclear weapons. Both countries conquered and conceded territory, demarcated disputed territories, and resolved a major border dispute related to the Indus River. These territorial agreements are empirical evidence of peace initiatives between India and Pakistan before they acquired nuclear weapons.

India-Pakistan Rivalry: War and Peace After Nuclear Weapons (1987–2019)

Before the acquisition of nuclear weapons, India and Pakistan waged wars and decisively resolved border disputes related to the Indus River and in India's east. Below I examine the historical record and provide evidence for the hypothesis that after developing nuclear weapons India and Pakistan engaged in brinkmanship and détente but did not resolve a single border dispute. I begin with a short introduction of India and Pakistan's nuclear weapons programs and current capabilities.

State of India's Nuclear Weapons Program

India's decision to build a nuclear weapon was a response to its defeat by the Chinese in 1962. China developed nuclear weapons by 1964, and India first tested a device in 1974. After September 11, 2001, India faced Pakistani insurgent attacks in New Delhi (2001–2002) and Mumbai (2008). India's doctrine (first introduced in 2003) is based on the following pillars:²¹⁴ India would create and

²¹⁴ "The Cabinet Committee on Security Reviews Operationalization of India's Nuclear Doctrine," January 4, 2003, quoted in Bhumitra Chakma, "Pakistan's Post-test Nuclear
Mullick 117

sustain a credible minimum deterrent and adopt a no-first-use stance, “where nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere.”²¹⁵ If attacked first, India would use massive retaliation sanctioned by civilian leaders. India would not use its nuclear weapons against non-nuclear states unless it was attacked by biological and chemical weapons. India would participate in international efforts to protect and limit fissile material, agree to observe a moratorium on nuclear tests, and pledge to work for a nuclear weapon-free world.²¹⁶

In 2018, India operated seven nuclear-capable systems: two aircraft-based ballistic missiles, four land-based ballistic missiles, and one sea-based ballistic missile. These systems provided India with a developing second-strike capability. At least four more systems are being developed with a focus on long-range, land- and sea-based missiles “for possible deployment within the next decade.”²¹⁷

India has produced 600 kilograms of weapons-grade plutonium, enough for 150-200 nuclear warheads; India currently has one 120 to one 140 nuclear warheads. In addition to the Dhruva plutonium production reactor near Mumbai, India is planning to build “six fast breeder reactors” and produce weapons-grade plutonium and is building a new, unsafeguarded gas centrifuge facility to increase

Use Doctrine,” in Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia* (Farnham: Ashgate Publishing Limited, 2011), 62. (This source is authoritative because it is quoted in at least five major scholarly books I read for this paper; see bibliography.)

²¹⁵ “The Cabinet Committee on Security Reviews Operationalization of India’s Nuclear Doctrine,” January 4, 2003, quoted in Bhumitra Chakma, “Pakistan’s Post-test Nuclear Use Doctrine,” in Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia* (Farnham: Ashgate Publishing Limited, 2011), 63.

²¹⁶ This is not based on India’s official nuclear doctrine, because it is classified.

²¹⁷ Hans M. Kristensen and Matt Korda, “Indian Nuclear Forces, 2018,” *Bulletin of the Atomic Scientists* 74, no. 6 (2018): 362.

uranium production.²¹⁸ Aircraft remains the major delivery system of India's nuclear weapons. Up to "four squadrons of Mirage 2000H and Jaguar IS/IB (and possibly MiG-27) aircraft, at three bases," are responsible for nuclear strike missions against Pakistan and China.²¹⁹

India has four types of land-based, nuclear-capable ballistic missiles: the short-range Prithvi-2 (350 kilometers [km]) and Agni-1 (700 km), the medium-range Agni-2 (2,000 km), and the intermediate-range Agni-3 (3,200 km). Two longer-range Agni missiles are under development: Agni-4 (3,500 kilometers) and Agni-5 (up to 8,000 km). Agni 6 (up to 12,000 km) underwent successful testing in 2017 and has a multiple independently targetable re-entry vehicle—a payload containing several thermonuclear warheads, each capable of being aimed to hit a different target.²²⁰ Variants of Agni-5 and -6 are also under development as submarine-launched ballistic missiles. To put the missile ranges in context, an intercontinental ballistic missile (ICBM) has a minimum range of 5,500 km and can carry a nuclear warhead.²²¹ All in all India is a modern, highly capable, and soon to be secured-second strike, nuclear power.

²¹⁸ Shannon N. Kile and Hans M. Kristensen, "Trends in World Nuclear Forces, 2017," SIPRI Fact Sheet, July 2017.

²¹⁹ Hans M. Kristensen and Robert S. Norris, "Indian Nuclear Forces, 2017," *Bulletin of the Atomic Scientists* 73, no. 4 (2017): 206.

²²⁰ Franz-Stefan Gady, "India to Test Fire Nuclear Missile Capable of Hitting China," *The Diplomat*, December 15, 2016; Ankit Panda, "India is Capable of Developing a 10,000-kilometer range ICBM," *The Diplomat*, April 6, 2015; and Hans M. Kristensen, "India's Missile Modernization Beyond Minimum Deterrence," *Federation of American Scientists*, October 4, 2013.

²²¹ Hans M. Kristensen and Matt Korda, "Indian Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 6 (2018): 362.

State of Pakistan's Nuclear Weapons Program

Pakistan built nuclear weapons to mitigate the threat from India after three largely unsuccessful wars—especially after the 1971 war that resulted in Pakistan losing its entire eastern wing (54,000 square miles). In 2018, it was estimated that Pakistan was building between fourteen and twenty-seven new warheads per year.²²²

Pakistan has a nuclear first use policy, which is contingent upon certain red lines (as stated by a former Pakistani Air Force General officer)²²³: Indian troops cross the border beyond a certain distance (over 25 miles), major cities like Lahore or Sialkot are about to be overrun, the Pakistani Army is nearly destroyed, Pakistan's nuclear facilities or "strategic assets (large economic infrastructure) such as dams" are attacked, the Pakistani military's logistical supply routes are broken, or India crosses into Pakistan-administered Kashmir and establishes control.²²⁴ Lieutenant General Khalid Kidwai (retired), former head of the Strategic Plans Division (who led a 15,000-person security force protecting Pakistani nuclear weapons), spoke of similar red lines.²²⁵

In 2018, Pakistan had 150 nuclear warheads, several delivery systems, four plutonium production reactors, uranium enrichment facilities, and four heavy-water plutonium production reactors that reside in the Khushab complex.

²²² Hans M. Kristensen, Robert S. Norris and Julia Diamond, "Pakistan Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 5 (2018): 349.

²²³ Tariq Majmud Ashraf, *Aerospace Power: The Emerging Strategic Dimension* (Peshawar: PAF Book Club, 2003), 148, quoted in Bhumitra Chakma, "Pakistan's Post-test Nuclear Use Doctrine," in Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia* (Farnham: Ashgate Publishing Limited, 2011), 79.

²²⁴ Ashraf, *Aerospace Power*, 79.

²²⁵ Naeem Salik, *The Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective* (Oxford: Oxford University Press, 2009), 219-225.

In addition, Pakistan has six nuclear-capable ballistic missiles: the short-range Abdali (180 km), Ghanavi (250 km), Shaeen-1 (750 km), and NASR (60 km) and the medium-range Ghauri (1,250 km) and Shaheen-2 (1,500 km). Two more are under development, Shaheen-1A (900 km) and Shaheen-3 (2,750 km). Tactical nuclear weapons include Babur, Ghaznavi, Shaeen-1, and NASR, and are reported to be deployed near the Indian border in missile garrisons.

Additionally, Pakistan has several cruise missiles, ground-launched Babur, and air-launched Ra'ad (350 km). There are media reports that Babur is being molded to fit on ships and submarines.²²⁶ Both are slimmer than Pakistan's ballistic missiles, "suggesting success with warhead miniaturization based on plutonium instead of uranium."²²⁷

Moreover, Pakistan is investing in tactical nuclear weapons, short-range and relatively miniature and more mobile, designed to counter not only an Indian nuclear attack but also a conventional attack.²²⁸ Pakistan has developed nuclear-capable, short-range missiles, such as Babur and Shaheen-1, that appear to be intended for tactical nuclear roles and missions. These developments are in the pursuit of what Pakistani officials describe as a "full-spectrum deterrence" posture.²²⁹ Since Pakistan cannot compete with India's conventional forces it is

²²⁶ Hans M. Kristensen, Robert S. Norris and Julia Diamond, "Pakistan Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 5 (2018): 349.

²²⁷ Compared to uranium, less plutonium is required for a successful nuclear fission chain reaction.

²²⁸ Sajid Farid Shapoo, "The Dangers of Pakistan's Tactical Nuclear Weapons," *The Diplomat*, February 1, 2017.

²²⁹ Shannon N. Kile and Hans M. Kristensen, "Trends in World Nuclear Forces, 2017," *SIPRI Fact Sheet*, July 2017.

heavily investing in “nuclear weapons through quantity, doctrines and the concept of Full Spectrum Deterrence”.²³⁰

Next I discuss how India and Pakistan’s nuclear weapons shape episodes of bluster between the two.

Brinkmanship

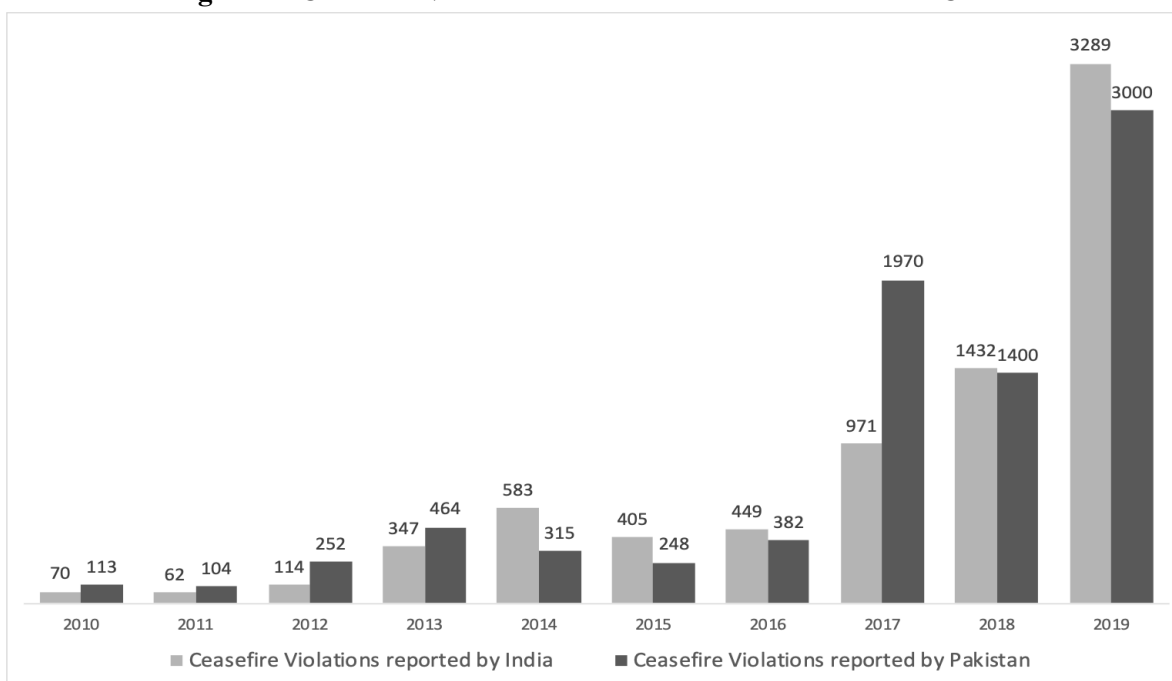
Brinkmanship is a rivalry outcome resulting from nuclear-armed rivals attempting to expand their respective stake in the disputed territory without escalating to full-scale war. While it is difficult to ascertain accuracy, India and Pakistan have reported an increase in ceasefire violations across the Line of Control from 2010-2019.²³¹ By September 2020, India reported 3,104 and Pakistan reported 2,158 ceasefire violations, which included crossfire, cover fire and illegal crossing of people.²³² Not all ceasefire violations graduate to brinkmanship, but the trend is contextually important for the following discussion.

²³⁰ Text of “Keynote Address and Discussion Session with Lieutenant General (Retd) Khalid Kidwai,” Advisor, National Command Authority; and former Director-General, Strategic Plans Division, Pakistan, *IISS*, Seventh *IISS*-Centre for International Strategic Studies (CISS) (Pakistan) Workshop on ‘South Asian Strategic Stability: Deterrence, Nuclear Weapons and Arms Control’ February 6, 2020.

²³¹ Ceasefire Violations, *Indo-Pak Conflict Monitor* (accessed November 13, 2020); available from www.indopakconflictmonitor.org, and Christophe Jaffrelot, “Ceasefire Violations in Kashmir: A War by Other Means?” *Carnegie Endowment for International Peace*, October 24, 2018.

²³² Sushant Singh, “Can India Transcend its Two-Front Challenge?” *War on Rocks*, September 14, 2020, and Happymon Jacob, *Ceasefire Violations in Jammu and Kashmir: A Line of Fire*, (Washington, D.C., United States Institute of Peace 2017), 12.

Figure 16 Ceasefire Violations Across India-Pakistan Line of Control



Source: Author based on Indo Pak Conflict Monitor and Indian and Pakistani news sources.

Below are six episodes of Brinkmanship experienced by India and Pakistan (albeit instigated by Pakistan) after they acquired nuclear weapons. In each incident India and Pakistan engaged in a range of skirmishes fought by troops, but not a single episode escalated to full scale war or extend to the international border. Instead, conflict remained constrained to the disputed border in the Kashmir region.

1990 Kashmir Crisis

In the aftermath of fraudulent elections and strict governance from India, droves of Kashmiris protested on the streets in the winter of 1990. Much like the Khalistan movement in Indian Punjab in the 1980s, Pakistan began supporting the

militant elements of the Kashmiri separatist movement by providing material, training, and diplomatic support.²³³

In response, India deployed infantry units in Indian Punjab and Kashmir. Pakistan deployed its Army's II Corps across Pakistani Punjab's southern border with Indian Rajasthan and elements of Army's I Corps to Kashmir. This occurred immediately following a Pakistani military exercise (*Zarb-e-Momin*) exploring a new offense-defense doctrine that would "take war into India," according to then Pakistani Army Chief of Staff General Aslam Beg.²³⁴

Over 200,000 Indian and 100,000 Pakistan troops were eyeball-to-eyeball in the disputed region of Kashmir. Both sides kept their strike corps away from the international border. Rhetoric from both sides was incendiary and dangerous. Not until United States' National Security Advisor Robert Gates intervened, did India and Pakistan start talking, and de-escalation began.²³⁵

Pakistani Prime Minister Benazir Bhutto "ordered the army and air force to get ready. A squadron of F-16s was moved to Mauripur and we pulled out our [nuclear] devices and all to arm the aircraft.... All movement was made in a way that is visible, because the purpose was not to precipitate a crisis but to deter [it]."²³⁶ Both had nuclear warheads, at least two dozen, and a nascent ballistic

²³³ Devin T. Hagerty, "Nuclear Deterrence in South Asia: the 1990 Indo-Pakistani Crisis," *International Security* 20, no. 3 (Winter 1995).

²³⁴ Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (New Jersey: Princeton University Press, 2014), 65-68.

²³⁵ P.R. Chari, Pervaiz Iqbal Cheema, and Stephen P. Cohen, *Four Crises and a Peace Process: American Engagement in South Asia* (Washington, DC: Brookings Institution Press, 2007), 80-91.

²³⁶ Feroz Khan, *Eating Grass: The Making of the Pakistani Bomb* (Stanford, CA: Stanford University Press, 2012), 230.

missile capability, but the primary delivery system was aircraft. War was averted but both sides were willing to play with nuclear fire.

1999 Kargil Crisis

The Kargil Crisis occurred only thirteen months after India and Pakistan openly tested nuclear weapons in May 1998.²³⁷ Pakistan-supported insurgents and regular army units under disguise moved across the LoC into Indian-administered Kashmir. Pakistan's military and Kashmiri rebels occupied strategic positions (military bunkers on top of the Tiger Hills) on the Indian side of Line of Control, provoking a counteroffensive by India. The Kargil conflict killed more than 500 Indian and nearly 400 Pakistani soldiers, and ended with India successfully pushing back Pakistani fighters to the other side of the LoC.²³⁸ The crisis attracted international attention and was finally defused by the personal intervention of United States President Bill Clinton and his senior staff.²³⁹ Pakistan pulled its troops back and banned several insurgent groups, only to permit them to reappear under new pseudonyms.²⁴⁰ Pakistani leaders tested limited conflict under the nuclear threshold and Indian leaders were prodded to prepare for a wide array of

²³⁷ India tested on May 11, 1998, and Pakistan tested on May 28, 1998.

²³⁸ The LoC is the de facto international border separating Kashmir between India and Pakistan. Both countries do not recognize it as the official border, although India has proposed to make it so. I use the neutral terms of *Indian-* and *Pakistan-administered Kashmir*s, rather than calling the disputed region by Pakistan's term, *Azad Kashmir*, or India's term, *Jammu and Kashmir*, for the disputed border region.

²³⁹ P.R. Chari, Pervaiz Iqbal Cheema, and Stephen P. Cohen, *Four Crises and a Peace Process: American Engagement in South Asia* (Washington, DC: Brookings Institution Press, 2007), 118-148, and Rifat Fareed, "20 Years of Kargil War: India, Pakistan Remain Tense Over Kashmir," *Al Jazeera*, July 26, 2019.

²⁴⁰ P.R. Chari, Pervaiz Iqbal Cheema, and Stephen P. Cohen, *Four Crises and a Peace Process*, 118-148.

limited attacks from Pakistan. Both sides would test these propositions again several times.²⁴¹

2001–2002 Twin Peaks Crises

The third crisis, known as Twin Peaks, was a border confrontation from December 2001 to October 2002 that led to a massive Indian military buildup on its western border with Pakistan below the LoC and near Pakistan's Punjab province. At the height of the crisis, India and Pakistan had amassed 1 million troops in total.²⁴² The trigger was an attack by Pakistan-supported insurgents on the Indian Parliament in Delhi. India mobilized its strike corps, but a slow deployment process (three weeks) and increased international pressure (especially from the United States) defused the crisis.²⁴³ It was a diplomatic victory for India, because the United States strong-armed Pakistan into banning certain anti-India insurgent groups and decreasing insurgent support in Indian-administered Kashmir. Pakistan's military dictator, General Pervez Musharraf, initially cracked down on anti-India insurgents, but over time the restrictions on them waned, leading to another crisis.²⁴⁴

²⁴¹ Ashley J. Tellis, C. Christine Fair, Jamison Jo Medby, *Limited Conflicts Under the Nuclear Umbrella: Indian and Pakistani Lessons from the Kargil Crisis* (Washington DC: RAND Corp Press, 2001), 29-32.

²⁴² Polly Nayak and Michael Krepon, "US Crisis Management in South Asia's Twin Peaks Crisis," *Stimson Center Report*, September 1, 2006.

²⁴³ Walter C. Ladwig, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (Winter 2007): 162; and Anurag Tripathi, "Operation Parakram Leaves a Bitter Taste," *Times of India*, January 18, 2003.

²⁴⁴ Praveen Swami, "The Roots of Crisis – Post-Kargil Conflict in Kashmir and the 2001-2002 Near War," in Zachary S. David, *The India Pakistan Military Standoff: Crisis Escalation in South Asia* (New York: Palgrave Macmillan, 2011), 19-52.

2008 Mumbai Crisis

Almost seven years after the Delhi Parliament attacks, Pakistani citizens and members of Lashkar-e-Taiba (LeT) attacked India's financial hub, the city of Mumbai.²⁴⁵ More than 163 people were killed, including several American citizens, and the city was under siege for three days. By this time, India had instituted a limited war doctrine²⁴⁶ called Cold Start: a blitzkrieg approach to eradicating insurgent training camps between seventy-two and ninety-six hours after a terrorist attack originated from Pakistan.

However, fearing economic collapse and Pakistan's first-use policy, India did not initiate Cold Start, and once again, under U.S. pressure, both sides backed down. Pakistani leaders promised to crack down, but Pakistani military, intelligence, judicial, and political leaders were unwilling and unable to prosecute LeT insurgents.²⁴⁷ Besides their unwillingness to go after a proxy, Pakistani prosecutors had little admissible evidence against LeT leaders such as Hafiz Saeed for a successful conviction.²⁴⁸

This pattern of Pakistan-supported insurgents attacking Indian Kashmir and major cities like Delhi and Mumbai continued but India's patience was running out. Full-scale war was out of question but if attacked again India was expected to retaliate more forcefully.

²⁴⁵ Polly Nayak and Michael Krepon, *The Unfinished Crisis: US Crisis Management after the 2008 Mumbai Attacks* (Washington, DC: USIP, 2012), 25-35.

²⁴⁶ Ladwig, A Cold Start for Hot Wars? 158-190.

²⁴⁷ Author interview with [Indian] Major General (retired) Dipankar Banerjee, director for defence studies and analyses, in Delhi, India on October 2009.

²⁴⁸ "No concrete evidence against Hafiz Saeed," *The News* [Pakistan], April 6, 2012.

2016 Uri Attacks and Border Crisis

Much like Kargil, Twin-Peak and the Mumbai crises the Uri attacks also involved Pakistan-supported insurgents wreaking havoc across the disputed 435-mile Line of Control.²⁴⁹

On January 2, 2016, Kashmiri militants attacked the Indian Air Force Base in Pathankot, killing seven members of the Indian security forces. All fingers pointed to *Jaish-e-Mohammad*, a Kashmiri terrorist group tied to elements of the Pakistani intelligence services.²⁵⁰ However, this was only a foreshadowing of what was to come. Eight months after the attack on Pathankot, on September 18, 2016, Kashmiri militants with ties to Pakistan attacked the Indian Army Base in Uri, killing seventeen Indian security personnel.²⁵¹ When India demanded that Pakistan investigate and prosecute those responsible, the Pakistani defense minister accused India of attacking its own people to distract from Indian human rights violations. India reacted swiftly by conducting “surgical strikes” across the LoC inside Pakistan-administered Kashmir. The Pakistani military denied India’s claims and instead said that there were skirmishes on the LoC. Indian home minister Rajnat Singh called Pakistan a “terrorist state,” while Pakistan’s Foreign

²⁴⁹ Julia Thompson, “The Dynamics of Violence along the Kashmir Divide, 2003-2015,” *The Stimson Center*, 2015.

²⁵⁰ Hari Kumar and Geeta Anand, “17 Indian Soldiers Killed by Militants in Kashmir,” *New York Times*, September 18, 2016.

²⁵¹ “Militants Attack Indian Army Base in Kashmir ‘killing 17’,” *BBC*, September 18, 2016.

Ministry spokesman said, “India is trying to hide its crimes against humanity in occupied Kashmir.”²⁵²

Nuclear weapons deterred full-scale war. India did not open a second front on the international border, and the confrontation was limited in scale and time. Territorial boundaries did not change, and India did not send troops across the disputed border. India and Pakistan did not expand the conflict across their international borders, but Indian aircraft did cross the LoC and bombed insurgent training camps inside Pakistani-administered Kashmir, setting a precedent that was repeated by both sides in the aftermath of the 2019 Pulwama Attacks.²⁵³

2019 Pulwama Attacks and Border Crisis

Less than three years after the Uri attacks, on February 14, 2019 a Jaish-e-Mohammad member drove a vehicle packed with explosives into a convoy of 78 buses carrying Indian paramilitary police in Pulwama, on the heavily guarded Srinagar-Jammu highway in Indian-administered Kashmir. The attack resulted in the death of 40 members of India’s Central Reserve Police Force.²⁵⁴

On February 26, India retaliated by conducting air strikes on an alleged Jaish-e-Mohammad training camp in Balakot which is on the edge of Pakistan-administered Kashmir. Pakistan countered the next day with its own air strikes in Indian-administered Kashmir near an Indian Army camp, and also captured an

²⁵² Hari Kumar and Geeta Anand, “17 Indian Soldiers Killed by Militants in Kashmir,” *New York Times*, September 18, 2016.

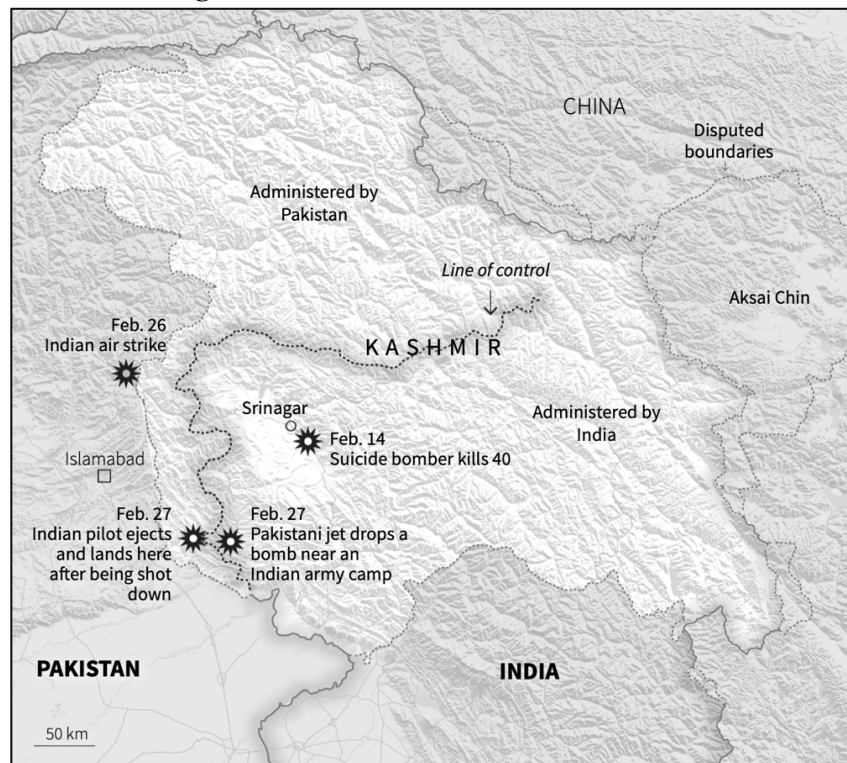
²⁵³ Rejendra M. Abhyankar, *Indian Diplomacy: Beyond Strategic Autonomy* (New Delhi, Oxford University Press, 2018) 23-24.

²⁵⁴ “Kashmir Attack: Tracing the Path that led to Pulwama,” *BBC*, May 1, 2019.

Indian pilot, “whose aircraft was shot down during a mission over Pakistani airspace.”²⁵⁵

While Indian aircraft did drop its payload a little beyond Pakistan-administered Kashmir, no military action was taken across the international border. Pakistan’s air attack stayed within Indian-administered Kashmir, and Pakistan returned the Indian pilot in March.²⁵⁶ Full-scale war was averted but over time the intensity of brinkmanship episodes grew. “Each time you attack us, be certain we will get back at you, harder and stronger,” India’s minister of state for external affairs, Vijay Kumar Singh, tweeted in February 2019.²⁵⁷

Figure 17 India-Pakistan Pulwana Crisis 2019



²⁵⁵ Moeed W. Yusuf, “The Pulwana Crisis: Flirting with War in a Nuclear Environment,” *Arms Control Association*, May 2019.

²⁵⁶ “Abhinandan: Captured Indian pilot handed back by Pakistan,” *BBC*, March 1, 2019.

²⁵⁷ Lauren Frayer, “India Strikes Pakistani Village in Retaliation for Attack in Kashmir,” *NPR*, February 26, 2019.

Source: Reuters

All six episodes provide evidence for the likelihood (and increase in intensity) of brinkmanship among asymmetric nuclear rivals. For example, immediately after hot testing nuclear weapons in 1998, Pakistan jolted India by audaciously supporting an insurgent takeover of the Tiger Hills in Kargil. These observations are important, but the main question of my dissertation – why nuclear rivals reject peace – is best examined through episodes of détente that fall short of border dispute resolutions.

Rapprochement

Unlike incidents of brinkmanship, which have been studied from the lenses of nuclear deterrence theories (no war to avoid mutual annihilation), incidents of détente are prime tests for NPRT. Below I briefly explain four incidents of rapprochement followed by my Nuclear Prison Theory's explanation of how and why India and Pakistan avoided resolving border disputes.

1988 India-Pakistan Non-attack/Non-nuclear Aggression Agreement

The Non-nuclear aggression agreement, also known as the India-Pakistan Non-attack Agreement, was signed by Pakistani Prime Minister Benazir Bhutto and Indian Prime Minister Rajiv Gandhi on December 21, 1988. The agreement was a pledge not to attack each other's nuclear sites with or without third-party help.

The agreement promotes a confidence-building security environment and restricts each party from “undertaking, encouraging, or participating in, directly or indirectly, any action aimed at causing destruction or damage to any nuclear

installation or facility in each country.”²⁵⁸ In accordance with the agreement since January 1992, India and Pakistan have exchanged lists of their respective military and civilian nuclear-related facilities annually.²⁵⁹

The agreement provides for both countries refraining from undertaking, encouraging, or participating in, directly or indirectly, any action aimed at causing destruction or damage to any nuclear installation or facility. It describes a nuclear installation or facility and requires each party to inform the other of the precise locations (latitude and longitude) of installations and facilities by January 1 of each calendar year and whenever there is any change. The agreement does not mandate detailed disclosures of nuclear-related activities, however, for example scope and scale of nuclear weapons development activities.²⁶⁰ This agreement was signed as a forerunner to future agreements that would focus on border disputes.

1997–2008 Composite Dialogue and Confidence-building Measures (CBMs)

Nine years after the Non-Attack agreement, in May 1997, leaders from Pakistan, and India in Male, Maldives began a bilateral dialogue. Things took off in a positive direction. India included Jammu and Kashmir on the agenda, and Pakistan agreed to discuss cross-border terrorism. This was significant because following the Kargil crisis (1999) and the failed Agra Summit (July 2001), the prospects for negotiation between India and Pakistan were nil and became

²⁵⁸ “Agreement Between India and Pakistan on the Prohibition of Attack Against Nuclear Installations and Facilities (India-Pakistan Non-attack Agreement),” signed December 31, 1988; (accessed November 2, 2020) available from http://www.nti.org/media/pdfs/aptindpak.pdf?_=1316555923.

²⁵⁹ “Agreement Between India and Pakistan on the Prohibition of Attack Against Nuclear Installations and Facilities.

²⁶⁰ “Agreement Between India and Pakistan on the Prohibition of Attack Against Nuclear Installations and Facilities.

nonexistent after the Twin Peak crisis in late 2001 and early 2002. Many in India believed that Pakistan directly supported insurgents that had attacked the Indian parliament. But that event, along with the September 11, 2001, terror attacks in the United States, restructured international politics on the subcontinent. That Pakistan hosted, and sometimes abetted, insurgents belonging to internationally designated terrorist groups, shaped all future India-Pakistan relations. Tensions between India and Pakistan rose throughout spring and summer 2002.

Yet, that pressure began to diminish in October 2002, and within six months the focus had returned to the Composite Dialogue. In April 2003, India began what was described as a step-by-step trust-but-verify initiative toward Pakistan. In July 2003, diplomatic relations and direct transport links were reestablished, and in November a ceasefire was initiated. The Composite Dialogue process was revived in June 2004 in pursuance of a decision made during the visit of former Prime Minister of India Shri Atal Bihari Vajpayee to Pakistan in January 2004.²⁶¹ The Confidence Building Measures abruptly stopped after the Mumbai attacks of 2008, however.

1999 Lahore Declaration

In February 1999, the Indian premier visited Pakistan to promote stability between India and Pakistan, which had hot tested their nuclear arsenals nine months earlier in May 1998. The declaration focused on building trust and continuing dialogue on longstanding territorial disputes recognizing dangers of

²⁶¹ Mohammed Badrul Alam, "In Pursuit of Peace: A Micro Study of Confidence-Building Measures between India and Pakistan," *Indian Journal of Asian Affairs* 23, no. 1 (2010): 41-60.

escalating brinkmanship to full-scale war. The parties reemphasized the “importance of mutually agreed confidence building measures for improving the security environment” and stated that both sides “shall intensify their efforts to resolve all issues, including the issue of Jammu and Kashmir.”²⁶² Moreover, India and Pakistan reaffirmed their commitment to regional economic integration through organizations like South Asian Association for Regional Cooperation and reaffirmed their “condemnation of terrorism in all its forms and manifestations and their determination to combat this menace.”²⁶³

2004-2007 Four-Point Formula to Resolve the Kashmir Border Dispute

From 2004-2007 India and Pakistan made the most significant effort to resolve their most continuous border dispute of Kashmir. Pakistan’s premier Pervez Musharraf and India’s premier Manmohan Singh appointed special representatives to head the negotiations which produced the “four-point formula” initially proposed by President Musharraf. His formula consisted of self-governance for “the entire former princely state of Jammu and Kashmir”; demilitarization of the region; elimination of irrelevant borders, “implying free movement of people and trade between India, Pakistan, and the two sides of Jammu and Kashmir”; and joint administration of Kashmir, with India, Pakistan, and “the two Kashmirs forming a group to manage common interests and

²⁶² “The Lahore Declaration,” signed February 21 1999, *USIP*; (accessed November 10, 2020) available from https://www.usip.org/sites/default/files/file/resources/collections/peace_agreements/ip_lahore19990221.pdf.

²⁶³ “The Lahore Declaration,” signed February 21 1999.

common issues such as trade, tourism, and river waters.”²⁶⁴ Moreover, Kashmiri political leaders “were regularly consulted by India and Pakistani officials” as the deal garnered support. Optimism began to erode, however, when President Musharraf’s administration faced political turmoil after he fired the Chief Justice of Pakistan evoking mass protests military rule. Under the Four Point Formula demilitarization of Kashmir was a tall order requiring Pakistan to stop supporting insurgent groups for India to call back thousands of troops from Jammu and Ladakh under its administration. The Four Point Formula had the hallmarks of the 1950s Border Dispute resolutions, the Indus Water Treaty of 1960, but now India and Pakistan had nuclear weapons. Every compromise on the border looked like mutual capitulation – India wanted to keep territory under its control, and Pakistan wanted more territory, in the end there was no border dispute resolution.

2011 Most Favored Nation

As members of the World Trade Organization, India and Pakistan are encouraged to grant all trading partners an equal status as “most favored.” India granted Most Favored Nation (MFN) status to Pakistan in 1996, largely because of a trade balance in India’s favor.²⁶⁵ During the Composite Dialogue (1997–2008), Pakistan agreed to give MFN status to India in 2011, whereby most tariff and non-tariff trade restrictions would be reduced or altogether eliminated. India-Pakistan trade continued to grow until the 2016 border crisis, when Pakistan

²⁶⁴ Steve Coll, “India and Pakistan’s Secret Kashmir Talks,” *New Yorker*, February 23, 2009, and Happymon Jacob, “Toward a Kashmir Endgame? How India and Pakistan Could Negotiate a Lasting Solution,” *United States Institute of Peace*, August 2020.

²⁶⁵ Nisha Taneja Samridhi Bimal Anmol Nagpal, “Recent Trends in India-Pakistan Trade 2018-19,” *Indian Council for Research on International Economic Relations*, 2018.

renege on granting MFN status to India, and both countries did not sign the South Asia Free Trade Agreement.²⁶⁶ Once again, a strong attempt at rapprochement fell short of resolving the root cause of the rivalry: disputed borders. Despite increased trade and the India granting MFN status to Pakistan, disputed border talks did not start let alone lead to a resolution.

Nuclear Prison Theory and India-Pakistan Rivalry

Nuclear Prison Theory portends that nuclear rivals contesting borders do not resolve their border disputes because the weaker of the two possessing nuclear weapons sees compromise as surrender and the stronger opponent sticks with the self-advantageous option – control over said territory transformed into sovereignty over that territory. We observe this in the India-Pakistan case across four incidents of rapprochement that did not graduate to border dispute resolutions.

Nuclear Prison Theory indeed works under four conditions for India and Pakistan: both are (1) asymmetric (2) rivals with (3) nuclear weapons and their (4) rivalry predates their acquisition of nuclear weapons. Additionally, in the India-Pakistan case we observe the creation of a ‘nuclear prison’ through a five-phase self-perpetuating process:

1. First, India and Pakistan maximized security and their stake in disputed borders by pursuing nuclear weapons after losses to a militarily stronger

²⁶⁶ Michael Kugelman and Robert M. Hathaway, eds. *Pakistan-India Trade: What Needs to Be Done? What Does It Matter?* (Washington, D.C.: Wilson Center Press, 2013), 18-30.

adversary (India's loss to China in 1962, and Pakistan's loss to India in 1971).

2. Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures, such as advanced delivery and missile defense systems. For example, after Pakistan obtained a nuclear device in 1987, it gained significant military power against India, which motivated India's efforts to build a missile defense system.²⁶⁷
3. Third, adversaries trade provocative actions, such as border skirmishes but stop short of war. For example, Pakistan, militarily and economically inferior to India, used limited force against India, short of full-scale war, in the Kargil region of the disputed territory of Kashmir.²⁶⁸
4. After a major crises as Kargil and the Mumbai attacks, partly in fear of how close India and Pakistan came to engaging in a nuclear war, both rivals engaged in rapprochement, something akin to what the Russians and Americans did following the Cuban Missile Crisis: both sides were horrified at how close they had come to thermonuclear war.²⁶⁹ For example, the 2004-2007 Four Point Formula to resolve the disputed border in Kashmir.

²⁶⁷ Frank O' Donnell and Yogesh Joshi, "India's Missile Defense: Is the Game Worth the Candle?" *The Diplomat*, August 2, 2013.

²⁶⁸ Peter R. Lavoy, *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict* (New York: Cambridge University Press, 2009).

²⁶⁹ Mohammed Badrul Alam, "In Pursuit of Peace: A Micro Study of Confidence-Building Measures between India and Pakistan," *Indian Journal of Asian Affairs* 23, no. (2010): 41-60.

5. When the underlying cause of their rivalry – border disputes – is not resolved, the rivals revert to stalemate or engage in brinkmanship again.

For example, India and Pakistan engaged in brinkmanship due to Pakistan-sponsored Mumbai Attacks in 2008 after the 2004-2007 Four Point Formula talks for border resolution failed.

On balance, nuclear rivals find themselves in a vicious cycle of escalation short of war and de-escalation short of peace — war is perceived to be suicide and peace (border dispute resolution) is perceived to be mutual surrender rendering both outcomes as unacceptable to the rivals.

Figure 18 Sequential Path and Conditions for India-Pakistan Nuclear Prison

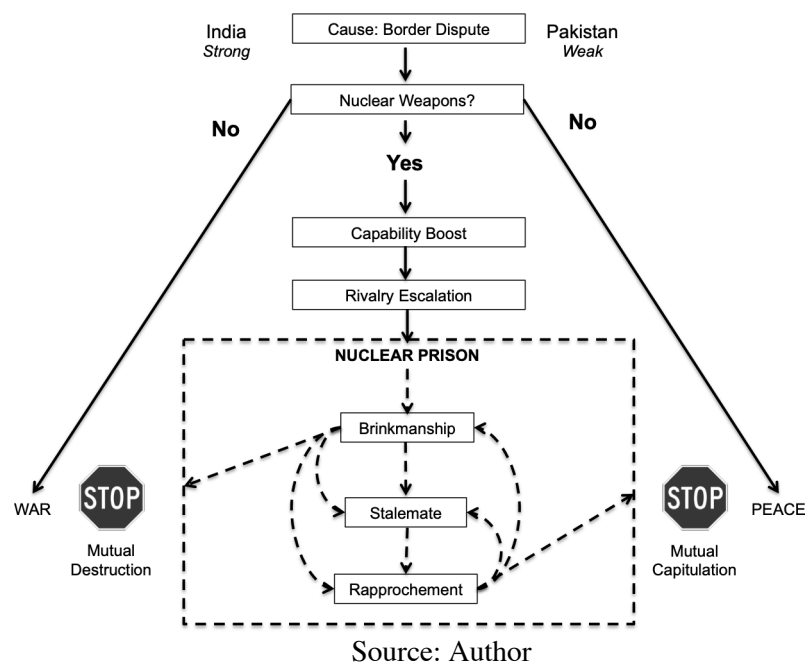
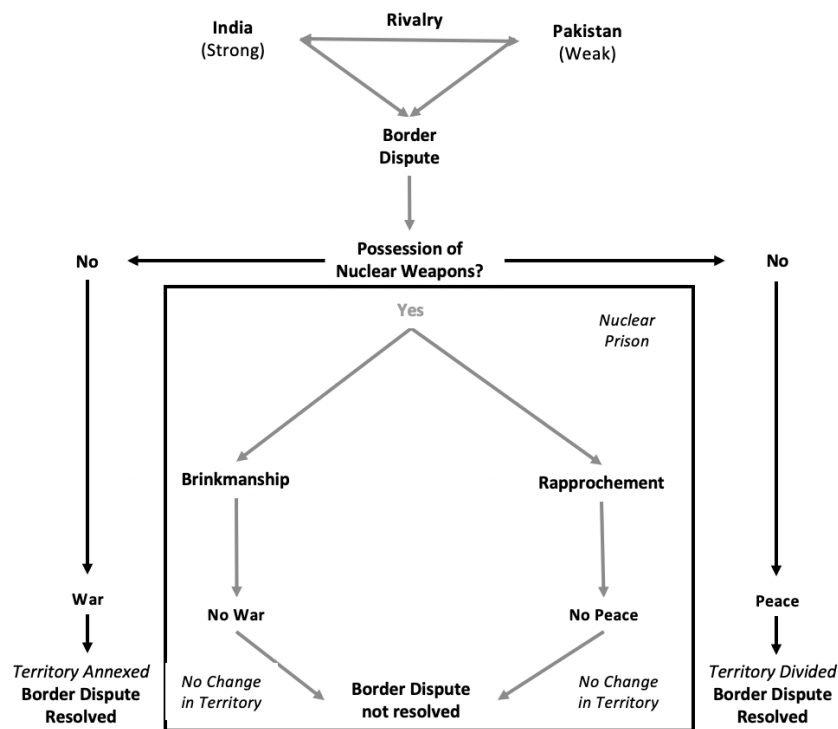


Figure 19 Nuclear Prison Theory: India-Pakistan Case



Source: Author

Next, I examine the India-Pakistan case by highlighting the limits of existing international relations theories and the value NPRT adds to answering the question: why nuclear rivals eschew border dispute resolutions.

Let's start with realism, which does not directly answer the question of why India and Pakistan eschew border dispute resolutions. Yet, it provides a convincing explanation of continuous conflict due to an anarchic world with no policeman where states maximize security to survive and prosper.²⁷⁰ Realist Nuclear Deterrence theory does answer why nuclear rivals avoid war by

²⁷⁰ For a sampling of essential work on realism, see Thomas Hobbes, *Leviathan* (London: Wordsworth, 2014); Machiavelli, *The Prince* (Cambridge: Cambridge University Press, 1998); Kenneth Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 1979); John Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001); Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1985); Stephen M. Walt, *The Origins of Alliances* (New York: Cornell University Press, 1987); and Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999).

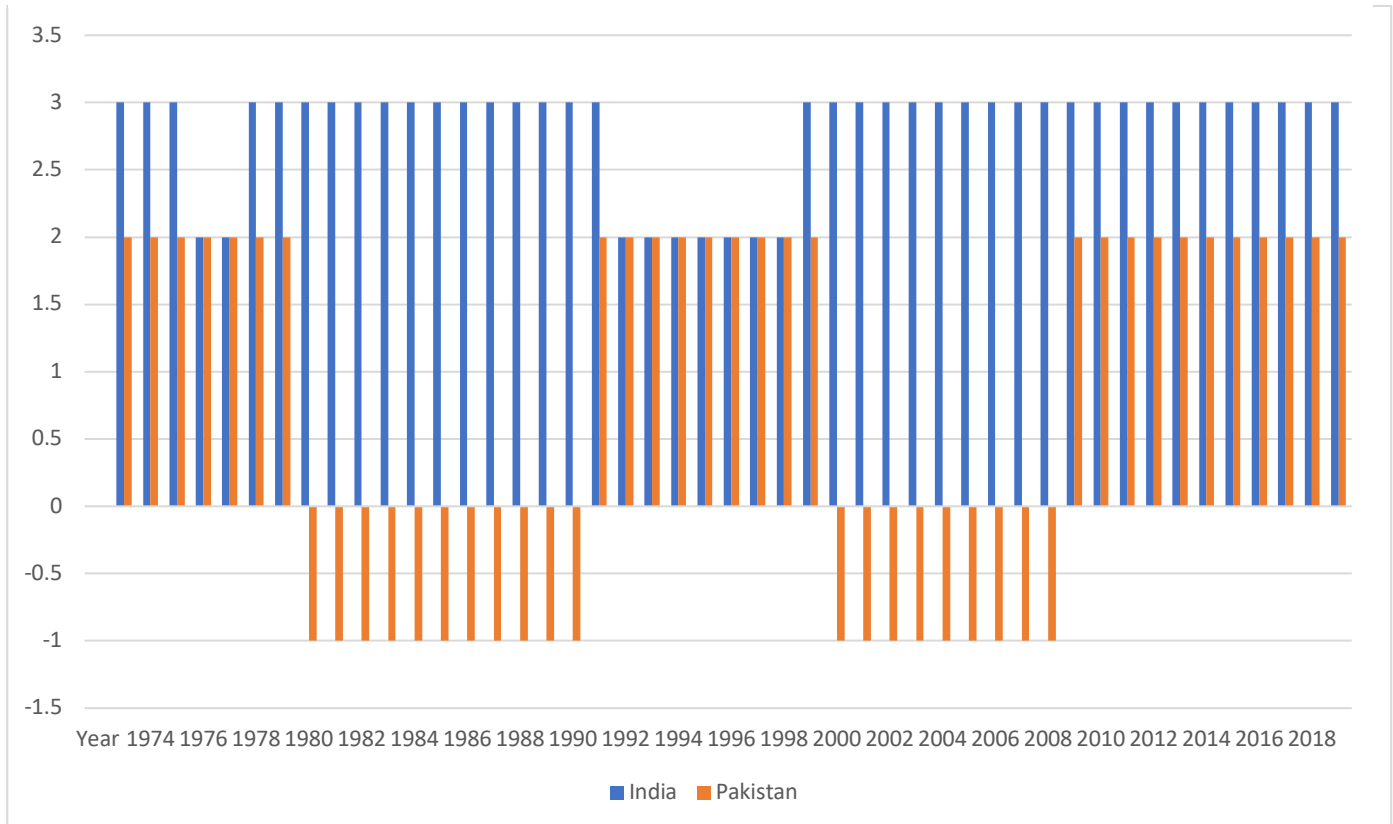
emphasizing the fear that both rivals experience of mutual suicide from perceived or actual miscalculation leading to the use of the deadliest weapon man has ever made. My Nuclear Prison Theory relies on the logic of mutual destruction, embedded in realist nuclear deterrence theory which asserts that nuclear rivals are deterred from border dispute resolution due to mutual capitulation. Both countries perceive any compromise on disputed territory as a surrender to the rival's demands, making any border dispute resolution nearly impossible. This was clearly demonstrated as we looked at five episodes of rapprochement between India and Pakistan.

Next let's examine the India-Pakistan case from the vintage point of Liberalism, which is a normative family of theories most notable Democratic Peace Theory (democracies don't go to war with each other), economic interdependence and membership in international organizations instilling norms of peace abate war. Yet this does not explain the persistence of nuclear rivalries. India and Pakistan are members of numerous regional and international organizations but have frequently engaged in brinkmanship. For example, India and Pakistan were active members of the South Asian Association for Regional Cooperation and were both in democratic phases when they engaged in brinkmanship over Kashmir in 2008: a time when Freedom House rated India as "free" and Pakistan as "partially free"—a fledgling democracy.²⁷¹ Below is a graph depicting regime types within India and Pakistan from 1976. As is clearly

²⁷¹ "Freedom in the World 2009: Progress in South Asia," *Freedom House* (accessed November 11, 2017); available from <https://freedomhouse.org/report/freedom-world/freedom-world-2009>

observed, India and Pakistan experienced incidents of brinkmanship in the early 1990s when both had democratic regimes, and most notable in 2008, 2016 and 2019 when both countries were either considered “free” or “partly free” with elected assemblies at the federal and provincial/state level.

Figure 20 Freedom House Ratings of India and Pakistan 1973-2019

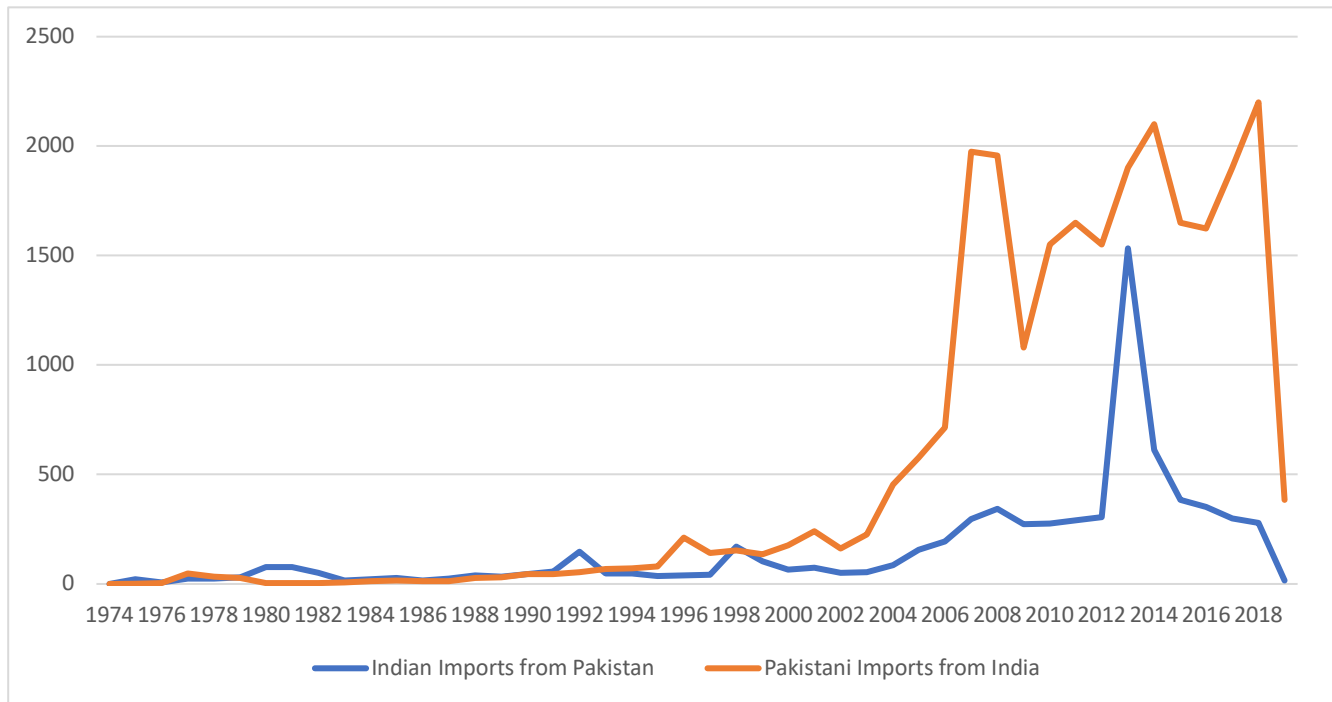


Source: Freedom House. Note: 3=Free, 2=Partly Free, and -1= Not Free

Another proxy for Liberalism, specifically economic interdependence theories is trade. As demonstrated below trade between India and Pakistan is meager given its potential. Trade between the two countries has the potential to reach \$35 billion but until the Pulwama crisis of 2019 which dropped total trade to less than \$1 billion, the average trade between the two was \$2 billion. While trade has dipped after incidents of brinkmanship, for example after the 2008

Mumbai attacks and the 2019 Pulwana crisis, it has generally increased since 2000.

Figure 21 Trade between India and Pakistan (1974-2019)



Source: World Bank and World Trade Organization

The Nuclear Binding theory under Liberalism argues that arms control and reduction treaties ‘bind’ nuclear adversaries and slowly move them toward fewer incidents of brinkmanship.²⁷² Yet, in the case of India-Pakistan we observe that while they have instituted Confidence Building Measures, such as military hotline communications, they did not sign arms control or reduction treaties. Given that these treaties will do little to resolve the underlying cause of their rivalry – border

²⁷² See, for example, Steven Pifer and Michael O’Hanlon, *The Opportunity: Next Steps in Reducing Nuclear Arms* (Washington, D.C.: Brookings Press: 2012); Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012).

disputes – there is little hope that nuclear binding will end the India-Pakistan rivalry.

Next let's examine constructivism and its variants in the case of India-Pakistan rivalry. Unlike realists and liberal institutionalists, constructivists argue that groups and individuals within the state determine its behavior through their ideas, which shape the international system and its anarchic attributes, rather than the other way around.²⁷³ Specifically, Michael Horowitz argues that, for most Nuclear rivals, the period immediately following the acquisition of nuclear weapons encourages risk taking, especially for weaker opponents who have newfound military power against their stronger rivals. The longer these parties have nuclear weapons, the more likely they are to realize the dangers of escalation and, over time, they then initiate cross-border military hotline communications, arms control and disarmament measures to ease tensions.²⁷⁴ They learn that such weapons do not solve all their problems, only some of them, while generating new challenges that enjoin them to find answers. The India-Pakistan rivalry however has not followed this path.

²⁷³ For essential writings on constructivism, see Alexander Wendt, "Anarchy is what states make of it: the social construction of power politics," *International Organization* 46, (1992): 391-425; Dale C. Copeland, "The Constructivist Challenge to Structural Realism: A Review Essay," *International Security* 25, no. 2 (Fall 2000): 187-212; John Gerard Ruggie, *Constructing the World Polity: Essays on International Institutionalization* (New York: Routledge, 1998), 1-39, 172-197; Emanuel Adler and M. Barnett, "Security Communities in Theoretical Perspective," in *Security Communities*, ed. Emmanuel Adler and M. Barnett (Cambridge: Cambridge University Press, 1998), 3-28; Alexander Wendt, "Constructing International Politics," *International Security* 20 (1995): 71-81; and Nicholas Greenwood Onuf, *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia, S.C.: University of South Carolina Press, 1989).

²⁷⁴ Michael Horowitz, "The Spread of Nuclear Weapons and International Conflict: Does Experience Matter?" *Journal of Conflict Resolution* 53, 234 (2009): 234-257.

In December 2020, the India-Pakistan dyad was over thirty years old and had experienced six major crises without signing a single test ban treaty (e.g., Nuclear Proliferation Treaty and Comprehensive Test Ban Treaty) or arms control treaty; essentially making little progress toward rapprochement let alone resolving a border dispute.²⁷⁵

Horowitz's prediction that "late adopters may have a faster learning curve due to vicarious learning" does not seem to apply to India and Pakistan. Instead, these countries waged a major skirmish in Kargil (1999), and India retaliated to Pakistan-linked terrorist attacks in 2016 and 2019 by airstrikes in Pakistan-administered Kashmir.²⁷⁶ All indications are that India-Pakistan have not grown out of their risk-prone stage as Horowitz predicts. Moreover, unlike Horowitz prediction that once nuclear rivals graduate from risk taking to mitigating tensions phase they stay there is not true for India-Pakistan.

Finally, let's examine the India-Pakistan case across rivalry termination theories. There is a rich body of interstate-rivalry-termination literature.²⁷⁷ From a total of fifteen theories explaining the causes of interstate-rivalry termination, six are based on a cost-benefit analysis of actors. If the cost of rivalry is greater than the benefit of maintaining that rivalry—as Maoz, Armstrong, Pervin, and Womack argue—then adversaries begin to negotiate, engage in détente, and

²⁷⁵ The starting point for the U.S. and Russia is 1949, and for India and Pakistan it is 1987.

²⁷⁶ Jayita Sarkar, "Managing nuclear risk in South Asia," *Bulletin of the Atomic Scientists*, 73:1 (2017), 59-61, and Jeffrey Gettleman, "Tensions Over Kashmir Rise but India Says No Plans for War," *New York Times*, August 30, 2019.

²⁷⁷ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End* (Philadelphia: University of Pennsylvania Press, 2013), 195-227.

eventually terminate their rivalry.²⁷⁸ These theorists, however, do not explain why *nuclear* rivals fail to end perilous episodes of brinkmanship.²⁷⁹

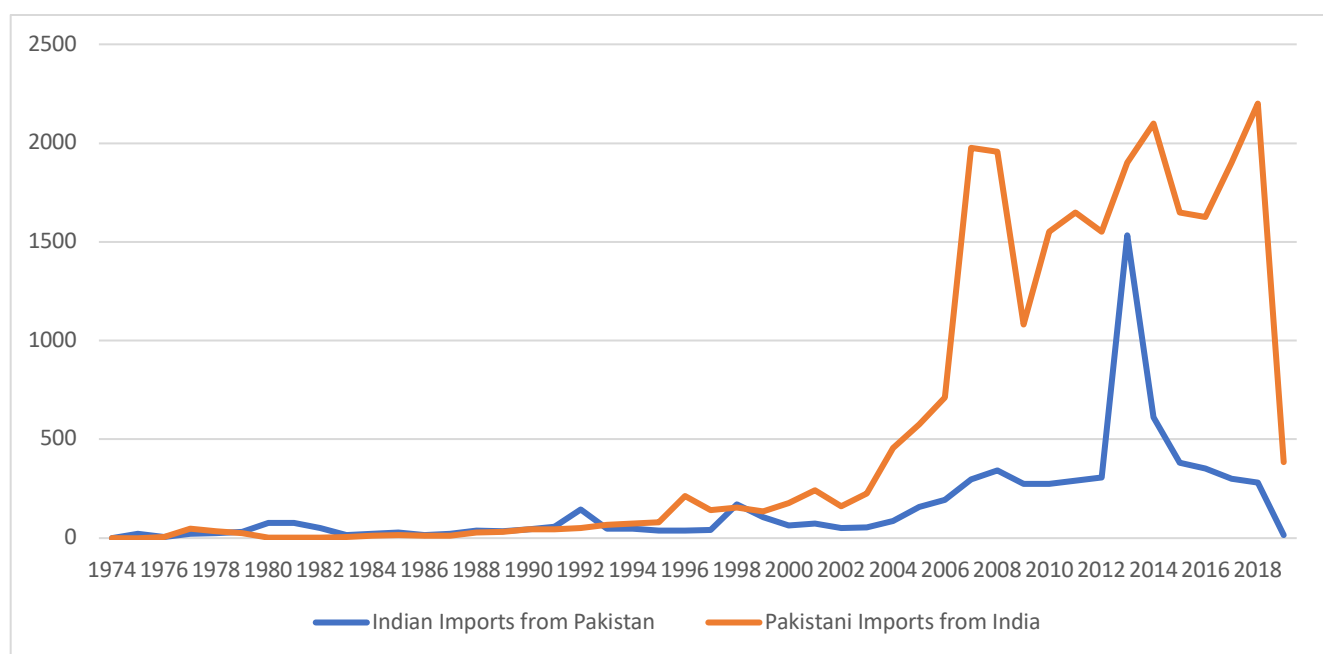
Several rivalry-termination theorists like Rosati, Legro, and Diehl argue that rivalries may end due to a catastrophic external shock or crisis that forces one or both rivals to reconsider the costs of their rivalry, leading to compromise and eventual peace based on resolving the underlying cause of conflict. This, however, does not explain the continuation of nuclear rivalry despite external shocks. For example, Pakistan was slapped with international sanctions after it hot-tested nuclear weapons in 1998, but instead of resolving its disputed territory with India, it engaged in brinkmanship during nine months later in Kargil. The Pakistanis were emboldened and less interested in calming tensions. This elicited a similar response from the Indians that also hot-tested nuclear weapons in 1999, creating a vicious cycle of continuous saber rattling short of war and détente short of resolving border disputes.

²⁷⁸ Zeev Maoz and Ben D. Mor, *Bound by Struggle: Strategic Evolution of Enduring International Rivalries* (Ann Arbor, M.I.: University of Michigan Press, 2002); Tony Armstrong, *Breaking the Ice: Rapprochement between East and West Germany, the United States and China, and Israel and Egypt* (Washington, D.C.: U.S. Institute of Peace, 1993); David J. Pervin, "Building Order in Arab-Israeli Relations: From Balance to Concert?" in David A. Lake and Patrick M. Morgan, eds., *Regional Orders: Building Security in a New World* (University Park: Pennsylvania State University Press, 1997); and "Asymmetric Rivals: China and Vietnam" in Sumit Ganguly and William R. Thompson, eds., *Asian Rivalries: Conflict, Escalation and Limitation on Two-Level Games* (Stanford, CA: Stanford University Press, 2011).

²⁷⁹ Jerel A. Rosati, "Cycles in Foreign Policy Restructuring: Politics of Continuity and Change in U.S. Foreign Policy," in Jerel A. Rosati, Joe D. Hagan, and Martin W. Sampson III, eds., *Foreign Policy Restructuring: How Governments Respond to Global Change* (Columbia, S.C.: University of South Carolina Press, 1994); Jeffrey W. Legro, *Rethinking the World: Great Power Strategies and International Order* (Ithaca, N.Y.: Cornell University Press, 2005); and Paul Diehl and Gary Goertz, *War and Peace in International Rivalry* (Ann Arbor, M.I.: University of Michigan Press, 2000).

Other rivalry termination theorists like Cos, Rock, and Lebow argue that domestic politics – shaped by doves overpowering hawks, presence of an acute crisis, or the success of internal policies dependent on ending rivalry, respectively— explain why rivalries terminate. These models, however, do not offer answers on the puzzling persistence of nuclear rivalries in the presence of stronger doves (2001 Agra Summit between India and Pakistan), presence of acute crisis (Pakistan’s economy in 2007), and internal policy success depending on rivalry termination (Pakistan and India’ economic policies from 1999-present specifically related to trade in South Asia). Again, regrettably, rivalry termination theories fall short in explaining the persistence of India-Pakistan nuclear rivalry. The major reason is that the primary cause of a nuclear-armed rivalry—disputed borders—remains unresolved, a factor essential to the India-Pakistan nuclear rivalry and not adequately examined in these theories.

Figure 22 India-Pakistan Trade 1974–2019 in \$ Millions



Source: Correlates of War Trade Database (4.0), World Bank, and Trading Economics

H2 Peace

Peace (border dispute resolution) is *less* likely when India and Pakistan possess nuclear weapons.

±Nuclear Weapons

= **War** (*border dispute resolved*); **Brinkmanship** (*border dispute unresolved*);
Peace (*border dispute resolved*); **Rapprochement** (*border dispute unresolved*)

Hypothesized Predictions	India-Pakistan Rivalry
India and Pakistan are likely to settle a border dispute by signing a peace treaty before the acquisition of nuclear weapons	Confirmed (e.g., 1949 Karachi Agreement, 1960 Indus Waters Treaty, 1972 Simla Agreement)
India and Pakistan are likely to engage in rapprochement, but not settle a border dispute by signing a peace treaty, after the acquisition of nuclear weapons	Confirmed (e.g., 1997-2008 Composite Dialogue and Confidence Building Measures, and 2011 Most Favored Nation Status)

On balance, there is significant empirical evidence in support of Nuclear Prison Theory and its main hypothesis that border dispute resolution is less likely when rival states possess nuclear weapons. In the next chapter I test NPRT across the India-China nuclear rivalry.

“China’s position on the sector of the China-Indian boundary, or Zangnan (the southern part of China’s Xizang[Tibet]), is consistent and clear. The Chinese government has never recognized the so-called Arunachal Pradesh [which is 32,333 square miles and twice the size of Bhutan].”

- Zhao Lijian, Spokesperson, Ministry of Foreign Affairs, China, September 7, 2020.²⁸⁰

“Pokhran is the area which witnessed Atal Ji’s [former Indian Prime Minister] firm resolve to make India a nuclear power and yet remain firmly committed to the doctrine of ‘No First Use’. India has strictly adhered to this [No First Use] doctrine. What happens in [the] future depends on the circumstances.”

- Raksha Mantri Shri Rajnath Singh, Minister of Defense, India, August 16, 2019.²⁸¹

Chapter 4: China-India Rivalry

In this chapter, I continue to test my Nuclear Prison Theory and assess its explanatory and predictive range. Like the India-Pakistan rivalry, the China-India rivalry, based on border disputes, is essential to testing the Nuclear Prison Theory. The China-India rivalry’s historical record demonstrates a similar pattern to the India-Pakistan rivalry: both countries waged war and settled border disputes before they acquired nuclear weapons and avoided war and the resolution of border disputes after acquiring nuclear weapons.

I also observed that a border dispute on sharing Brahmaputra River’s water was not resolved after China and India acquired nuclear weapons. This is an important observation that supports the Nuclear Prison Theory given that India and Pakistan did resolve their water dispute pre-nuclear acquisition (Indus Waters

²⁸⁰ “Foreign Ministry Spokesperson Zhao Lijian’s Regular Press Conference,” Ministry of Foreign Affairs of the People’s Republic of China, September 7, 2020.

²⁸¹ “Raksha Mantri Shri Rajnath Singh pays homage to former Prime Minister Atal Bihari Vajpayee in Pokhran on his first death anniversary,” India’s Ministry of Defense Official Statement, August 16, 2019

Treaty 1960). Why China and India avoid settling their border disputes after the acquisition of nuclear weapons is the focus of this chapter.

Specifically, I investigate one episode of war, one episode of peace, four episodes of brinkmanship, and six episodes of rapprochement, with special focus on H2 (*China-India border dispute resolution is less likely when rival states possess nuclear weapons*). Additionally, in this chapter I analyze the China-India nuclear rivalry case through the vantage points of other international relations theories and ascertain why they do not adequately explain the absence of peace between nuclear rivals. Collectively, this methodology assesses the value of NPRT in predicting and explaining nuclear rivalries based on border disputes.

H1_{War}

China-India Interstate war over border disputes is *less* likely when rival states possess nuclear weapons.

H2_{Peace}

China-India Peace (border dispute resolution) is *less* likely when rival states possess nuclear weapons.

±Nuclear Weapons

= ***War*** (*border dispute resolved*); ***Brinkmanship*** (*border dispute unresolved*); ***Peace*** (*border dispute resolved*); ***Rapprochement*** (*border dispute unresolved*)

Table 8 China-India Rivalry Outcomes

	Before Possession of Nuclear Weapons (1947–1974)	After Possession of Nuclear Weapons (1974–2020)
War	1. 1962 China-India War	
Brinkmanship		1. 1987 Sumdorong Chu Valley Crisis 2. 2013 Ladakh, Aksai Chin Crisis 3. 2017 Doklam, Bhutan Crisis 4. 2020 Galwan Valley, Ladakh Crisis
Rapprochement		1. 1993 Agreement on Resolving Border Dispute 2. 1996 Confidence Building Measures 3. 2005 Confidence Building Measures and Border Talks Agreement 4. 2012 Working Mechanism on China-India Border 5. 2013 Border Defense Cooperation Agreement 6. 2013 Border Water Dispute Agreements
Peace (Border Dispute Resolution)	1. 1954 Panchsheel Treaty	

The China-India rivalry is primarily based on border disputes across three sectors: eastern, central, and western. Unlike India and Pakistan, which dispute parts of their borders but have a formal ceasefire line (*Line of Control*) with a mutually agreed demarcation, India and China frequently dispute the length of their borders.²⁸² Instead, India considers its border with China to be 2,502 miles long, while China considers it to be 1,242 miles long. Both countries refer to their eastern and western borders as the *Line of Actual Control*, which is left to each

²⁸² Ather Zia, “LoC: The Line “out” of Control in the Region of Kashmir,” *American Quarterly* 71, no. 4 (2019): 1037, and T.V. Paul ed., *The China-India Rivalry in the Globalization Era* (Washington, D.C., Georgetown University Press, 2018), 29-32.

country's discretion of 50–100 miles each way. The central portion, with the least amount of disputed territory, is referred to as the disputed border instead of the Line of Actual Control. Historically, the India-China border was purposefully not drawn by “British India, Tibet, or the Qing [dynasty],” instead, Tibet and its mountainous terrain was used as a buffer between the two.²⁸³ For this dissertation, I use CIA's World Factbook estimate of a 1,652-mile-long China-India border and refer to India and China's disputed border by regions: eastern, central, and western.²⁸⁴

In the eastern sector, India accepts the McMahon Line, which was ostensibly drawn between British India and the Republic of China between 1913 and 1914. The McMahon Line cut southeast Tibet into the modern-day Indian state of Arunachal Pradesh (eastern sector). At that time, China was militarily and economically weak and India was a British colony. Therefore, China rejects the McMahon Line and considers Arunachal Pradesh (32,300 square miles) a part of its Tibetan province (sometimes referred to by China as South Tibet). The Chinese find the McMahon Line “a colonial imposition that New Delhi was perpetuating because China had never agreed to it.”²⁸⁵ West of Arunachal Pradesh is Sikkim, a former independent kingdom that joined the Indian Federation in

²⁸³ Fravel, M. Taylor, *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes*, (Princeton, Princeton Press, 2008), 326.

²⁸⁴ The World Factbook, CIA (accessed November 9, 2020); available from <https://www.cia.gov/library/publications/the-world-factbook/>, and Jeff M. Smith, *Cold Peace: China-Rivalry in the Twenty-First Century* (London: Lexington Books, 2014), 22-23.

²⁸⁵ Mahesh Shankar, “Territory and the China-India Competition,” in *The China-India Rivalry in the Globalization Era*, ed. T.V. Paul (Washington, D.C., Georgetown University Press, 2018), 29-30.

1975, and which has a small sliver of territory called the Nathu La mountain pass that is also disputed by China. Nathu La was the site of a major border skirmish between India and China in 1967.²⁸⁶

The central sector has the smallest territory under dispute—810 square miles in the Indian states of Himachal Pradesh and Uttarakhand, west of Nepal and southwest of Tibet. The central sector seems most ripe for resolution because India and China have exchanged official maps of the region with less variation than the eastern and western sectors of disputed territory; yet, both sides have not resolved the border dispute.²⁸⁷

On the western sector, south of the Chinese province of Xinjiang and the western Tibetan frontier, the border is disputed along the Kunlun Mountains in a region called *Aksai Chin* (desert of white stones). Aksai Chin is a large ice glacier that is strategically located near China's Xinjiang-Tibet highway, the lifeline between Tibet and mainland China and is the Chinese military's major logistics pipeline. India claims 14,671 square miles of Aksai Chin, while China claims 579 square miles to the south surrounding Demchok. Additionally, Pangong Lake is one-third controlled by India in the west, and two-third by China in the east; yet, both countries contest each other's claims.²⁸⁸

²⁸⁶ C. Raja Mohan, *Samudra Manthan: Sino-Indian Rivalry in the Indo-Pacific* (Washington, D.C., Carnegie Endowment for International Peace, 2012), 10-25, and Michael Rowland, "The Bloody China-India Border Fight Is a Lot Like the Last One," *Foreign Policy*, June 18, 2020.

²⁸⁷ Jeff M. Smith, *Cold Peace: China-Rivalry in the Twenty-First Century* (London: Lexington Books, 2014), 25.

²⁸⁸ J. W. Garver, *Protracted Contest: Sino-Indian Rivalry in the Twentieth Century* (Seattle, University of Washington Press, 2001), 79-80. Rishika Chauhan, "Differences not Disputes: India's View of the Border After 1962," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 181-182.

Figure 23 China-India Border Disputes



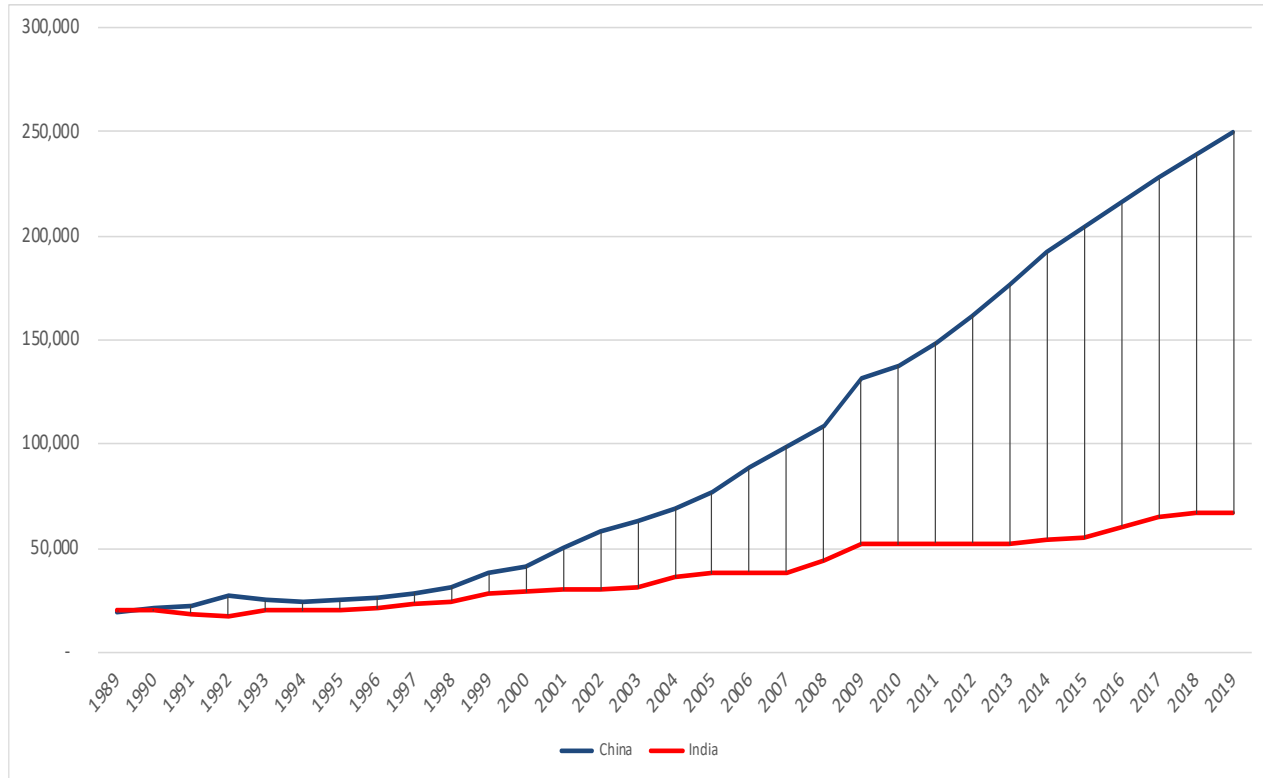
Source: Fravel, M. Taylor. *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes*. (Princeton, Princeton Press, 2008), 80.

In addition to the China-India rivalry, which is largely based on active border disputes, the rivalry is asymmetric—a condition that existed both before and after the acquisition of nuclear weapons. A reliable proxy of asymmetry is military spending, demonstrated below in a graph. Moreover, China is the stronger power, with a GDP of \$14.3 trillion in 2019, which is nearly five times that of India's \$2.9 trillion. China also outspends India by nearly four times on its military (China's defense budget in 2019 was \$266 billion, compared to India's \$71 billion)²⁸⁹. In 2020, the Lowy Institute Asia Power Index gave China a score

²⁸⁹ SIPRI, "SIPRI Military Expenditure," Data for all countries 1949-2019, (accessed November 10, 2020); available from www.sipri.org

of 92.5 for economic capability compared to a score of 25.3 for India, and a score of 66.8 to China for military capability compared to 44.3 to India.²⁹⁰

Figure 24 China and India Military Spending in \$ Millions 1989-2019



Source: SIPRI²⁹¹

In 2019, the trade deficit between the two countries was \$58.7 billion in favor of China.²⁹² Although Beijing and Delhi had hoped that the economic benefits of trade would soften the rougher edges of their diplomatic and security relations, and even lay the groundwork for a border settlement, the opposite has happened. Economic relations themselves have become part of the conflict, and diplomatic-security relations have not significantly improved. On the border, the

²⁹⁰ Lowy Institute Asia Power Index, 2020 Edition, (accessed November 12, 2020); available from www.power.lowyinstitute.org

²⁹¹ SIPRI, "SIPRI Military Expenditure," Data for all countries 1949-2019, (accessed November 10, 2020); available from www.sipri.org

²⁹² Amitendu Palit, "Can India Decouple from China?" *The Diplomat*, November 1, 2020.

two countries are as far apart as ever, “indeed, the Chinese position on its claims has hardened to include all of Arunachal Pradesh (South Tibet).”²⁹³

Military capabilities are measured on quantities and quality of materiel and personnel. China, for example, has just over two million active-duty personnel, whereas India has under 1.4 million; China operates 6,740 main battle tanks, and India operates 3,097; and China operates 57 attack submarines, and India operates 14. Moreover, China has 3,736 more artillery pieces, 55 more major surface combatants, 1,181 more fighter/multirole aircraft, and 162 more bombers than India.²⁹⁴

Given the asymmetry in economic and military power, China should have no issue resolving the problem of contested territory, and yet, since their acquisition of nuclear weapons, India and China have not gone to war or resolved a single border dispute.²⁹⁵ This is incredibly noteworthy when we observe the fact that, before either side had nuclear weapons, territory was gained and lost through war and peace.

Next, I closely inspect cases of war and peace (border dispute resolution) before China and India acquired nuclear weapons, and major incidents of brinkmanship and rapprochement (short of border dispute resolution). Since

²⁹³ Rishika Chauhan, “Differences not Disputes: India’s View of the Border After 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 7-8.

²⁹⁴ “Chapter Six: Asia,” *The Military Balance*, 120, no.1, (2020): 220-221, and Oriana Skylar Mastro and Arzan Tarapore, “Asymmetric but Uneven: The China-India Conventional Military Balance,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 240.

²⁹⁵ China acquired nuclear weapons in 1964, and India in 1974 based on first successful nuclear weapon test. Therefore, I use 1974 as the year both had nuclear weapons.

political scientists have rigorously explored why nuclear rivals avoid war for decades, I briefly describe incidents of brinkmanship, leaving a deeper analysis for episodes of détente and why they did not end in border dispute termination, which is the main question of my dissertation.

China-India Rivalry: War and Peace Before Nuclear Weapons (1947–1974)

China-India 1962 War and Territorial Change

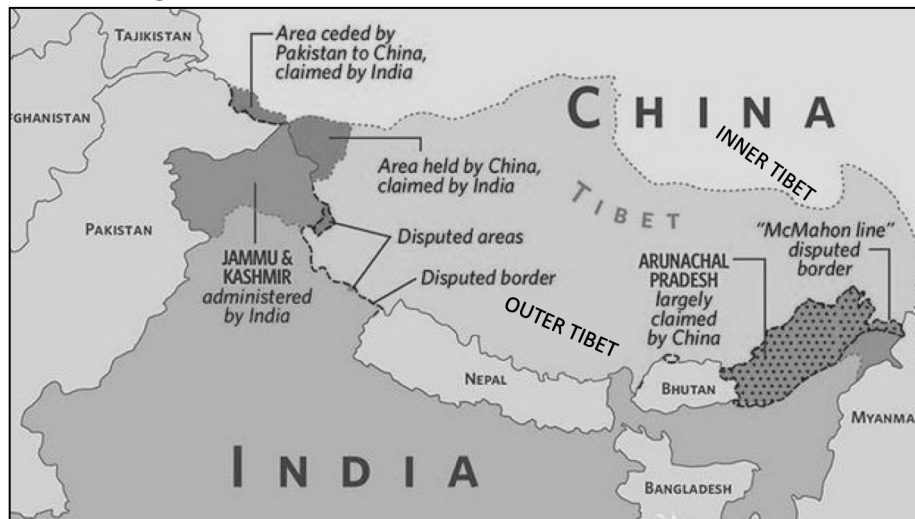
There were major territorial changes before and after the 1962 war between China and India. In 1950, China successfully annexed Tibet (474,300 square miles), which was, at that time, a protectorate of India (inherited from the British Empire in 1947) housing Indian troops, diplomats, and traders. After the 1962 War, China annexed Aksai Chin (14,380 square miles) and, after the 1967 skirmishes, India held on to the kingdom of Sikkim (2,740 square miles), which eventually became an Indian state.

After India gained independence from the British Empire in 1947, China was determined to nullify the British Empire's privileges in Tibet that India had inherited. In 1914, the British Empire demarcated the borders between China, Tibet, and India through the McMahon Line. Tibet was considered a buffer between China and British India. The British had invaded Tibet in 1904 and created a de facto autonomous polity, independent from China, under British protection. The Tibetan delegation agreed to the new borders, which promised

near independence to Tibet, but the Chinese delegation refused to sign the 1914 Simla Convention.²⁹⁶

The agreement divided Tibet into “Outer Tibet” and “Inner Tibet.” Outer Tibet contained Tibet’s capital, Lhasa, which housed British and, after 1947, Indian military troops, garrisons, trade posts, and cultural and other diplomatic missions.²⁹⁷ A British-backed Tibet’s government (largely comprising of the present-day Chinese province of Tibet) ruled from 1914 until 1950 when Chinese troops invaded and annexed the territory.

Figure 25 China-India-Tibet Border Variations 1914-1950



Source: Author based on BBC, Scott Relya, “Yokes of Gold and Threads of Silk: Sino-Tibetan Competition for Authority in Early Twentieth Century Kham,” *Modern Asian Studies* 49, (2015): 963-1009, and Karunakar Gupta, “The McMahon Line 1911-45: The British Legacy,” *The China Quarterly* 47, (1971): 521-525.

²⁹⁶ Karunakar Gupta, “The McMahon Line 1911-45: The British Legacy,” *The China Quarterly* 47, (1971): 521-525.

²⁹⁷ Melvyn Goldstein, *A History of Modern Tibet: The Calm Before the Storm: 1951-1955* (Los Angeles: University of California Press, 2009), 469, quoted in Jeff M. Smith, *Cold Peace: China-India Rivalry in the Twenty-First Century* (London: Lexington Books, 2014), 86.

After Chinese communists ascended to power in 1950, they invaded Tibet to renounce the 1914 McMahon Line. Therefore, China claimed India's then-North East Frontier Agency (present day Arunachal Pradesh) as South Tibet. China explicitly rejected Indian privileges in Tibet because they were based on “the unequal relationships between Britain and the former Chinese government” and assured Chinese suzerainty over Tibet—but not sovereignty—by placing South Tibet under India's control.²⁹⁸

Despite some domestic support for military action against China in 1950, in the end India did not push back militarily. Having recently won independence from the British, India faced severe internal security and economic problems, was reeling from a war with Pakistan in 1948, with an Army that had “severe disadvantages against the Chinese given that they were neither adequately equipped nor trained” to fight at high altitudes across mountain ranges.²⁹⁹

The Chinese annexation became permanent when India agreed to “the withdrawal of the Indian Military Escorts stationed in Tibet,” on October 3, 1953, limiting Indian military intelligence efforts.³⁰⁰ By 1954, most of the Indian economic and military infrastructure in Tibet was removed or taken over by China, including “commercial organs, post and telecommunication faculties, and

²⁹⁸ “Cable from Ambassador Yuan Zhongxin, 'Minutes of Meeting between R.K. Nehru and Ambassador Yuan',” September 06, 1953, *History and Public Policy Program Digital Archive*, PRC FMA 105- 00032-03, 12-14. Obtained by Dai Chaowu and translated by 7Brands. <http://digitalarchive.wilsoncenter.org/document/114752>.

²⁹⁹ Hu Xiaowen, “The 1950s in China-India Relations,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 90.

³⁰⁰ “Aide Memoire from the Government of India, Ministry of External Affairs,” October 03, 1953, *History and Public Policy Program Digital Archive*, PRC FMA 105-00032-05, 23. Obtained by Dai Chaowu. <http://digitalarchive.wilsoncenter.org/document/114753>.

troops,” and India’s investment in Tibet’s transportation system, which was critical to transporting troops.³⁰¹

Instead of protesting, India officially recognized Chinese sovereignty over Tibet by signing the Panchsheel Treaty in 1954, emphasizing “Five Principles of Peaceful Coexistence.” In the ensuing years, India gave up all its special rights in Tibet, pulled troops, and closed certain diplomatic and trade offices.³⁰² However, India simultaneously reinforced its claim to Arunachal Pradesh (32,300 square miles) and continued to anger China through its “Forward Policy” by building 40 Indian military posts in the western and eastern sectors, many times in visible distance of Chinese military posts.³⁰³

In 1955, India occupied Pulam Sumda (*Bo lin san duo*), which is one of the ten trade markets that the Chinese government had agreed to open in the Ngari Prefecture of Tibet in accordance with the 1954 Panchsheel Treaty. In 1957, India occupied Shipki La (*Shi pu qi shankou*), which is one of the four important

³⁰¹ “Cable from the Chinese Foreign Ministry, 'Report on Negotiations regarding the Tibet issue between China and India',” November 24, 1950, *History and Public Policy Program Digital Archive*, PRC FMA 105-00011-02, 42-44. <http://digitalarchive.wilsoncenter.org/document/114749>, and Chaowu Dai, “China’s Strategy for Sino-Indian Boundary Disputes 1950-1962,” *Asian Perspective*, 43, no. 3 (2019), 442.

³⁰² The text of the “Agreement between the Republic of India and the People’s Republic of China on Trade and Intercourse between the Tibet Region of China and India,” also known as the Panchsheel Treaty clearly uses the term, “The Tibet Region of China,” and Hu Xiaowen, “The 1950s in China-India Relations,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 88-93.

³⁰³ Mahesh Shankar, “The Reputational Bases of India’s China Policy: The Forward Policy and Beyond,” *India Review*, 18, no. 5 (2019): 524-525, and Neville Maxwell, *India’s China War* (London: Cape, 1972), 292.

passageways from India to Tibet in the central sector. China, busy with the Korean War, protested diplomatically, but did not send troops.³⁰⁴

In 1959, Tibetans in Lhasa revolted after enduring nine years of Chinese occupation. Tibet's spiritual leader, the 14th Dalai Lama, while actively supporting the rebels, fled Tibet and sought and gained asylum from India.³⁰⁵ Indian and Chinese premiers met to resolve the issue, but the talks failed, and in 1961 Indian premier Jawaharlal Nehru declared that "the dispute could not be negotiated, let alone resolved" unless the Chinese withdrew first from what India considered occupied territories in the western, central, and eastern sectors.³⁰⁶ This was a nonstarter for the Chinese.

To counter India's forward policy, China attacked first. From October 20 to November 21, 1962 Chinese troops routed Indian troops and destroyed their military posts in the western and eastern sectors. Specifically, Chinese troops pushed Indian troops out of Aksai Chin and established full control of 14,380 square miles of territory.³⁰⁷ Chinese troops pushed the Indian Fourth Division south from the Thag La ridge near Bhutan, Walong, and India's Arunachal Pradesh (then called the North East Frontier Agency).³⁰⁸ In late November, Chinese troops had control over western and eastern Arunachal Pradesh, most of

³⁰⁴ Hu Xiaowen, "The 1950s in China-India Relations," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 94.

³⁰⁵ Jennifer Latson, "How and Why the Dalai Lama Left Tibet," *TIME*, March 5, 2019.

³⁰⁶ Mahesh Shankar, "The Reputational Bases of India's China Policy: The Forward Policy and Beyond," *India Review*, 18, no. 5 (2019): 524.

³⁰⁷ Bruce Riedel, *JFK's Forgotten Crisis* (Washington, D.C., Brookings, 2015), 132.

³⁰⁸ Bruce Riedel, *JFK's Forgotten Crisis* 114, and Neville Maxwell, *India's China War* (London: Cape, 1972), 280-295.

32,300 square miles of Indian-administered territory. On November 21, 1962 China declared a unilateral ceasefire and moved its troops out of Arunachal Pradesh but kept them in Aksai Chin.³⁰⁹

While the China-India 1962 war involved thousands of troops from both sides, there were other major skirmishes before both countries developed nuclear weapons. Out of these skirmishes the 1967 Nathu La and Cho La clashes deserve special attention because of the intensity of fighting and the resulting exchange of territory.

After India's loss to China in 1962, India began rebuilding and expanding its military, nearly doubling it in five years. The kingdom of Sikkim (eastern sector) was a protectorate of India. China encouraged Sikkim to revolt and declare its independence from India. Indian soldiers stationed in Sikkim began building trenches, placing small wire fencing, and augmenting a military post near Nathu La and Cho La abutting the Sikkim-Tibet border. Chinese soldiers considered such a post as a violation of the Line of Actual Control and major clashes followed, including artillery barrages. China reported a total of 36 dead servicemen, but the Indians reported 400 Chinese servicemen were killed, making clear the possibility that dozens were killed on both sides.³¹⁰

In the aftermath, Indian troops remained in Sikkim, and Sikkim voted to join the Indian Union in 1975; and it became an Indian state in 2003. Much like

³⁰⁹ Robert Farley, "How China Defeated India in a Terrifying 1962 War," *The National Interest*, February 11, 2020, and Bruce Riedel, *JFK's Forgotten Crisis*, 140.

³¹⁰ Michael Roward, "The Bloody China-India Border Fight is a Lot Like the Last One," *Foreign Policy*, June 18, 2020.

India's grudging acceptance of the invasion of Tibet in 1954, China accepted Sikkim as part of India in 2005.³¹¹

Peace (Border Dispute Resolution)

1954 Panchsheel Treaty

Four years after China annexed Tibet in 1950, and India did not act militarily to defend its protectorate, New Delhi and Beijing, on April 29, 1954, officially recognized China's control over Tibet, promoted economic ties, and pledged to resolve border disputes through dialogue. Both parties signed the Panchsheel Treaty, which was formally called *the Agreement between the Republic of India and the People's Republic of China on Trade and Intercourse between the Tibet Region of China and India*.³¹² In the very title of the agreement India accepted China's control over Tibet.

Additionally, the Panchsheel Treaty was based on five principles of coexistence:

³¹¹ Tanvi Madan, "How the U.S. Viewed the 1967 Sikkim Skirmishes between India and China," *Brookings*, September 13, 2017, and Rishika Chauhan, "10 Differences Not Disputes: India's View of the Border After 1962," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 182.

³¹² "Agreement between the Republic of India and the People's Republic of China on Trade and Intercourse between the Tibet Region of China and India," April 29, 1954, *History and Public Policy Program Digital Archive*, Renmin ribao (People's Daily), April 30, 1954. <http://digitalarchive.wilsoncenter.org/document/121558>, and Fang Tien-sze, "Solving a Solved Problem: The Tibet Issue in China-India Relations," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 200.

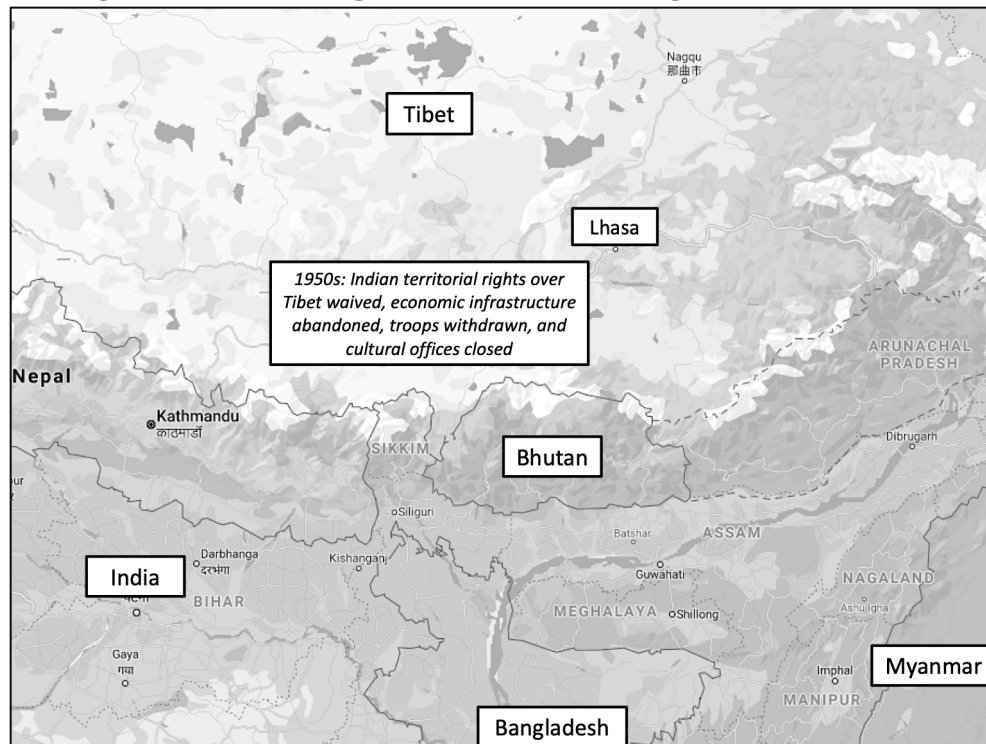
- (1) mutual respect for each other's territorial integrity and sovereignty
- (2) mutual non-aggression
- (3) mutual non-interference in each other's internal affairs
- (4) equality and mutual benefit
- (5) peaceful co-existence³¹³

India and China also agreed to open trade and diplomatic offices in the area bordering Tibet and India, and in mainland China and New Delhi. Both countries permitted families separated by the border to meet and travel across for religious pilgrimages.³¹⁴ The biggest win for China was India's acceptance of its control over Tibet.

³¹³ "Agreement between the Republic of India and the People's Republic of China on Trade and Intercourse between the Tibet Region of China and India," April 29, 1954, *History and Public Policy Program Digital Archive*, Renmin ribao (People's Daily), April 30, 1954. <http://digitalarchive.wilsoncenter.org/document/121558>.

³¹⁴ "Agreement between the Republic of India and the People's Republic of China on Trade and Intercourse between the Tibet Region of China and India.

Figure 26 Surrendering of Indian Territorial Rights in Tibet in the 1950s



Source: Author based on Ryosuke Kobayashi, "Tibet in the Era of 1911 Revolution," *Journal of Contemporary East Asia Studies* 3, no.1 (2014), 104-108, and Karunakar Gupta, "The McMahon Line 1911-45: The British Legacy," *The China Quarterly* 47, (1971): 521-525.

The war and border resolution outcomes of the China-India rivalry (before the acquisition of nuclear weapons) strongly support the Nuclear Prison Theory assertion that countries resolve their contested borders before acquiring nuclear weapons. China and India engaged in one war (1962) based on a border dispute and exchanged disputed territories (Tibet, Arunachal Pradesh and Aksai Chin) after that war. Additionally, the 1954 Panchsheel Treaty provides strong evidence of a disputed border resolution between China and India before they acquired nuclear weapons.

China-India Rivalry: War and Peace After Nuclear Weapons (1974–2020)

Before the acquisition of nuclear weapons, China and India waged war and resolved their border disputes in the eastern and western sectors. Below I demonstrate that, after developing nuclear weapons, both engaged in brinkmanship and détente but never resolved a single border dispute. I begin with a short introduction of China and India's nuclear weapons program and current capabilities.

State of China's Nuclear Weapons Program

China tested its first fission device, a 20-22kT uranium device, on October 16, 1964.³¹⁵ Unlike India and Pakistan, China's pursuit of nuclear weapons was not motivated by "a defeat in conventional war, but rather to balance against the threat of future nuclear coercion and potential nuclear use."³¹⁶ China has since claimed that its nuclear doctrine is based on no-first-use and considers its nuclear weapons as minimum deterrents against an external nuclear attack.³¹⁷ China has nearly 200 nuclear warheads and plans to double the size in the near future.³¹⁸

Chinese land-based ballistic missile forces are organized under the People's Liberation Army's Rocket Force, which is responsible for maintaining conventional and nuclear weapons and the "ability to deter and strike across the

³¹⁵ Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton: Princeton University Press, 2014), 121.

³¹⁶ Vipin Narang, *Nuclear Strategy in the Modern Era*, 123.

³¹⁷ Nuclear Threat Initiative, "China" (accessed November 16, 2020); available from www.nti.org

³¹⁸ United States Department of Defense, "Military and Security Developments Involving the People's Republic of China 2020." September 2020, 85.

entire defense area.”³¹⁹ It was established in 2015 to “enhance nuclear deterrence and counter-strike capacity” with medium- and long-range precision-strike ability. The Chinese Rocket Force is responsible for all strategic missiles, including those on the Chinese Navy’s submarines, including the *Jin* class.³²⁰

Since the 1980s, China has moved from liquid-fuel, slow-launching missiles to longer-range, road-mobile, solid-fuel, and quicker-launching missiles including the DF-41 Intercontinental Ballistic Missile (ICBM), which will likely replace the DF-4, DF-5A, and DF-5B.³²¹ Over the years, Chinese nuclear command and control has also modernized with the goal of a “land-based missile force better able to survive U.S. (or Russian or Indian) surprise attacks,” especially given China’s competitors’ intelligence, surveillance, and reconnaissance capabilities and precision-guided conventional weapons.³²²

Specifically, the DF-31A (CSS-10 Mod 2)—a solid-fueled, three-stage, road-mobile ICBM—is an extended-range version of the DF-31, designed to reach targets in most of the continental United States. China also has four *Jin*-class (Type 094) nuclear-powered ballistic missile submarines (SSBNs), which are based at the Longposan naval base near Yeilin on Hainan Island. Each Jin SSBN is designed to carry up to 12 JL-2 (CSS-14) missiles, a submarine-launched ballistic missile (SLBM) that is a modified version of the DF-31.³²³ The H-6N

³¹⁹ Hans M. Kristensen and Matt Korda, “Chinese Nuclear Forces, 2019,” *Bulletin of the Atomic Scientists*, 2019, Vol. 75, No. 4, 171-178.

³²⁰ M. Taylor Fravel, *Active Defense: China’s Military Strategy Since 1949* (Princeton: Princeton University Press, 2019), 267.

³²¹ M. Taylor Fravel, *Active Defense*, 266.

³²² Hans M. Kristensen and Matt Korda, “Chinese Nuclear Forces, 2019,” 173.

³²³ Hans M. Kristensen and Matt Korda, “Chinese Nuclear Forces, 2019,” 175, and M. Taylor Fravel, *Active Defense*, 267.

bomber will “carry an air-launched version of the DF-21 medium-range ballistic missile designated by the U.S. intelligence community as CH-AS-X-13. A 2019 DoD report said that this nuclear air-launched ballistic missile would “for the first time, provide China with a viable nuclear ‘triad’ of delivery systems dispersed across land, sea, and air forces.”³²⁴

State of India’s Nuclear Weapons Program

India’s decision to build a nuclear weapon was a response to its defeat by the Chinese in 1962. China developed nuclear weapons by 1964, and India first tested a device in 1974. After September 11, 2001, India faced Pakistani insurgent attacks in New Delhi (2001–2002) and Mumbai (2008). India’s doctrine (first introduced in 2003) is based on the following pillars:³²⁵ India would create and sustain a credible minimum deterrent and adopt a no-first-use stance, “where nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere.”³²⁶ If attacked first, India would use massive retaliation sanctioned by civilian leaders. India would not use its nuclear weapons against non-nuclear states unless it was attacked by biological and chemical weapons. India would participate in international efforts to protect and

³²⁴ Hans M. Kristensen and Matt Korda, “Chinese Nuclear Forces, 2019,” 176.

³²⁵ “The Cabinet Committee on Security Reviews Operationalization of India’s Nuclear Doctrine,” January 4, 2003, quoted in Bhumitra Chakma, “Pakistan’s Post-test Nuclear Use Doctrine,” in Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia* (Farnham: Ashgate Publishing Limited, 2011), 62. (This source is authoritative because it is quoted in at least five major scholarly books I read for this paper; see bibliography.)

³²⁶ “The Cabinet Committee on Security Reviews Operationalization of India’s Nuclear Doctrine,” January 4, 2003, quoted in Bhumitra Chakma, “Pakistan’s Post-test Nuclear Use Doctrine,” in Bhumitra Chakma, *The Politics of Nuclear Weapons in South Asia* (Farnham: Ashgate Publishing Limited, 2011), 63.

limit fissile material, agree to observe a moratorium on nuclear tests, and pledge to work for a nuclear weapon-free world.³²⁷

In 2018, India operated seven nuclear-capable systems: two aircraft-based ballistic missiles, four land-based ballistic missiles, and one sea-based ballistic missile. These systems provided India with a developing second-strike capability. At least four more systems are being developed with a focus on long-range, land- and sea-based missiles “for possible deployment within the next decade.”³²⁸

India has produced 600 kilograms of weapons-grade plutonium, enough for 150-200 nuclear warheads; India currently has one 120 to one 140 nuclear warheads. In addition to the Dhruva plutonium production reactor near Mumbai, India is planning to build “six fast breeder reactors” and produce weapons-grade plutonium and is building a new, unsafeguarded gas centrifuge facility to increase uranium production.³²⁹ Aircraft remains the major delivery system of India’s nuclear weapons. Up to “four squadrons of Mirage 2000H and Jaguar IS/IB (and possibly MiG-27) aircraft, at three bases,” are responsible for nuclear strike missions against Pakistan and China.³³⁰

India has four types of land-based, nuclear-capable ballistic missiles: the short-range Prithvi-2 (350 kilometers [km]) and Agni-1 (700 km), the medium-range Agni-2 (2,000 km), and the intermediate-range Agni-3 (3,200 km). Two

³²⁷ This is not based on India’s official nuclear doctrine, because it is classified.

³²⁸ Hans M. Kristensen and Matt Korda, “Indian Nuclear Forces, 2018,” *Bulletin of the Atomic Scientists* 74, no. 6 (2018): 362.

³²⁹ Shannon N. Kile and Hans M. Kristensen, “Trends in World Nuclear Forces, 2017,” SIPRI Fact Sheet, July 2017.

³³⁰ Hans M. Kristensen and Robert S. Norris, “Indian Nuclear Forces, 2017,” *Bulletin of the Atomic Scientists* 73, no. 4 (2017): 206.

longer-range Agni missiles are under development: Agni-4 (3,500 kilometers) and Agni-5 (up to 8,000 km). Agni 6 (up to 12,000 km) underwent successful testing in 2017 and has a multiple independently targetable re-entry vehicle—a payload containing several thermonuclear warheads, each capable of being aimed to hit a different target.³³¹ Variants of Agni-5 and -6 are also under development as submarine-launched ballistic missiles. To put the missile ranges in context, an intercontinental ballistic missile (ICBM) has a minimum range of 5,500 km and can carry a nuclear warhead.³³² All in all India is a modern, highly capable, and soon to be secured-second strike, nuclear power.

Brinkmanship

Brinkmanship is a rivalry outcome resulting from nuclear-armed rivals attempting to expand their respective stake in the disputed territory without escalating to full-scale war. Below are four episodes of Brinkmanship experienced by China and India after they acquired nuclear weapons. In each incident, both countries engaged in a range of border clashes, intensified by amassing of troops, but did not escalate to full-scale war.

Before we discuss these episodes, it is important to highlight the expansion of military infrastructure on both sides of the border. These episodes

³³¹ Franz-Stefan Gady, “India to Test Fire Nuclear Missile Capable of Hitting China,” *The Diplomat*, December 15, 2016; Ankit Panda, “India is Capable of Developing a 10,000-kilometer range ICBM,” *The Diplomat*, April 6, 2015; and Hans M. Kristensen, “India’s Missile Modernization Beyond Minimum Deterrence,” *Federation of American Scientists*, October 4, 2013.

³³² Hans M. Kristensen and Matt Korda, “Indian Nuclear Forces, 2018,” *Bulletin of the Atomic Scientists* 74, no. 6 (2018): 362.

involved not only “transgressions” by each side (when Indian or Chinese patrols crossed the other’s understanding of the Line of Actual Control) but involved one side crossing over and setting up military camps across the disputed border. Transgressions from China to India have increased from 2010 to 2018, and both sides have made significant investments in building roads and military infrastructure close to the Line of Actual Control.

In 2006, India decided to build 73 strategic roads, along the disputed border with China, across the western, central, and eastern sectors.³³³ For example, the 2020 Galwan Valley Crisis episode (examined below) was triggered by India’s construction of a 140-mile road meant specifically to “move men and materiel rapidly in a conflict” with China.³³⁴ Additionally, in 2009, India established two mountain divisions, and in 2013 announced its intent to build a 90,000-strong mountain strike corps to “be able to conduct offensive operations against China in Tibet.”³³⁵ India has also developed airstrips capable of housing combat and transport aircraft, like the Daulat Beg Oldi military base in Ladakh near Aksai Chin, and deployed surface-to-air missile air squadrons. Since 2010,

³³³ M. Taylor Fravel, “Stability in a Secondary Direction: China and the Border Dispute with India after 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 174.

³³⁴ Patrik Jakhar, “India and China Race to Build along a Disputed Frontier,” *BBC*, July 30, 2020.

³³⁵ Shivshankar Menon, *Choices, Inside the Making of India’s Foreign Policy* (Washington D.C.: Brookings, 2016), 24, and Taylor Fravel, “Stability in a Secondary Direction: China and the Border Dispute with India after 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 174.

India has made more investments in military infrastructure near the Line of Actual Control than “in any decade since independence.”³³⁶

China has also significantly increased its military infrastructure in the last five years with new roads, airstrips, barracks, and helipads. Specifically, in 2019, Chinese Tibet had four major airbases with helipads, four air defense sites, and one electronic warfare station with shelters that “obscure combat aircraft from observation.” The goal is to strengthen China’s air superiority along the Line of Actual Control and exploit “gaps in India’s capabilities.”³³⁷

Table 9 Chinese Transgressions into India 2010-2018

Year	Transgressions from China into India
2010	250
2011	220
2012	430
2013	340
2014	500
2015	350
2016	250
2017	426
2018	326

Source: M. Taylor Fravel, “Stability in a Secondary Direction: China and the Border Dispute with India after 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 174, and “1,025 Chinese Transgressions from 2016-2018: Government Data,” *Economic Times*, November 28, 2019.

³³⁶ Shivshankar Menon, *Choices, Inside the Making of India’s Foreign Policy* 24, and Taylor Fravel, “Stability in a Secondary Direction: China and the Border Dispute with India after 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (London: Routledge, 2020), 174.

³³⁷ Sim Tack, “A Military Drive Spells out China’s Intent Along the Indian Border,” *Stratfor*, September 22, 2020, and Rezaul H. Laskar, “China Doubled its Air Bases, Air Defences and heliports near LAC in Three Years: Report,” *Hindustan Times*, September 22, 2020.

1987 Sumdorong Chu Valley Crisis

During the 1962 China-India war, India had lost control over Namka Chu river that flows near the Tawang District of the Indian state of Arunachal Pradesh. As there were no defensive positions in northern Tawang, India began, in 1983, constructing a small base near the Sumdorong Chu valley. In the event of a future war with China, such a base would give Indian troops the high ground to defend the Tawang district. In 1986, the year India declared Arunachal Pradesh an Indian state, an Indian border patrol noticed a Chinese military presence in the Thadrang pasture on the banks of the Sumdorong Chu valley in the Tawang district of Arunachal Pradesh. This was part of the same territory that India and China fought a war over in 1962. India notified China of what it considered to be a violation of Indian territory across the Line of Actual Control. Beijing denied the intrusion and Indian forces occupied the area next to the Chinese troops, which lead to a year-long impasse.³³⁸ The military standoff did not result in a border resolution, but tensions were decreased when India's minister of external affairs visited China in 1987, and the Indian Prime Minister's visit the following year, which then led to informal talks that culminated in the 1993 China-India agreement to resolve border disputes.

³³⁸ Rishika Chauhan, "10 Differences Not Disputes: India's View of the Border After 1962," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 183, and Sushant Singh, "Why 2017 is not 1987," *The Indian Express*, August 4, 2017.

Figure 27 Sumdorong Chu Valley, Tawang, Arunachal Pradesh



Source: Author based on Reuters

2013 Ladakh, Aksai Chin Crisis

While there were incursions from both sides after the 1987 standoff, it was on April 15, 2013 that Chinese troops not only crossed the Line of Actual Control but also set up a camp in territory claimed by India. This was a clear violation of the 1993, 1996, 2005, and 2012 border management agreements. A small platoon of Chinese soldiers crossed the Line of Actual Control and set up camp at Raki Nala in northern Ladakh, in the Indian state of Jammu and Kashmir. Raki Nala is 19 miles away from India's Daulat Beg Oldi military base. Next day, the Indo-Tibetan Border Police discovered the camp and set up an opposing camp next to it—eyeball to eyeball.³³⁹

³³⁹ “Chinese Incursion of April 2013 in Depsang, Ladakh,” *Takshashila Institution*, May 2, 2013., and “The China-India Border Issue in 2013: Point and Counter-Point,” *Future Directions International*, May 28, 2013.

It took nearly a month of negotiations by senior diplomatic and military leaders to break the impasse, which resulted in both sides abandoning their military camps and returning to the hitherto-agreed-upon Line of Actual Control. Military action on both sides did not change the boundaries of the disputed border.³⁴⁰

Figure 28 Raki Nala, Ladakh, India-China Border



Source: USIP

2017 Doklam, Bhutan Crisis

This episode of China-India brinkmanship occurred in the Doklam plateau of Bhutan at the trijunction between India, Bhutan, and China. Bhutan is an independent country with close economic and military ties with India. Unlike Tibet, which was annexed by China in 1950, or Sikkim, which became an Indian state in 1975, Bhutan became an independent country after the British left India.

³⁴⁰ Isabwille Saint-Mezard, "The Border Incident of Spring 2013: Interpreting China-India Relations," *Herodote*, 150, no. 3 (2013): 137-141.

In 1949, Bhutan and India signed a Treaty of Friendship whereby Bhutan agreed to let India guide its foreign policy and defense matters.³⁴¹ In 2007, however, Bhutan and India renegotiated the Treaty of Friendship, removing the requirement of India's guidance on Bhutanese foreign and defense policies.³⁴² India is Bhutan's largest trading partner, making up 92 percent of Bhutan's total exports from 2014–2018.³⁴³ On the other hand, Bhutan did not have diplomatic relations with China until 1991. Even as late as June 2020, China and Bhutan primarily communicated through the Bhutanese embassy in New Delhi.³⁴⁴

On June 16, 2017, Chinese troops accompanied a road construction crew to extend a road into Bhutan's Doklam plateau near the disputed trijunction between India, Bhutan, and China. Two days later several hundred-armed Indian troops with bulldozers crossed the Indian state of Sikkim into the Doklam plateau.³⁴⁵ Bhutan protested to China constructing the road in Doklam, but China's Foreign Ministry released a map showing Doklam as part of China. China argued that, according to the 1890 Convention of Calcutta between China and the British Empire, Doklam was part of Tibet, and therefore China. Bhutan, however, rejected China's claim because Bhutan never signed the 1890 Convention, and the

³⁴¹ Treaty of Friendship Between India and Bhutan, 8 August 1949, signed at Darjeeling, India. Full text available at: www.refworld.org

³⁴² Tuhina Sarkar, "India-Bhutan Relations," *The Indian Journal of Political Science* 73, no.2 (2012): 347-352.

³⁴³ Nisha Taneja, Samridhi Bimal, Taher Nadeem and Riya Roy, "India-Bhutan Economic Relations," *Indian Council for Research on International Economic Relations*, August 2019.

³⁴⁴ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, "A Frozen Line in the Himalayas," *Center for Strategic and International Studies*, August 2020, 5.

³⁴⁵ Kanti Bajpai, "Modi's China Policy and the Road to Confrontation," *Pacific Affairs* 91, no. 2 (2018): 245-246.

agreement did not include any maps³⁴⁶. This was ironic given China's opposition to the British-led 1914 McMahon Line agreement that gave Tibet significant autonomy and made it a protectorate of British India. China signed the 1890 Calcutta agreement and asked Bhutan to abide by it, who did not sign it for the same reason China didn't sign the 1914 McMahon Line agreement.

Committed to helping its ally, Bhutan, and keeping a check on Chinese attempts at incremental annexation, India sent troops to protect the area south of Doklam, which overlooks India's Siliguri Corridor. This corridor contains vital roads that connect India's northeastern states to the mainland.³⁴⁷ After 72 days both sides declared a mutual withdraw, but China continued road and military base construction very close to the India-China-Bhutan trijunction border. Satellite images from 2017–2019 show that China has expanded its road network near and inside Doklam, and has also constructed “small Chinese military bases and defensive positions...helicopter landing pads; [paved] newly graded roads.”³⁴⁸

³⁴⁶ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, “A Frozen Line in the Himalayas,” *Center for Strategic and International Studies*, August 2020, 4.

³⁴⁷ Sumit Ganguly, “The Doklam Dispute in Context,” *Foreign Affairs*, August 9, 2017.

³⁴⁸ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, “A Frozen Line in the Himalayas,” 9.

Figure 29 India-Bhutan-China Doklam 2017 Crisis



Source: BBC

India also expanded its defensive positions, “including what appears to be a track or trench that runs south from Doka La to China’s claimed tripoint, allowing India to monitor Chinese activity in the area.”³⁴⁹ Once again, both sides engaged in saber-rattling short of war and did not resolve the border dispute.

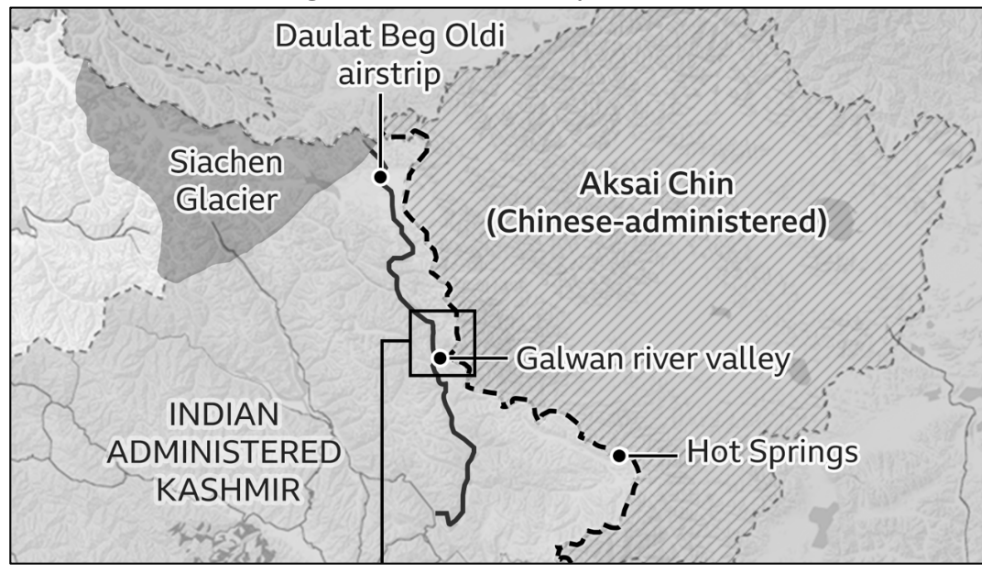
2020 Galwan Valley, Ladakh Crisis

Seven years after the 2017 Doklam Crisis the situation was flipped. This time it was Chinese troops that attempted to stop India from building a road to connect India’s military base (Daulat Beg Oldi) with Ladakh, which closely follows the disputed border in the western sector passing through the Galwan Valley.³⁵⁰

³⁴⁹ M. Taylor Fravel, “Stability in a Secondary Direction: China and the Border Dispute with India after 1962,” 176.

³⁵⁰ Ajai Shukla, “How China and India Came to Lethal Blows,” *New York Times*, June 19, 2020.

Figure 30 Galwan Valley Crisis of 2020



Source: BBC

Unlike in 2017, where the standoff at the Sikkim-Tibet-Bhutan trijunction was nonviolent, in May 2020, when Chinese soldiers tried to stop Indian road construction, both sides drew weapons. On one of the highest regions in the world (17,000 feet above sea-level), soldiers from both sides engaged in melee fighting that resulted in the deaths of 20 Indian and 43 Chinese soldiers.³⁵¹ Dozens of soldiers were captured on both sides, which made this crisis the bloodiest since the 1962 war.³⁵² Using the Joint Working Group, and the Working Mechanism for Consultation and Coordination on China-India Border Affairs, both sides partially disengaged, but the Chinese troops refused to leave Pangong Lake near the Galwan Valley.³⁵³ In response, Indian troops took defensive positions along the

³⁵¹ Ryan Fahey, "Twenty Indian Soldier are Killed and 43 Chinese troops are Injured or Dead," *Daily Mail*, June 16, 2020.

³⁵² Ankit Panda, "A Skirmish in Galwan Valley: India and China's Deadliest Clash in More than 50 years," *The Diplomat*, June 17, 2020.

³⁵³ Antoine Levesques, "A New Normal for India-China Tensions?" *International Institute for Strategic Studies*, September 18, 2020.

Line of Actual Control directly across from Chinese military camps in Spanggur gap and Spannggur Tso. On September 7, 2020, shots were fired from both sides, breaking yet another time-tested mutual restraint codified in multiple border agreements (1993, 1996, 2005, 2012, and 2013).³⁵⁴

Soon after this, Indians doubled down on building the road and called in 12,000 road construction workers through the Indian Border Roads Organization.³⁵⁵ There was no hand-to-hand combat in November 2020, but both sides kept their military camps near the Galwan Valley.³⁵⁶ Chinese troops crossed the border and attempted to set up military camps in Hot Springs and Depsang Plains in Ladakh (western sector), and also opened multiple smaller fronts in Naku La in North Sikkim (near the location of the 2017 Doklam Crisis).³⁵⁷

There were other minor incidents in 1975, 1986, and 2015 that did not rise to the level of brinkmanship, because Chinese or Indian troops did not cross the disputed border and set up military camps.³⁵⁸ All four episodes provide evidence strongly suggesting that brinkmanship was highly likely when China and India tried to change their disputed borders. For example, in the 2017 Doklam, Bhutan Crisis, China attempted to build a road near the India-Bhutan-China border

³⁵⁴ Jeffrey Gettleman, “Shots Fired Along India-China Border for First Time in Years,” *New York Times*, September 8, 2020.

³⁵⁵ Jin Wu and Steven Lee Myers, “Battle in the Himalayas,” *New York Times*, July 18, 2020.

³⁵⁶ Shishir Gupta, “China is Fortifying Defences Across Ladakh Border, Not Prepping to Disengage,” *Hindustan Times*, November 19, 2020, and Dan Altman, “What the History of Modern Conquest tells us about China and India’s Border Crisis,” *War on the Rocks*, July 9, 2020.

³⁵⁷ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, “A Frozen Line in the Himalayas,” *Center for Strategic and International Studies*, August 2020, 3.

³⁵⁸ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, “A Frozen Line in the Himalayas,” 3.

trijunction only to stop after Indian troops retaliated; and in 2020, India attempted to finish a road to its military base in Ladakh, which invited Chinese military intervention.

Rapprochement

Unlike incidents of brinkmanship, which scholars have pondered over through lenses of nuclear deterrence theories, incidents of détente are the more appropriate tests of NPRT and its central question: why nuclear rivals reject peace (border dispute resolution). Below, I briefly describe six incidents of rapprochement followed by a detailed analysis of how and why China and India avoided resolving border disputes through NPRT. The sixth episode of rapprochement is of particular interest because it deals with a border water dispute. Unlike India and Pakistan, which resolved their water dispute (Indus Water Treaty 1960) before acquiring nuclear weapons, China and India engaged on their water dispute after they developed nuclear weapons, and therefore, as predicted by NPRT, have not resolved it.

All six episodes of rapprochement focus on talks and agreements made by China and India to resolve the main cause of their rivalry—border disputes. In each, the two nuclear rivals pledged to resolve their border dispute, reject military escalation, and limit military activities near the Line of Actual Control. Yet, as the last section on episodes of brinkmanship clearly demonstrates, both nuclear rivals failed to keep their agreements and consistently violated them through dangerous skirmishes. Additionally, the agreements lacked a common understanding of the scope and scale of the disputed border because China and India never agreed on

the Line of Actual Control (unlike India and Pakistan's Line of Control, which is based on a contested, yet demarcated, ceasefire).

1993 Agreement on Resolving Border Dispute

After a major war in 1962, several skirmishes, and nearly forty years after the China-India Panchsheel Agreement of 1954, China and India once again pledged to implement the Five Principles of Peaceful Coexistence and resolve their border disputes.³⁵⁹ On September 7, 1993, both countries agreed to 1) respect each other's territorial integrity, 2) eschew military aggression against each other, 3) not to interfere in each other's domestic matters, 4) resolve border disputes on the basis of "equality and mutual benefit," and 5) maintain "peace and tranquility in areas along the line of actual control in the India-China border areas."³⁶⁰

Specifically, both sides pledged to resolve "the India-China boundary question" peacefully, keep military forces on both sides of the Line of Actual Control "to a minimum level compatible with the friendly and good" neighborly relations, promptly call back troops if they accidentally cross the border, reduce military presence on both sides of the border, avoid major military exercises near the border, and keep airspace above the disputed border neutral by ensuring "that air intrusions across the line of actual control do not take place and [both sides] shall undertake mutual consultations should intrusions occur." Both sides also

³⁵⁹ Ivan Lidarev, "History's Hostage: China, India and the War of 1962," *The Diplomat*, August 21, 2012, and Walter C. Ladwig, "Not the Spirit of Wuhan: Skirmishes between India and China," *RUSI*, May 21, 2020.

³⁶⁰ "Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas, September 7, 1993," United Nations Peacemaker database.

agreed to create the India-China Joint Working Group with diplomatic representatives from both sides to implement the agreement.

The agreement was an important step toward détente but flawed because there was a fundamental disagreement on the Line of Actual Control in the western, central, and eastern sectors. Article six of the agreement stated that both “sides agree that references to the line of actual control in this Agreement do not prejudice their respective positions on the boundary question.” Moreover, there were no specifics on the scope and scale of acceptable military presence on both sides of the border, air space neutrality over the border, and the Working Group did not have a clear mandate for dispute resolution. The border was not demarcated.³⁶¹

1996 Confidence Building Measures

Three years after the 1993 agreement, China and India signed an agreement that included confidence-building measures such as allowing specific, mutually permissible military activities along the China-India disputed border.³⁶² Specifically, both sides pledged not to use “military capability against the other,” to seek a “fair, reasonable and mutually acceptable settlement of the boundary question,” and to “strictly respect and observe the line of actual control.” They also agreed to restrict the number of field army, border defense forces,

³⁶¹ Pravin Sawhney, “How China Turned the Tables on India and Converted the 1993 Agreement into a Land Grab,” *The Wire*, August 2, 2020, and “Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas, September 7, 1993,” United Nations Peacemaker database.

³⁶² “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, November 26, 1996,” United Nations Peacemaker database.

paramilitary forces, and categories of armaments including “combat tanks, infantry combat vehicles, guns (including howitzers) with 75mm or bigger caliber, mortars with 120 mm or bigger caliber, surface-to-surface missiles, surface-to-air missiles,” and other weapon systems.

China and India also agreed to exchange data on military forces and armaments; avoid large-scale military exercises, including those involving “one Division (approximately 15,000 troops) in close proximity of the line of actual control,” and, if either side decided to conduct an exercise involving a Brigade Group (approximately 5,000 troops), they would have to give prior notice and report to the other side within five days of troops leaving the area close to the border.³⁶³

To avoid airspace violation above the disputed border, both sides agreed to take “adequate measures to ensure that air intrusions across the line of actual control do not take place,” and agreed not to fly combat aircraft, including fighters, bombers, reconnaissance airplanes, and armed helicopters, within six miles of the disputed border. If either side had to fly combat aircraft within six miles of the disputed border, each side agreed to inform the other of the type, height, duration, and area of operations of said combat aircraft. Unmanned aircraft and survey helicopters are allowed near the disputed border according to the agreement.³⁶⁴

³⁶³ “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, November 26, 1996,” United Nations Peacemaker database.

³⁶⁴ “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

Additionally, China and India agreed not to arm their border patrols and instructed their troops to never “open fire, cause bio-degradation, use hazardous chemical, conduct blast operations or hunt with guns or explosives,” or conduct exercises using live ammunition within a mile of the Line of Actual Control.

To avoid escalation, both sides agreed to expand telecommunication links, conduct frequent flag meetings between border representatives, and support bilateral cooperation on cross-border natural disasters and halting epidemic diseases. To bolster the India-China Working Group, the 1996 agreement created the India-China Diplomatic and Military Expert Group to implement this agreement.

Yet, both sides admitted that there was no consensus on the Line of Actual Control and that “full implementation of some of the provisions of the present Agreement will depend on the two sides arriving at a common understanding of the alignment of the line of actual control in the India-China border areas.” Both sides also agreed to exchange maps “indicating their respective perceptions of the entire alignment of the line of actual control.”³⁶⁵

While the 1996 agreement certainly added specifics to the 1993 agreement, the problem of not having a common understanding of the disputed border beleaguered this effort at rapprochement. Both sides violated military restrictions on troops, aircraft, bases, and exercises, and no mutually agreed upon maps were shared. An indicator that India and China foresaw the agreement’s

Along the Line of Actual Control in the India-China Border Areas, November 26, 1996,” United Nations Peacemaker database.

³⁶⁵ “Agreement Between the Government of the Republic of India and the Government of the People’s Republic of China on Confidence-Building Measures November 26, 1996.

fatal flaw can be seen in Article X, section 2, where both countries agreed that, while a common understanding of Line of Actual Control was being worked out, this agreement was to be implemented on a “interim basis, without prejudice to their respective positions on the alignment of the line of actual control as well as on the boundary question.”³⁶⁶

2005 Confidence-Building Measures and Border Talks Agreement

Nearly ten years after the 1996 agreement, China and India renewed their commitments and added more specifics under the framework of the Five Principles of Peaceful Co-existence. The aim was to “facilitate the process of early clarification confirmation of the Line of Actual Control.”³⁶⁷ The agreement reiterated and added specifics to respecting the interim Line of Actual Control, increasing flag meetings, refraining from large troop and armament deployments, building infrastructure near the border, conducting large-scale military exercises, and avoiding the airspace above the disputed border. Additionally, both sides agreed to increase military exchanges between border units including “between institutions of sports and culture of the two armed forces.”³⁶⁸

In terms of military exercises, the 2005 agreement added the stipulation that flag meetings should occur 15 days prior to the exercises, and that the side

³⁶⁶ “Agreement Between the Government of the Republic of India and the Government of the People's Republic of China on Confidence-Building Measures November 26, 1996.

³⁶⁷ “Protocol between the Government of the Republic of India and the Government of the People's Republic of China on Modalities for the Implementation of Confidence Building Measures in the Military Field along the Line of Actual Control in the India-China Border Areas. New Delhi, 11 April 2005,” United Nations Peacemaker database.

³⁶⁸ “Protocol between the Government of the Republic of India and the Government of the People's Republic of China on Modalities for the Implementation of Confidence Building Measures 11 April 2005.

conducting the exercises should share the “type, level, planned duration and area of exercise as well as the number and type of units or formations participating in the exercise.”

In terms of violation of airspace above the disputed border, the agreement added that the side responsible will ask for a flag meeting within 48 hours, investigate, and share its finding.³⁶⁹ Reiterating the prohibition on carrying live ammunition during border patrols, each side agreed to exercise restraint if they “come to face-to-face situation due to differences on the alignment of the Line of Actual Control...and take all necessary steps to avoid an escalation...and neither side shall use force or threaten to use force against the other.”³⁷⁰

Despite adding specifics, China and India continued to violate the Line of Actual Control, did not agree on its demarcation, and never resolved the border dispute. Instead, both sides increased troops, surveillance, and expanded infrastructure including helipads, roads, and barracks. Additionally, both sides interfered in their rival’s internal affairs: China supported India’s Naxalite separatists, and India supported Tibetan separatists, in part by employing thousands of Tibetan refugees into a high-altitude combat unit called the Special Frontier Force.³⁷¹

³⁶⁹ Flag meetings refer to meetings between India and China’s senior military leaders focused on the border.

³⁷⁰ “Protocol between the Government of the Republic of India and the Government of the People’s Republic of China on Modalities for the Implementation of Confidence Building Measures 11 April 2005.

³⁷¹ Dipak K. Gupta, “The Naxalites and the Maoist Movement in India: Birth, Demise, and Reincarnation,” *Democracy and Security* 3, no. 2 (2007): 175-177, Haider Ali Hussein Mullick, “The Naxalite Rebellions,” *The American Interest* 9, no. 1 (2013): 22, and “The Tibetans Serving in ‘Secretive’ Indian Force,” *BBC*, October 16, 2020.

2012 Working Mechanism on China-India Border

In January 2012, China and India decided to bolster the “Working Mechanism for Consultation and Coordination on India-China Border Affairs,” through the India-China Strategic and Cooperative Partnership for Peace and Prosperity. The Working Mechanism was a step higher than the prior Working Group (1993, 1996, and 2005 agreements) and was headed by a Joint-Secretary-level official from the Ministry of External Affairs of India, and a Director-General-level official from the ministry of Foreign Affairs of China. The aim was to placate any potential emergencies such as skirmishes, contentious border crossings, military movements, deployments, exercises, and other related issues—but not the “resolution of the boundary question.”³⁷²

No specific details were provided on the exact role of the Working Mechanism, which did not replace the prior Joint Working Group on resolving the border dispute. This mechanism did not deter military saber-rattling on the border, and a year later both sides were facing off in a major border skirmish.³⁷³

2013 China-India Border Defense Cooperation Agreement

A year after the Working Mechanism was created, China and India signed a 10-article agreement to reduce hostilities on the disputed border, while admitting that there were areas in the western, central, and eastern sectors “where

³⁷² “Agreement between the Government of the Republic of India and the Government of the People's Republic of China on the Establishment of a Working Mechanism for Consultation and Coordination on India-China Border Affairs, New Delhi, 17 January 2012,” United Nations Peacemaker Database.

³⁷³ Fayaz Bukhari and Satarupa Bhattacharjya, “India and China Withdraw Troops from Himalayan Face Off,” *Global Post*, May 7, 2013.

there is no common understanding of the line of actual control.”³⁷⁴ The 2013 agreement built on the prior agreements of 1993, 1996, 2005, and 2012 under the framework of the Five Principles of Peaceful Co-existence and desire to resolve the border dispute.

Both sides agreed to exchange additional information on “military exercises, aircrafts, demolition operations and unmarked mines;” jointly counter “smuggling of arms; wildlife, wildlife articles and other contrabands;” help locate personnel or equipment that may have inadvertently crossed the disputed border; and support joint natural disaster relief. The agreement also upgraded flag meetings through the Joint Working Group and Working Mechanism on border issues to include “meetings between officers of the relevant Military Regions of China and Army Commands of India,” and added a high-level India-China Annual Defense meeting.

The two sides also created a hotline between military headquarters, permitted military celebrations near the border, and pledged to “not follow or tail patrols of the other side in areas where there is no common understanding of the line of actual control.”³⁷⁵

Both sides simply accepted the fact that they had not resolved the border dispute since the first agreement in 1993 and further highlighted that neither side

³⁷⁴ “Agreement between the Government of the Republic of India and the Government of the People's Republic of China on Border Defence Cooperation, October 23, 2013,” United Nations Peacemaker Database, and Ankit Panda, “Indian PM Signs Border Defense Agreement with China,” *The Diplomat*, October 24, 2013.

³⁷⁵ “Agreement between the Government of the Republic of India and the Government of the People's Republic of China on Border Defence Cooperation, October 23, 2013. A Hotline refers to a direct phone line between senior military leaders of India and China.

agreed on the Line of Actual Control as they pledged to implement this agreement “without prejudice to their respective positions on the alignment of the line of actual control as well as on the boundary question.”³⁷⁶

In the end, the border dispute was not resolved and tensions across the disputed border worsened, with major episodes of brinkmanship taking place in 2017 and 2020. By November 2020, the Joint Working Group, Special Representatives, and Working Mechanism members had met 23 times, but the two sides were far from reaching a resolution of their disputed border.³⁷⁷

2013 Border Water Dispute Management Agreements

China and India, like Pakistan and India, share cross-border rivers. The major ones are the Indus, Sutlej, and Brahmaputra, which originate in Tibet. China is upstream “and India is downstream (and other riparian countries such as Pakistan and Bangladesh are still further downstream than India).”³⁷⁸ Much like Pakistan worries about India’s plans to build dams upstream, India too dreads “Chinese plans for future water diversion projects and a series of dam projects already launched by China on the Brahmaputra,” which could significantly tax the Indian economy and prosperity.³⁷⁹ India is estimated to “face a severe water deficit

³⁷⁶ “Agreement between the Government of the Republic of India and the Government of the People's Republic of China on Border Defence Cooperation, October 23, 2013.

³⁷⁷ Richard M. Rossow, Joseph S. Bermudez Jr., and Kriti Upadhyaya, “A Frozen Line in the Himalayas,” *Center for Strategic and International Studies*, August 2020.

³⁷⁸ Sebastian Biba, “China-India River-Water Conflicts: Toward a Solution Through Launching a Cooperation Spiral.” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 210.

³⁷⁹ U. K. Sinha “Towards Riparian Rationality. An Indian Perspective,” in K. Bajpai, J. Huang and K. Mahbubani, eds., *China-India Relations. Cooperation and Conflict* (London and New York: Routledge, 2016): 167.

by 2030 with demand growing to 1.5 trillion cubic meters.” Moreover, out of the 354 billion cubic meters of water that flows from Tibet into India, 131 billion cubic meters comes from the Brahmaputra river.³⁸⁰

India also worries about the opposite: too much water could lead to massive flooding that would endanger Indian citizens downstream.³⁸¹ For example, the Zangmu Dam proposed in China’s 11th Five Year Plan of Tibet’s Development of Society and Economy (2006–2010) was the first mega hydroelectric power station on the Yarlung (upper stream of the Brahmaputra river), and four additional dams are under construction in accordance with the 12th Five Year Plan.³⁸²

In 2004, for example, a lake began to form on a tributary of the Sutlej river, which some observers called China’s *liquid bomb*, “an artificial lake unleashed at will to potentially devastate downstream areas.”³⁸³ These concerns were heightened during India and China’s Doklam standoff in 2017 and again during the Galwan River Crisis in 2020, when Sutlej water levels increased up to 14 meters. In both cases, China withheld hydrological data on the Brahmaputra and Sutlej rivers from India.³⁸⁴

³⁸⁰ Selina Ho, “Power Asymmetry and the China-India Water Dispute,” in *The China-India Rivalry in the Globalization Era*, ed. T. V. Paul (Washington, D.C., Georgetown University Press, 2018), 137.

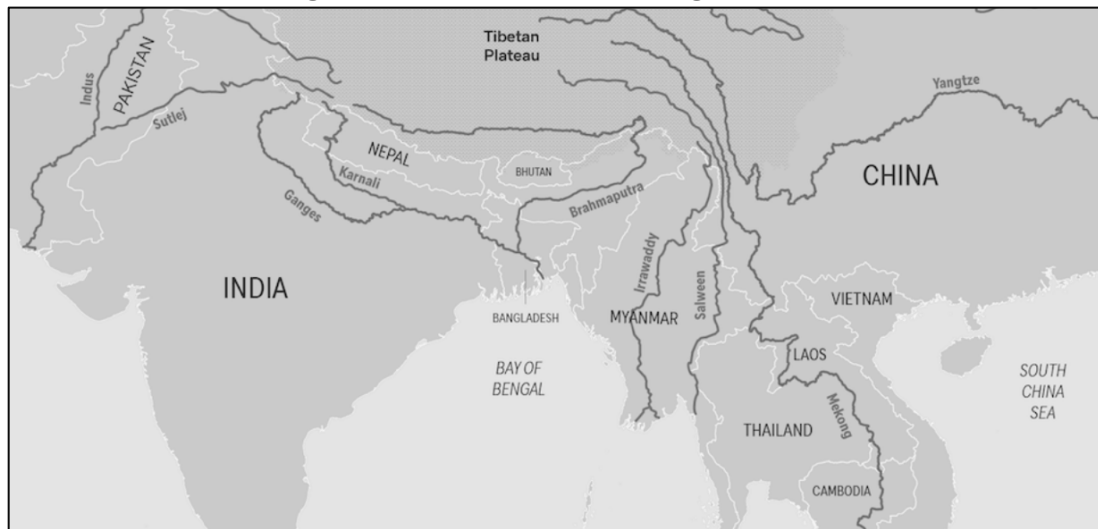
³⁸¹ Xie, L. and Jia, S. *China’s International Transboundary Rivers. Politics, Security and Diplomacy of Shared Water Resources* (London and New York: Routledge, 2018), 119.

³⁸² Sebastian Biba, “China-India River-Water Conflicts: Toward a Solution Through Launching a Cooperation Spiral.” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 211.

³⁸³ Ameya Pratap Singh and Urvi Tembey, “India-China Relations and the Geopolitics of Water,” *Lowy Institute*, July 23, 2020.

³⁸⁴ Ameya Pratap Singh and Urvi Tembey, “India-China Relations and the Geopolitics of Water,” *Lowy Institute*, July 23, 2020.

Figure 31 Rivers of China flowing into India



Source: Lowy Institute

Unlike the 1960 Indus Waters Treaty, which is a legally binding territorial resolution treaty that India and Pakistan signed (before they acquired nuclear weapons), China and India have no such treaty. Instead, China and India have signed three nonbinding memorandums of understanding (MOUs) on sharing hydrological data during the flood season on the Brahmaputra. The first MOU was signed in 2002 and then renewed in 2008 and 2013. A second MOU was created for the Sutlej and was first signed in 2005 and then renewed in 2010. A third MOU was signed in 2006, which created a bilateral group of experts that could frequently share hydrological data and visit each other's hydro dams.³⁸⁵

However, China has stopped Indian experts from visiting Chinese dam sites, and "hydrological data sharing to India only comes at China's goodwill and

³⁸⁵ Selina Ho, "Power Asymmetry and the China-India Water Dispute," in *The China-India Rivalry in the Globalization Era*, ed. T. V. Paul (Washington, D.C., Georgetown University Press, 2018), 152.

can easily be suspended or even terminated.”³⁸⁶ For example, during the 2017 Doklam Crisis, China stopped sharing hydrological data on Brahmaputra and Sutlej.³⁸⁷

These MOUs were signed after China and India acquired nuclear weapons and, much like their frozen border disputes, the water dispute continues to linger. This is consistent with the Nuclear Prison Theory—both sides are clinging to their positions. Once again, a strong attempt at rapprochement fell short of resolving the root cause of the rivalry: disputed borders.

Nuclear Prison Theory and China-India Rivalry

Nuclear Prison Theory asserts that nuclear rivals contesting borders do not resolve their border disputes because the weaker of the two possessing nuclear weapons sees compromise as surrender, and the stronger opponent sticks with the self-advantageous option—control over said territory converted to sovereignty over that territory. We observe this in the China-India case across six incidents of rapprochement that did not graduate to border dispute resolutions.

Nuclear Prison Theory works under four conditions for China and India: both are (1) asymmetric (2) rivals with (3) nuclear weapons and their (4) rivalry predates their acquisition of nuclear weapons. Additionally, in the China-India case, we can observe the creation of a nuclear prison through a five-phase, self-perpetuating process:

³⁸⁶ Sebastian Biba, “China-India River-Water Conflicts: Toward a Solution Through Launching a Cooperation Spiral.” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 212.

³⁸⁷ Maha Siddiqui, “China Refuses to Share Hydrological Data as India Battles Floods,” *News 18*, August 18, 2017.

1. First, China and India maximized security and their stake in disputed borders by pursuing nuclear weapons (China with the help of Soviet Union after its civil war and the war in Korea, and India after its loss to China in 1962).
2. Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures such as advanced delivery and missile defense systems. For example, after India obtained a nuclear device in 1974, it gained significant military power against China. Soon after, China began developing a missile defense system that has gained greater accuracy over the years.³⁸⁸
3. Third, adversaries exchange provocative actions, such as border skirmishes, but stop short of war. For example, India, militarily and economically inferior to China, used limited force against China, short of full-scale war, in the 2020 Galwan Valley Crisis in the western sector.³⁸⁹
4. Fourth, after close calls related to brinkmanship both rivals begin efforts at easing tensions. For example, after border clashes during the 1987 Sumdorong Chu Valley, partly in fear of escalation, both rivals engaged in

³⁸⁸ Thangavel K. Balasubramaniam and Ashok Kumar Murugesan, “China’s Rising Missile and Naval Capabilities in the Indo-Pacific Region: Security Implications for India and Its Allies,” *Journal of Indo-Pacific Affairs*, June 8, 2020.

³⁸⁹ Toby Dalton and Tong Zhao, “At a Crossroads? China-India Nuclear Relations After the Border Clash,” *Carnegie Endowment for International Peace*, August 19, 2020.

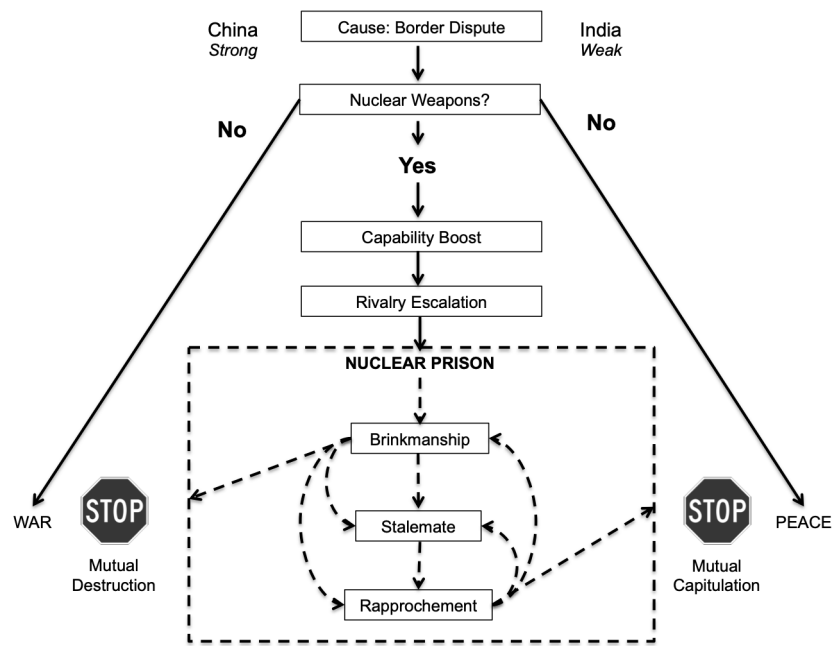
rapprochement and signed the 1993 agreement to manage and resolve the border dispute.³⁹⁰

5. Fifth, when the underlying cause of their rivalry—border disputes—is not resolved, the rivals reverted to stalemate or engaged in brinkmanship again. For example, after the failure of the 2013 Border Defense Cooperation Agreement, India and China engaged in brinkmanship in Doklam, Bhutan in 2017.

In the end the Nuclear Prison remains strong as nuclear rivals continue a vicious cycle of escalation short of war and de-escalation short of peace—war is perceived to be suicide and peace (border dispute resolution) is perceived to be mutual surrender, and this renders both outcomes as unacceptable.

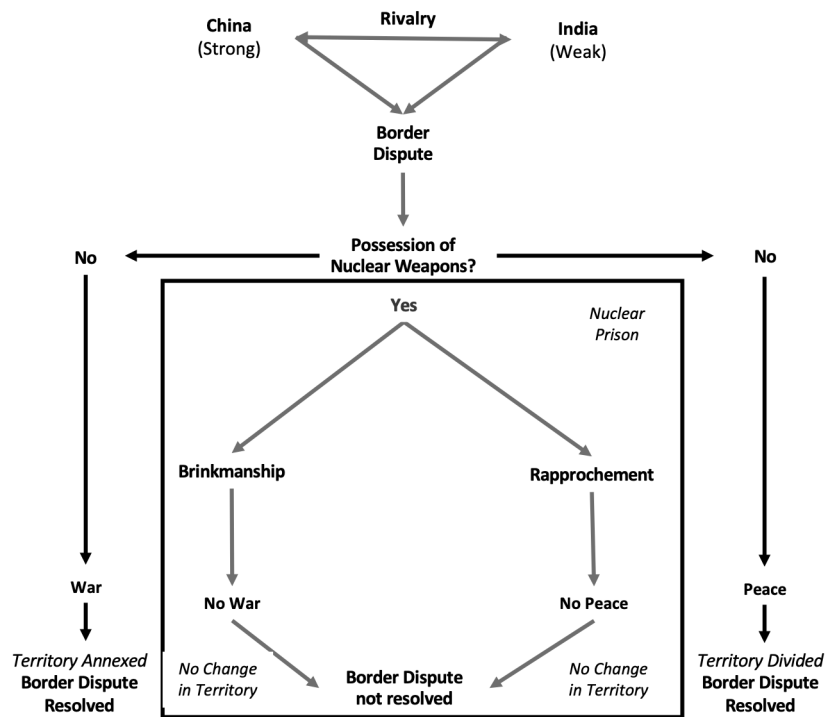
³⁹⁰ Rishika Chauhan, “10 Differences Not Disputes: India’s View of the Border After 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 183, and “Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas, September 7, 1993,” United Nations Peacemaker database.

Figure 32 Sequential Path and Conditions for China-India Nuclear Prison



Source: Author

Figure 33 Nuclear Prison Theory: China-India Case



Source: Author

Next, I examine the China-India case by highlighting the limits of existing international relations theories and the value NPRT adds to answering the question: why nuclear rivals avoid border dispute resolutions.

I start with realism, which does not directly answer the question of why China and India eschew border dispute resolutions. Yet, it does provide a convincing explanation of continuous conflict due to an anarchic world, with no world government, where states maximize security to survive and prosper.³⁹¹

While it does not provide an answer on border dispute resolutions, Realist Nuclear Deterrence Theory does give us an answer as to why nuclear rivals avoid war by emphasizing the fear that both rivals will destroy each other from a perceived, or actual, miscalculation leading to the use of the deadliest weapon man has ever made.

My Nuclear Prison Theory relies on the logic of mutual destruction, which is embedded in Realist Nuclear Deterrence Theory, and asserts that nuclear rivals are deterred from border dispute resolution due to the fear of mutual capitulation. Both countries perceive any compromise on disputed territory as a surrender to the rival's demands, making any border dispute resolution nearly impossible. This was clearly demonstrated as we examined six instances of rapprochement between China and India.

³⁹¹ For a sampling of essential work on realism, see Thomas Hobbes, *Leviathan* (London: Wordsworth, 2014); Machiavelli, *The Prince* (Cambridge: Cambridge University Press, 1998); Kenneth Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 1979); John Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001); Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1985); Stephen M. Walt, *The Origins of Alliances* (New York: Cornell University Press, 1987); and Stephen Van Evera, *Causes of War: Power and the Roots of Conflict* (Ithaca, NY: Cornell University Press, 1999).

Next, I examine the China-India case from the vintage point of Liberalism, which is a normative family of theories built on the premise that democracies do not go to war with each other, and economic interdependence and membership in international organizations instills norms of peace, which abate war. China, while not a democracy, still falls under the latter two Liberal theories.

Economic interdependence and membership in regional organizations does not explain the persistence of nuclear rivalries. China and India are members of numerous regional and international organizations but have frequently engaged in brinkmanship. For example, China and India were active members of the Shanghai Cooperation, East Asia Summit, Asia-Europe Meeting, and Association of South East Asian Nations (ASEAN) Regional Forum when Chinese and Indian troops engaged in hand-to-hand combat in the Ladakh-Aksai Chin western sector of their disputed border.³⁹²

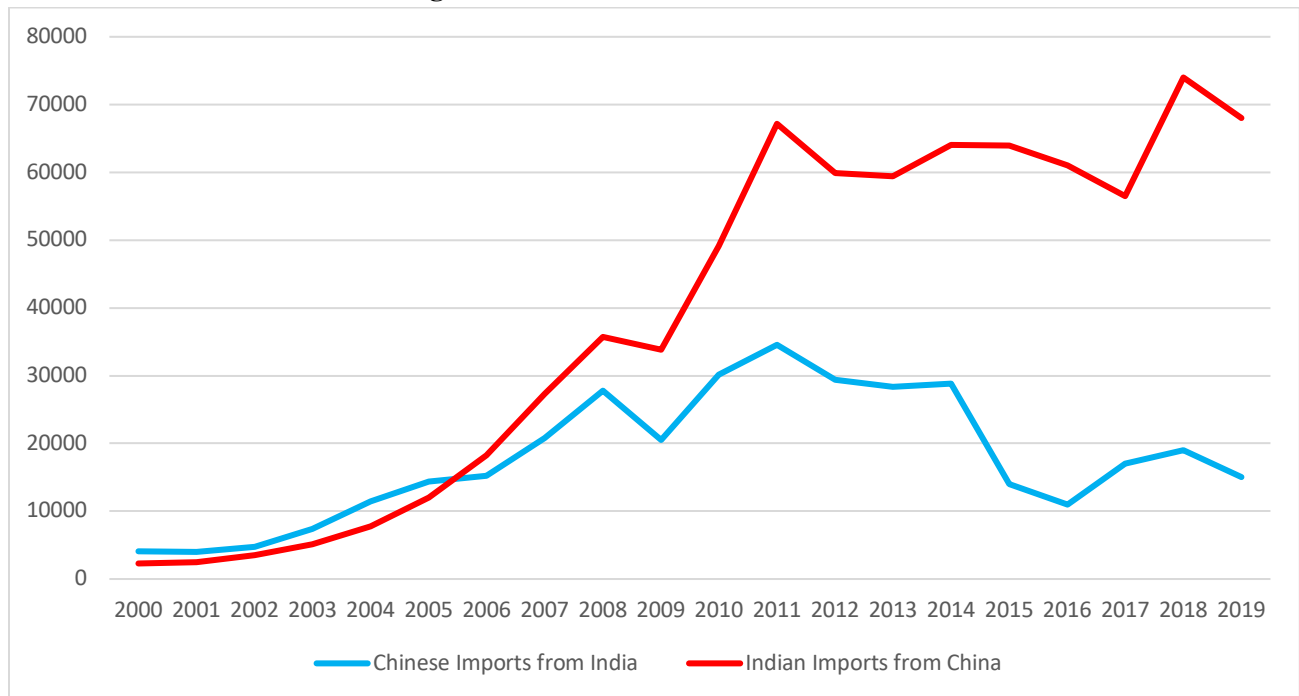
A measurable proxy for Liberalism, specifically economic interdependence theories, is trade. As demonstrated below, trade between China and India is significant (\$93 billion), and has increased steadily since 2000, but in favor of China, which exports four times more to India than it imports from India.³⁹³ Moreover, while the increase in trade shows strong economic interdependence, the military fracas in 2013, 2017, and 2020 demonstrate that despite numerous border agreements in 2005, 2012, and 2013, China and India

³⁹² See for example, “ASEAN Regional Forum (ARF),” ASEAN (Accessed November 22, 2020); available from www.asean.org.

³⁹³ Pradeep Taneja, “Bilateral Economic Relations Amid Trade and Trust Deficits,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 291-292.

have not resolved their border dispute. Instead, we can observe a trend of higher frequency and intensity of brinkmanship. China and India continue to bounce from brinkmanship to rapprochement and back—they are stuck in a nuclear prison where war is perceived by both sides to be suicide, and a border resolution would be considered mutually assured capitulation.

Figure 34 China-India Trade 2000–2019



Source: World Bank and World Trade Organization

Additionally, the Nuclear Binding Theory under Liberalism argues that arms control and reduction treaties bind nuclear adversaries and slowly move them toward fewer incidents of brinkmanship.³⁹⁴ Yet, in the case of China and India, we observe an uptick in brinkmanship; and while they have signed agreements to

³⁹⁴ See, for example, Steven Pifer and Michael O’Hanlon, *The Opportunity: Next Steps in Reducing Nuclear Arms* (Washington, D.C.: Brookings Press: 2012); Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012).

manage and resolve their border dispute, and instituted confidence-building measures such as military-to-military communications, they have not signed arms control or reduction treaties. Given that these treaties will do little to resolve the underlying cause of their rivalry—border disputes—there is little hope that nuclear binding will end the China-India rivalry.

Next, I examine constructivism and its variants in the case of the China-India rivalry. Unlike Realists and Liberal institutionalists, Constructivists argue that groups and individuals within the state determine its behavior through their ideas, which shape the international system and its anarchic attributes, rather than the other way around.³⁹⁵

Specifically, Michael Horowitz argues that, for most Nuclear rivals, the period immediately following the acquisition of nuclear weapons encourages risk taking, especially for weaker opponents who have newfound military power against their stronger rivals. The longer these parties have nuclear weapons, the more likely they are to realize the dangers of escalation and, over time, they

³⁹⁵ For essential writings on constructivism, see Alexander Wendt, “Anarchy is what states make of it: the social construction of power politics,” *International Organization* 46, (1992): 391-425; Dale C. Copeland, “The Constructivist Challenge to Structural Realism: A Review Essay,” *International Security* 25, no. 2 (Fall 2000): 187-212; John Gerard Ruggie, *Constructing the World Polity: Essays on International Institutionalization* (New York: Routledge, 1998), 1-39, 172-197; Emanuel Adler and M. Barnett, “Security Communities in Theoretical Perspective,” in *Security Communities*, ed. Emanuel Adler and M. Barnett (Cambridge: Cambridge University Press, 1998), 3-28; Alexander Wendt, “Constructing International Politics,” *International Security* 20 (1995): 71-81; and Nicholas Greenwood Onuf, *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia, S.C.: University of South Carolina Press, 1989).

initiate cross-border military hotline communications and arms control and disarmament measures to ease tensions.³⁹⁶

In December 2020, the China-India dyad was over 46 years old and had experienced six major crises without signing a single test ban treaty (e.g., Nuclear Proliferation Treaty and Comprehensive Test Ban Treaty) or arms control treaty; essentially making little progress toward rapprochement, let alone resolving a border dispute.³⁹⁷

Horowitz's prediction that "late adopters may have a faster learning curve due to vicarious learning" does not seem to apply to China and India. Instead, these countries waged major skirmishes in 2017 and 2020, and both sent troops across the Line of Actual Control with the explicit goal of annexing territory by setting up military bases. All indications are that China and India have not grown out of their risk-prone stage as Horowitz had predicted. Moreover, unlike Horowitz's prediction that once nuclear rivals graduate from the risk taking to the mitigating tensions phase they stay there, the same is not true for China and India.

Finally, I examine the China-India case across rivalry termination theories. There is a rich body of interstate-rivalry-termination literature.³⁹⁸ From a total of 15 theories explaining the causes of interstate-rivalry termination, 6 are based on a cost-benefit analysis of actors. If the cost of rivalry is greater than the benefit of maintaining that rivalry — as Maoz, Armstrong, Pervin, and Womack argue — then

³⁹⁶ Michael Horowitz, "The Spread of Nuclear Weapons and International Conflict: Does Experience Matter?" *Journal of Conflict Resolution* 53, 234 (2009): 234-257.

³⁹⁷ The starting point for China-India is 1974.

³⁹⁸ A useful summary of major rivalry termination theories is provided in Karen Rasler, William R. Thompson, and Sumit Ganguly, *How Rivalries End* (Philadelphia: University of Pennsylvania Press, 2013), 195-227.

adversaries begin to negotiate, engage in *détente*, and eventually terminate their rivalry.³⁹⁹ These theorists, however, do not explain why *nuclear* rivals fail to end competition that is costly and rises to dangerous levels.⁴⁰⁰

Several rivalry-termination theorists, like Rosati, Legro, and Diehl, argue that rivalries may end due to a catastrophic external shock or crisis that forces one or both rivals to reconsider the costs of their rivalry, leading to compromise and eventual peace based on resolving the underlying cause of the conflict. This, however, does not explain the continuation of nuclear rivalry despite external shocks. For example, India was slapped with international sanctions after it hot-tested nuclear weapons in 1998, but instead of resolving its disputed territory with China, it engaged in brinkmanship during the 2013, 2017, and 2020 crises.

Other rivalry termination theorists, like Cos, Rock, and Lebow, argue that domestic politics—shaped by doves overpowering hawks, the presence of an acute crisis, or the success of internal policies dependent on ending rivalry, respectively—explain why rivalries terminate. These models, however, do not

³⁹⁹ Zeev Maoz and Ben D. Mor, *Bound by Struggle: Strategic Evolution of Enduring International Rivalries* (Ann Arbor, M.I.: University of Michigan Press, 2002); Tony Armstrong, *Breaking the Ice: Rapprochement between East and West Germany, the United States and China, and Israel and Egypt* (Washington, D.C.: U.S. Institute of Peace, 1993); David J. Pervin, “Building Order in Arab-Israeli Relations: From Balance to Concert?” in David A. Lake and Patrick M. Morgan, eds., *Regional Orders: Building Security in a New World* (University Park: Pennsylvania State University Press, 1997); and “Asymmetric Rivals: China and Vietnam” in Sumit Ganguly and William R. Thompson, eds., *Asian Rivalries: Conflict, Escalation and Limitation on Two-Level Games* (Stanford, CA: Stanford University Press, 2011).

⁴⁰⁰ Jerel A. Rosati, “Cycles in Foreign Policy Restructuring: Politics of Continuity and Change in U.S. Foreign Policy,” in Jerel A. Rosati, Joe D. Hagan, and Martin W. Sampson III, eds., *Foreign Policy Restructuring: How Governments Respond to Global Change* (Columbia, S.C.: University of South Carolina Press, 1994); Jeffrey W. Legro, *Rethinking the World: Great Power Strategies and International Order* (Ithaca, N.Y.: Cornell University Press, 2005); and Paul Diehl and Gary Goertz, *War and Peace in International Rivalry* (Ann Arbor, M.I.: University of Michigan Press, 2000).

offer answers on the puzzling persistence of nuclear rivalries in the presence of stronger doves (2012 Working Mechanism on China-India Border), the presence of acute crisis (India after the 2008 Mumbai attacks), and internal policy success depending on rivalry termination (2000–2019 increasing China-India trade).

Again, regrettably, rivalry termination theories fall short in explaining the persistence of the China-India nuclear rivalry. The major reason is that the primary cause of a nuclear-armed rivalry—disputed borders—remains unresolved, a factor essential to the China-India nuclear rivalry, and is not adequately examined in these theories.

H2 Peace

Peace (border dispute resolution) is *less* likely when rival states possess nuclear weapons.

±Nuclear Weapons

= **War** (*border dispute resolved*); **Brinkmanship** (*border dispute unresolved*); **Peace** (*border dispute resolved*); **Rapprochement** (*border dispute unresolved*)

Hypothesized Predictions	China-India Rivalry
China and India are likely to settle a border dispute by signing a peace treaty before the acquisition of nuclear weapons	Confirmed (1954 Panchsheel Agreement)
China and India are likely to engage in rapprochement, but not settle a border dispute by signing a peace treaty, after the acquisition of nuclear weapons	Confirmed (e.g., 1993 Agreement on Resolving Border Disputes, 2005 Confidence Building Measures, and 2013 Managing Water Dispute Agreement)

On balance, there is significant empirical evidence in support of Nuclear Prison Theory and its main hypothesis that border dispute resolution is less likely when rival states possess nuclear weapons. In the next chapter I conclude with a

summary of the findings of my dissertation, briefly examine the one episode of rapprochement between Russia and China where they resolved a border dispute (despite having nuclear weapons), provide recommendations for future research, and make broad policy recommendations to minimize the dangers of nuclear prisons.

“We have grasped the mystery of the atom and rejected the Sermon on the Mount...Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living. If we continue to develop our technology without wisdom or prudence, our servant may prove to be our executioner.”
— General Omar Bradley⁴⁰¹

“Nuclear weapons offer us nothing but a balance of terror,
and a balance of terror is still terror.”
—George Wald⁴⁰²

Chapter 5: Conclusion

I began this dissertation by asking why nuclear rivals reject peace. Since the advent of the nuclear age, rival countries with nuclear weapons have not waged a full-scale war.⁴⁰³ These same nuclear rivals have also not signed a single peace treaty.⁴⁰⁴ I argued and demonstrated, through my Nuclear Prison Theory, that the root cause of sustainable, asymmetric nuclear rivalries is an active border dispute that is present before both parties acquire nuclear weapons. This contested territory remains unresolved because nuclear weapons uniquely empower the weaker rival to reject the stronger rival's offer to convert control over territory into sovereignty over territory. The economically and militarily superior rival has

⁴⁰¹ Armistice Day speech (11 November 1948), published in Omar Bradley's *Collected Writings*, Volume 1 (1967).

⁴⁰² From a speech given at an anti-war teach-in at the Massachusetts Institute of Technology (March 4, 1969), “A Generation in Search of a Future,” as edited by Ron Dorfman for *Chicago Journalism Review* (May 1969).

⁴⁰³ Full-scale war is hostilities between opposing national armed forces resulting in 1,000 battle deaths over a 12-month period as defined by the Correlates of War database. Under this definition the 1999 Kargil border conflict between nuclear-armed India and Pakistan was not a full-scale war.

⁴⁰⁴ Peace is defined as a bilateral agreement to resolve the decisive cause of conflict, which in the case of nuclear rivalries is disputed territory. Database compiled by author of all nuclear-armed countries involved in active rivalries – United States, Russia, China, India, Pakistan, and North Korea – have never signed a peace treaty with their rival that resolves disputed territory except for Zhenbao Island 1969 dispute between China and the Soviet Union that was resolved after in 1991.

de facto control of most of the disputed territory and, unsurprisingly, prefers the status quo ; whereas the weaker rival, punching above its weight with newly acquired nuclear weapons, rejects the status quo, and wants more territory. Both stick to their positions and the rivalry persists, with nuclear rivals finding themselves bouncing from brinkmanship (skirmishes) short of war, and rapprochement (confidence buildings measures) short of peace, punctuated by periods of stalemate in between. This makes any negotiated territorial settlement a mutual loss—what I call mutual capitulation. This limbo, between war and peace, which I call the Nuclear Prison, is very difficult to break out of when the root cause of the rivalry is a border dispute. In the one sui generis quasi-related case of Russia and China, where the Nuclear Prison did break, the Soviet Union literally imploded, and Russia then settled its border disputes with China.

In the previous chapters, I also demonstrated that nuclear weapons uniquely and decisively sustain these rivalries, because the same rivals without nuclear weapons behave differently by waging war and making peace (resolving border disputes). For example, India and Pakistan waged a full-scale war in 1948 over the contested territory of Kashmir, and then signed a peace treaty based on resolving a border dispute, in 1958, by dividing the state of Bengal (then West Pakistan, today Bangladesh), and later, in 1960, by dividing the river Indus.⁴⁰⁵ India and China signed a treaty in 1954 that solidified China's annexation of Tibet

⁴⁰⁵ United Nations, "Agreement between India and Pakistan on Border Disputes (East Pakistan)," Peace Agreements Database, October 9, 1958, Shuja Nawaz, *Crossed Swords: Pakistan, Its Army, and the Wars Within* (London: Oxford University Press, 2008), 42-72, and Opangmeren Jamir, "Understanding India-Pakistan Water Politics since the Signing of the Indus Waters Treaty." *Water Policy* 18, no. 5 (2016): 1070-087.

(former Indian protectorate inherited from British India), and waged a war in 1962 that resulted in China's annexation of Aksai Chin.⁴⁰⁶

In the previous chapters on the India-Pakistan and China-India rivalries, I tested the hypothesis that peace (border dispute resolution) is *less* likely when rival states possess nuclear weapons against across 31 episodes of war, brinkmanship, rapprochement and peace, and alternative hypotheses from 10 theories embedded in Realism, Liberalism, and Constructivism. Specifically, I examined Realist Nuclear Deterrence Theory, and three rivalry termination theories (Costs>Benefits, External Shock, And Extreme Power Asymmetry Theories); Liberal Nuclear Binding Theory and Third-Party Intervention Theory; and Constructivist Nuclear Learning And Nuclear Experience Theories and Internal Shock And Domestic Politics Ending Interstate Rivalry Termination Theories. Realist Nuclear Deterrence Theory came closest to a foundation to build my Nuclear Prison Theory, which, upon testing, demonstrated significant explanatory and predictive range.

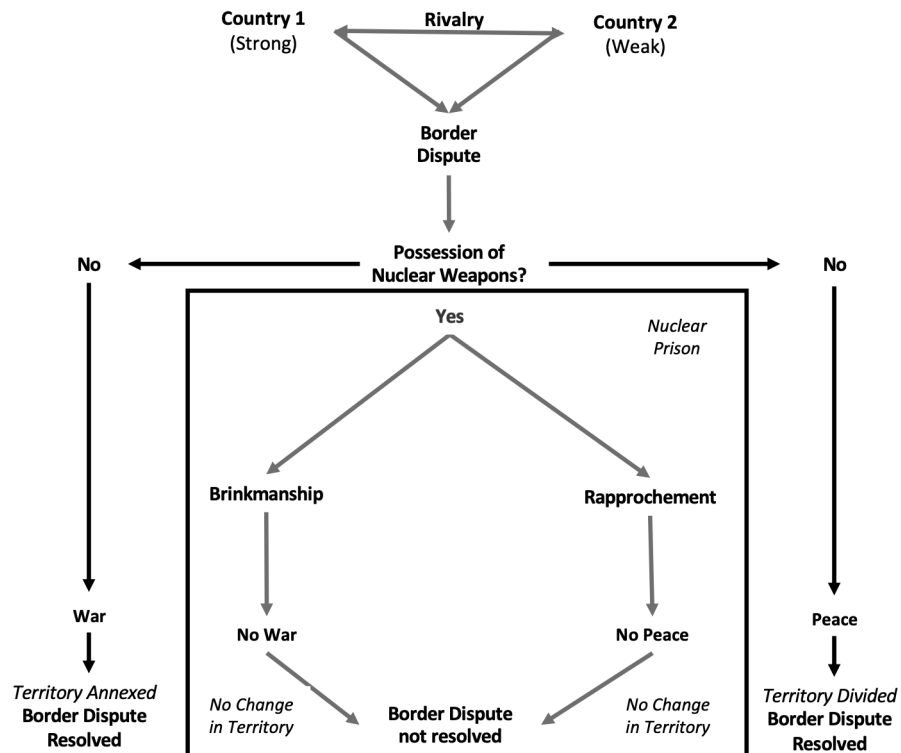
In this chapter I will summarize my central argument and the empirical support for my Nuclear Prison Theory. Next, I briefly examine the unique case of Russia and China that ostensibly falsifies the Nuclear Prison Theory. After that, I will emphasize avenues for future research. And finally, I suggest the implications that Nuclear Prison Theory has for American and international efforts to stop the spread of nuclear weapons.

⁴⁰⁶ Mahesh Shankar, "Territory and the China-India Competition," in *The China-India Rivalry in the Globalization Era*, ed. T.V. Paul (Washington, D.C., Georgetown University Press, 2018), 29-47.

Main Argument Revisited with Empirics

My Nuclear Prison Theory (NPRT) is nested in Structural Realism, and its subsidiary nuclear deterrence theory, and follows the major assertion that countries seek security as a primary goal in an anarchic international system. NPRT is based on four conditions: 1) presence of an entrenched interstate rivalry caused by border dispute(s) between two primary states; 2) rivalry is asymmetric between a strong and weak state; 3) rivalry predates the acquisition of nuclear weapons; and 4) both rivals possess nuclear weapons.

Figure 35 Nuclear Prison Theory



Source: Author

Nuclear Prison Theory works under four conditions for India and Pakistan: both are (1) asymmetric (2) rivals with (3) nuclear weapons and their (4) rivalry predates their acquisition of nuclear weapons. Additionally, in the India-Pakistan

case I observed in Chapter Three the creation of a nuclear prison through a five-phase, self-perpetuating process:

1. First, India and Pakistan maximized security and their stake in disputed borders by pursuing nuclear weapons after losses to a militarily stronger adversary (India's loss to China in 1962, and Pakistan's loss to India in 1971).
2. Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures such as advanced delivery and missile defense systems. For example, after Pakistan obtained a nuclear device in 1987, it gained significant military power against its rival, India, which increased India's efforts to build a missile defense system.⁴⁰⁷
3. Third, adversaries trade provocative actions, such as border skirmishes, but stop short of war. For example, Pakistan, militarily and economically inferior to India, used limited force against India, short of full-scale war, in the Kargil region of the disputed territory of Kashmir.⁴⁰⁸
4. Fourth, after a major skirmish India and Pakistan engaged in détente, for example after the 1999 Kargil Crisis, partly in fear of how close they came to engaging in a nuclear war, which is something akin to what the

⁴⁰⁷ Frank O' Donnell and Yogesh Joshi, "India's Missile Defense: Is the Game Worth the Candle?" *The Diplomat*, August 2, 2013.

⁴⁰⁸ Peter R. Lavoy, *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict* (New York: Cambridge University Press, 2009).

Russians and Americans did following the Cuban Missile Crisis: both sides were horrified at how close they had come to thermonuclear war.⁴⁰⁹

5. Firth, when the underlying cause of their rivalry—border disputes—is not resolved, the rivals revert to stalemate or engage in brinkmanship again. For example, India and Pakistan engaged in brinkmanship due to the Pakistan-sponsored Mumbai Attacks in 2008 after the 2004–2007 Four Point Formula toward détente failed.

In support of my Nuclear Prison Theory, I also observed that India and Pakistan eschewed border dispute resolution after the acquisition of nuclear weapons despite four episodes of rapprochement. Before the acquisition of nuclear weapons, I confirmed that India and Pakistan did sign five border dispute resolutions.

The China-India rivalry case also provides significant empirical evidence in support of the Nuclear Prison Theory. Specifically, I observed four conditions whereby China and India are (1) asymmetric (2) rivals with (3) nuclear weapons and their (4) rivalry predates their acquisition of nuclear weapons. As with the India-Pakistan case, in the China-India case we observe the creation of a nuclear prison through a five-phase, self-perpetuating process:

1. First, China and India maximized security and their stake in disputed borders by pursuing nuclear weapons (China with the help of Soviet Union

⁴⁰⁹ Mohammed Badrul Alam, “In Pursuit of Peace: A Micro Study of Confidence-Building Measures between India and Pakistan,” *Indian Journal of Asian Affairs* 23, no. (2010): 41-60.

after its communist revolution of 1949, and the war in Korea; and India after its loss to China in 1962).

2. Second, the state with the newly acquired nuclear arsenal experiences a major military capability boost, while the veteran nuclear power improves countermeasures such as advanced delivery and missile defense systems. For example, after India obtained a nuclear device in 1974, it gained significant military power against China. Soon after, China began developing a missile defense system that has gained greater accuracy over the years.⁴¹⁰
3. Third, adversaries exchange provocative actions, such as border skirmishes, but stop short of war. For example, India, militarily and economically inferior to China, used limited force against China, short of full-scale war, in the 2020 Galwan Valley Crisis in the western sector.⁴¹¹
4. Fourth, after close-calls from brinkmanship nuclear rivals lean toward détente. For example, after a major skirmish China and India engaged in détente, for example after border clashes during the 1987 Sumdorong Chu Valley, partly in fear of escalation, both rivals engaged in rapprochement and signed the 1993 agreement to manage and resolve the border dispute.⁴¹²

⁴¹⁰ Thangavel K. Balasubramaniam and Ashok Kumar Murugesan, “China’s Rising Missile and Naval Capabilities in the Indo-Pacific Region: Security Implications for India and Its Allies,” *Journal of Indo-Pacific Affairs*, June 8, 2020.

⁴¹¹ Toby Dalton and Tong Zhao, “At a Crossroads? China-India Nuclear Relations After the Border Clash,” *Carnegie Endowment for International Peace*, August 19, 2020.

⁴¹² Rishika Chauhan, “10 Differences Not Disputes: India’s View of the Border After 1962,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller (New York, Routledge, 2020), 183, and “Agreement on the

5. Fifth, when the underlying cause of their rivalry—border disputes—is not resolved, the rivals revert to stalemate or engage in brinkmanship again.

For example, after the 2013 Border Defense Cooperation Agreement failed to resolve their border dispute, India and China engaged in brinkmanship in Doklam, Bhutan in 2017.

In support of NPRT, in Chapter Four I observed that China and India rejected a border dispute resolution after the acquisition of nuclear weapons despite six episodes of rapprochement. Before the acquisition of nuclear weapons, I confirmed that India and Pakistan did sign one border dispute resolution.

In both cases, through an examination of 31 episodes of war, brinkmanship, rapprochement, and peace, I found empirical evidence for NPRT.

Hypothesized Predictions of the Nuclear Prison Theory	India-Pakistan Rivalry	China-India Rivalry
<u>H2 Peace</u> (border dispute resolution) is <i>less</i> likely when rival states possess nuclear weapons.	Yes	Yes
Empirical Examples	1997-2008 Composite Dialogue and Confidence Building Measures, and 2011 Most Favored Nation Status	1993 Agreement on Resolving Border Disputes, 2005 Confidence Building Measures, and 2013 Managing Water Dispute Agreement

Does China-Russia Case Falsify the Nuclear Prison Theory?

Unlike the India-Pakistan and China-India rivalries, the China-Russia case does not adhere to all the conditions of the Nuclear Prison Theory. Since the mid-nineteenth century, Russia and China have had a varied relationship, from China

Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas, September 7, 1993,” United Nations Peacemaker database.

being Russia's client and ally against Japan, to communist competitor, and finally as a strategic partner after the fall of the Soviet Union in 1991 (and resolution of border disputes).⁴¹³ Before 1991, Russia was economically and militarily stronger than China, exploited the weaknesses of China by interfering in Chinese domestic politics, coerced China to give concessions on territory, and constantly competed with China in promoting its brand of global communism.⁴¹⁴ Therefore, in its pure form, NPRT does not apply to the Russia-China case because both are (1) asymmetric (in favor of Russia before 1991 and in favor of China after 1991) but were *not* (2) enduring rivals with (3) nuclear weapons and their (4) rivalry *did not* predate their acquisition of nuclear weapons. Moreover, the disputed border between Russia and China was mere 0.3 square miles.

Nevertheless, because Russia and China had nuclear weapons and resolved a border dispute in 1991, (albeit astronomically smaller in size than India and Pakistan or China and India) it is important to briefly examine the Russia-China case.

In March 1969, China's People's Liberation Army battled troops from a Russian border post on Zhenbao Island in the eastern sector.⁴¹⁵ The skirmish ended and 22 years later, in 1991 (and again in 2005), China and Russia signed

⁴¹³ Lubina, Michal Lubina, *Russia and China: A Political Marriage of Convenience – Stable and Successful*. Opladen (Toronto: Verlag Barbara Budrich, 2017) 95-103, and Marcin Kaczmarek, *Russia-China Relations in the Post-Crisis International Order*, First Ed. (London: Routledge, 2015), 9-11.

⁴¹⁴ Marcin Kaczmarek, *Russia-China Relations*, 11.

⁴¹⁵ Robert Farley, "How the Soviet Union and China Almost Started World War III," *National Interest*, February 9, 2016.

comprehensive border dispute resolution treaties to resolve all outstanding border disputes.⁴¹⁶

It is important to place these two episodes of brinkmanship and rapprochement, which graduated to a border dispute resolution, in historical context. Until the collapse of the Soviet Union, Russia and China had an asymmetric (in favor of Russia) and complex relationship. Russia and China signed the Treaty of Aigun in 1958 that gave control of the territory north of the Amur river to Russia.⁴¹⁷ In the ensuing years, Russia took full advantage of Chinese economic and military weakness and embarked on a “colonial and economic infiltration” of China.⁴¹⁸ While Russia supported China against Japan during the Sino-Japanese war of 1894–1895, Russia gained control of Chinese seaports, northern Manchuria, and Outer Mongolia (present day Mongolia).⁴¹⁹ Even after Russia’s Bolshevik Revolution in 1917, and the establishment of the Republic of China in 1911 following the end of the Qing Dynasty, Russia remained the dominant partner.⁴²⁰ In the mid-twentieth century, communist Russia found common cause with Chinese communists but always kept China under its

⁴¹⁶ M. Taylor Fravel, *Strong Borders, Secure Nation: Cooperation and Conflict in China’s Territorial Disputes* (Princeton: Princeton University Press, 2008) 137-142.

⁴¹⁷ Marcin Kaczmarek, *Russia-China Relations in the Post-Crisis International Order*, First Ed. (London: Routledge, 2015), 9-11.

⁴¹⁸ Marcin Kaczmarek, *Russia-China Relations*, 10.

⁴¹⁹ Richard Lowenthal, “Russia and China: Controlled Conflict.” *Foreign Affairs* 49, no. 3 (1971): 507-509, and Marcin Kaczmarek, *Russia-China Relations in the Post-Crisis International Order*, First Ed. (London: Routledge, 2015), 10.

⁴²⁰ Y. Kuisong, “The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement,” *Cold War History* 1, no.1 (2000): 23.

thumb by maintaining global leadership in the communist camp.⁴²¹ It is during this time, in the 1960s, that China began to push back.⁴²²

China's assertiveness was on full display when, in March 1969, Chinese and Russian guards clashed on the bank of the Ussuri river on Zhenbao Island.⁴²³ Approximately 60 Russian and 70 Chinese troops were killed, but the Chinese kept control of the Island.⁴²⁴ In the ensuing months the fighting subsided and Beijing and Moscow began talks, but it would take decades before the border dispute was partially resolved through the *Agreement on the Eastern Section of the Boundary between the Union of Soviet Socialist Republics and the People's Republic of China* in May 1991, and completely resolved in the *China-Russia Border Agreement* in March 2005.⁴²⁵ The 1991 agreement resolved 32 boundary points across the China-Russia eastern border, splitting the Ussuri river; both parties exchanged official maps, created a joint demarcation committee "in charge of determining the exact location" of the mutually agreed upon border; and both sides agree to permit "vessels of all types, including military vessels," to navigate "unobstructed from the Ussuri River through Khabarovsk City Heilongjiang

⁴²¹ Y. Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," *Cold War History* 1, no.1 (2000): 22-26.

⁴²² Lorenz M. Luthi, "Restoring Chaos to History: Sino-Soviet-American Relations, 1969," *The China Quarterly* 210 (2012): 378-82, and Lyle J. Goldstein, "Do Nascent WMD Arsenal Deter? The Sino-Soviet Crisis of 1969," *Political Science Quarterly* 118, no. 1 (2003): 57-60.

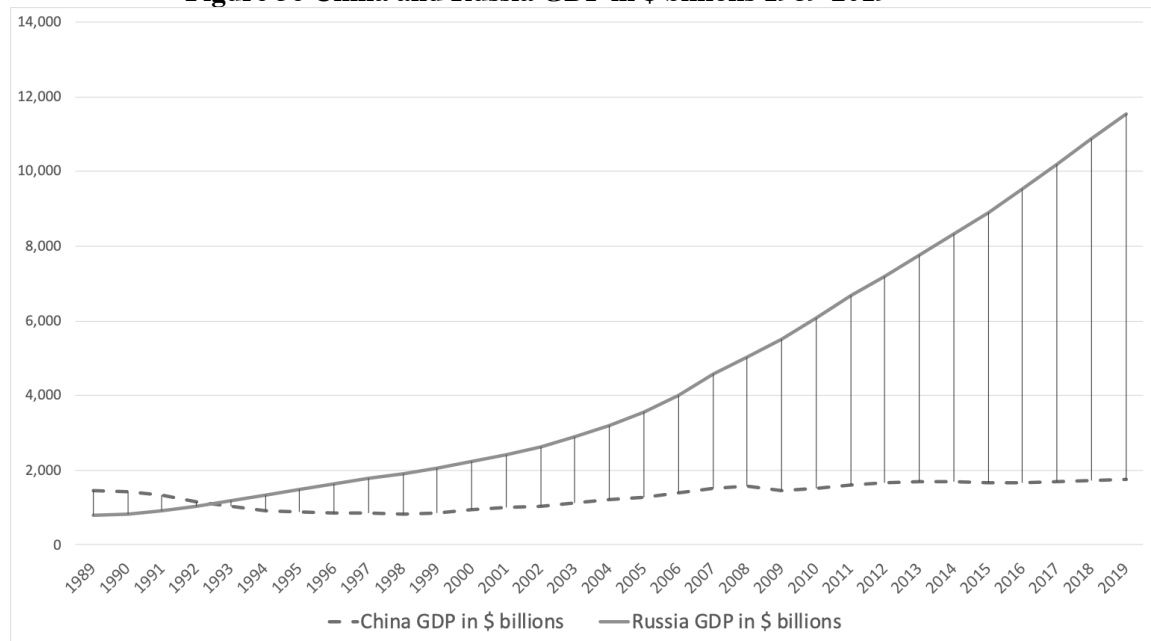
⁴²³ Lyle J. Goldstein "Return to Zhenbao Island: Who Started Shooting and Why It Matters," *The China Quarterly* 168 (2001): 985-87.

⁴²⁴ Lyle J. Goldstein, "Do Nascent WMD Arsenal Deter? The Sino-Soviet Crisis of 1969," *Political Science Quarterly* 118, no. 1 (2003): 57-60.

⁴²⁵ Full text of the 1991 agreement available at Peace Agreement Access Tool, University of Edinburgh, www.peaceagreements.org, and full text of the 2005 agreement available at the Embassy of the People's Republic of China in New Zealand website: www.chinaembassy.org.nz

(Amur River).”⁴²⁶ The 2005 agreement focused on resolving the remaining “eastern end of the joint border, defining two percent of the total 4,300 kilometers (2,700 miles) of the Sino-Russian frontier, stretching through several islands in the Khabarovsk region.”⁴²⁷

Figure 36 China and Russia GDP in \$ billions 1989-2019



Source: World Bank using 2010 constant U.S. dollars

Why did nuclear-armed China and Russia resolve their border dispute when India-Pakistan and China-India have not? Putting aside that the China-Russia case does not meet all the conditions of NPRT (both were not rivals and did not wage war before acquiring nuclear weapons), Russia moved to resolve its territorial dispute with China to maximize its security after the fall of the Soviet

⁴²⁶ “Agreement on the Eastern Section of the Boundary between the Union of Soviet Socialist Republics and the People's Republic of China (16/05/1991),” Peace Agreement Access Tool, University of Edinburgh, www.peaceagreements.org.

⁴²⁷ “China, Russia sign border agreement (03/06/2005)” Embassy of the People’s Republic of China in New Zealand website: www.chinaembassy.org.nz.

Union.⁴²⁸ The final border dispute resolution in 2005 was an acknowledgement of Chinese economic and military superiority and in support of cementing a Russia-China “strategic partnership.” It was a small price to pay given that, unlike large swaths of disputed territory between India and Pakistan (Kashmir is 85,806 square miles) and China and India (Arunachal Pradesh is 32,300 square miles), Zhenbao Island carries minor strategic significance in terms of size (0.3 square miles), location, and socio-economic potential.⁴²⁹

On balance, the Russia-China rivalry demonstrates the difficulty of breaking nuclear prisons without one competitor literally imploding. Next, I will briefly discuss avenues for future research.

Future Research

The Nuclear Prison Theory does not explain when nuclear rivals end up engaging in rapprochement or brinkmanship, instead it explains the rationale behind the existence of the nuclear prison. Middle range parsimonious theories are a limited representation of reality, as is my Nuclear Prison Theory, and therefore it should be judged through the prism of equifinality: there are several causes to a social phenomenon.⁴³⁰ That said, I have demonstrated that NPRT has significant explanatory power and adds value to the academic and policy debate on nuclear rivalries and nuclear proliferation.

⁴²⁸ Dmitri Trenin, “True Partners? How Russia and China See Each Other,” *Center for European Reform*, February 2012, 5.

⁴²⁹ Marcin Kaczmarski, *Russia-China Relations in the Post-Crisis International Order*, First Ed. (London: Routledge, 2015), 10.

⁴³⁰ Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005) 63.

One avenue could be to test the explanatory range of NPRT beyond border disputes to overlapping geographic zones of security (where opposing sides had stationed troops) of nuclear rivals, such as the United States and Russia in Eastern Europe, and China and the United States in the South China Sea. A zone of security could be a country's geographical realm of political and economic sphere beyond its national borders considered so vital to its national security that it deploys troops in that zone.⁴³¹ Unlike a border dispute based on contested territories, parts of which fall under the control of each rival, a zone of security could be based on competition for influence over sovereign countries. For instance, Russia's "near abroad" includes Belarus, Ukraine, and Georgia. Russian troops are deployed in, and control, eastern Ukraine. The United States also considers Ukraine as part of its zone of security bordering the North Atlantic Treaty countries of Poland, Hungary and Romania, and consequently, the United States has deployed troops in western Ukraine.⁴³² Likewise, Russian and U.S. troops are competing for influence in Syria through their local proxies.⁴³³ India and Pakistan support political proxies in Afghanistan, Bangladesh, and Sri Lanka in their overlapping zones of security.⁴³⁴ Moreover, India and China contest

⁴³¹ Zone of security is inspired by the concept of 'sphere of influence' in international politics but unlike the latter it does not refer to Great Britain and Germany's agreement in May 1885 which provided for "a separation and definition of their respective spheres of influence in the territories on the Gulf of Guinea." See for example, Daniel H. Deudney, "Sphere of Influence." *Britannica Online Academic Edition*, 2018, Encyclopedia Britannica, Inc. Zones of Influence are inherently conflictual and overlapping.

⁴³² Michael Rywkin, "Russia and the Near Abroad Under Putin," *American Foreign Policy Interests* 37, no. 4 (2015): 229-237.

⁴³³ Seth G. Jones, Nicholas Harrington, and Joseph S. Bermudez Jr. "Dangerous Liaisons: Russian Cooperation with Iran in Syria," *Center for Strategic and International Studies*, July 2019.

⁴³⁴ William Dalrymple, "A Deadly Triangle: Afghanistan, Pakistan and India," *Brookings Institution*, June 25, 2013.

overlapping zones of security in Asia by coercing or cajoling neighbors like Nepal and Bhutan.⁴³⁵

Researchers could ask if rivals contesting zones of security by deploying troops are less prone to brinkmanship than rivals engaged in border disputes due to proximity and higher national security priority. As proximity, and the capability to project national power, decreases are countries less likely to engage in conflict over faraway lands?

In this context, researchers could examine the U.S.-Russia rivalry through the prism of NPRT and test the hypothesis that nuclear rivalries based on overlapping zones of security housing troops from both sides are less volatile (in terms of frequency of brinkmanship) than nuclear rivalries based on border disputes.

On balance future research is recommended to find out when and how often brinkmanship and rapprochement occur and how can this frequency change; and if NPRT has applicability beyond interstate nuclear rivalries based on border disputes.

Theoretical and Policy Contributions

This dissertation carves a new path in the research field of nuclear deterrence, the impact of nuclear proliferation, and conflict escalation. It

⁴³⁵ Rohan Mukherjee and Darren J. Lim, “India is Our Brother, China is our Friend: Navigating Great Power Rivalry in Southern Asia,” *War on the Rocks*, September 22, 2017; and Eleanor Albert, “Competition in the Indian Ocean,” *Council on Foreign Relations*, May 19, 2016.

introduces a new, original limitation of nuclear deterrence—a *nuclear prison* that keeps nuclear rivals, paradoxically, from both war and peace. It helps bridge the theoretical gap between nuclear conflict escalation and de-escalation and the constricting effect of nuclear weapons on interstate rivalry termination. Both trends are underrepresented in current literature.

It is important to develop theories that do not explain a phenomenon but help practitioners of International Relations placate critical challenges, such as the Nuclear Prison. This is critical because “until the ‘engineering’ component of the discipline assumes a central role, research—whether theoretical, empirical, or any combination of the two—will continue to generate an incoherent accumulation of theories, lemmas, correlations and ‘facts.’”⁴³⁶ International relations theories that add knowledge and comprehension also facilitate two essential tasks of policymaking: diagnosis and prescription.⁴³⁷

NPRT is an attempt to diagnose and prescribe by contending that once rivals acquire nuclear weapons their rivalry is less likely to be terminated in war or peace. This explanation strongly supports nuclear nonproliferation efforts to strengthen regional and international stability. Second, even if peace—the resolution of border disputes—is unlikely between nuclear rivals, international efforts can focus on decreasing the likelihood of brinkmanship and increasing the likelihood of rapprochement by increasing economic interdependence. In concrete

⁴³⁶ Peter Ordeshook, “Engineering or Science: What is the Study of Politics?” in Jeffrey Friedman, ed., *The Rational Choice Controversy* (New Haven, CT: Yale University Press, 1995), 175-188.

⁴³⁷ Daniel Byman and Matthew Kroenig, “Reaching Beyond the Ivory Tower: A How To Manual,” *Security Studies* 25, no. 2 (2016): 277.

terms, that means that the United States, along with its international partners, should work assiduously to stop Iran and Saudi Arabia (and to a lesser degree Japan and Taiwan) from acquiring nuclear weapons. NPRT predicts that, once these countries have nuclear weapons, their respective rivalries will become long-lived and the overall stability in their respective regions will decrease. For current nuclear rivalries, the United States and its allies should promote economic interdependence, which is likely to encourage rapprochement and discourage brinkmanship. An important example of this is the India-Pakistan nuclear rivalry.

The topic of nuclear rivalries will remain vital to academics and policymakers focused on international security. Consequently, it is critical that we stop the creation of future Nuclear Prisons, and break existing ones, to maintain international peace.

Bibliography

- Abbas, Hassan. *Pakistan's Drift into Extremism: Allah, the Army, and America's War on Terror*. New York: M.E. Sharpe, 2005.
- Abhyankar, Rejendra M. *Indian Diplomacy: Beyond Strategic Autonomy*. New Delhi, Oxford University Press, 2018.
- Acosta, Marcus P. "The Kargil Conflict: Waging war in the Himalayas," *Small Wars and Insurgencies* 18, no. 3 (2007): 397-415.
- Adler, Emanuel and M. Barnett. "Security Communities in Theoretical Perspective," in *Security Communities*, ed. Emmanuel Adler and M. Barnett. Cambridge: Cambridge University Press, 1998.
- Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas, September 7, 1993, United Nations Peacemaker database.
- Ahmed, Samina. "Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices," *International Security* 23, no. 4 (Spring 1999): 178-204.
- Aide Memoire from the Government of India, Ministry of External Affairs," October 03, 1953, History and Public Policy Program Digital Archive, PRC FMA 105-00032-05, 23. Obtained by Dai Chaowu. <http://digitalarchive.wilsoncenter.org/document/114753>.
- Alam, Mohammed Badrul "In Pursuit of Peace: A Micro Study of Confidence-Building Measures between India and Pakistan," *Indian Journal of Asian Affairs* 23, no. (2010): 41-60.
- Albert, Eleanor. "Competition in the Indian Ocean," *Council on Foreign Relations*, May 19, 2016.
- Albright, David and Andrea Stricker, Taiwan's Former Nuclear Weapons Program. New York: Institute for Science and International Security, 2018.
- Alexander Wendt, "Anarchy is what states make of it: the social construction of power politics," *International Organization* 46, (1992): 391-425.
- Allison, Graham and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*. New York: Pearson, 1999.
- Allison, Graham. *Nuclear Terrorism: The Ultimate Preventable Catastrophe*. New York: Owl Books, 2005.

- Altman, Dan. "By Fait Accompli, Not Coercion: How States Wrest Territory from Their Adversaries," *International Studies Quarterly*, Vol. 61, No. 4 (2017): 881-891.
- Armstrong, Tony. *Breaking the Ice: Rapprochement between East and West Germany, the United States and China, and Israel and Egypt*. Washington, D.C.: U.S. Institute of Peace, 1993.
- ASEAN Regional Forum (ARF), ASEAN. Accessed November 22, 2020. Available from www.asean.org.
- Bajpai, Kanti. "Modi's China Policy and the Road to Confrontation," *Pacific Affairs* 91, no. 2 (2018): 245-246.
- Bajwa, Farooq Naseem. *From Kutch to Tashkent: The Indo-Pakistan War of 1965*. London, England: Hurst, 2013.
- Balasubramaniam, Thangavel K. and Ashok Kumar Murugesan, "China's Rising Missile and Naval Capabilities in the Indo-Pacific Region: Security Implications for India and Its Allies," *Journal of Indo-Pacific Affairs*, June 8, 2020.
- Balochistan Liberation Army, Mapping Militant Organizations, *Center for International Security and Cooperation*, Stanford University. Accessed December 7, 2020. Available from www.cisac.fsi.stanford.edu.
- Barry, Ben. "Pakistan's Tactical Nuclear Weapons: Practical Drawbacks and Opportunity Costs," *Survival* 60, no.1 (2018): 75-77
- Basrur, Rajesh M. *South Asia's Cold War: Nuclear Weapons and Conflict in Comparative Perspective*. New York: Routledge, 2008.
- Basrur, Rajesh. *Minimum Deterrence and India's Nuclear Security*. Stanford, CA: Stanford University Press, 2006.
- Beckley, Michael. "The Power of Nations: Measuring What Matters," *International Security*, Vol. 43, No. 2 (Fall 2018): 18-44.
- Beer, Francis A. *How Much War in History: Definitions, Estimates, Extrapolations, and Trends* Beverly Hills, CA: Sage Publications, 1974.
- Behera, Laxman K. "India's Defense Budget 2017-18: An Analysis," *Institute for Defense Studies and Analyses*, February 3, 2017.
- Behera, Navnita Chadha. *Demystifying Kashmir*. Washington, DC: Brookings Institution Press, 2006.
- Bell, Mark S. "Examining Explanations for Nuclear Proliferation," *International Studies Quarterly* 60 (2016): 520-529.

- Bhargava, G. S. "The Simla Agreement – An Overview," *India Quarterly* 29, no. 1 (1973): 26-31.
- Boulding, Kenneth E. *Stable Peace*. Austin: University of Texas Press, 1978.
- Bracken, Paul *The Second Nuclear Age: Strategy, Danger, and the New Power Politics*. New York: St. Martin's Griffin, 2013.
- Brodie, Bernard. *The Absolute Weapon: Atomic Power and World Order*. New York: Harcourt Brace, 1946.
- Bukhari, Fayaz and Satarupa Bhattacharjya, "India and China Withdraw Troops from Himalayan Face Off," *Global Post*, May 7, 2013.
- Bunn, Matthew. "Reducing the greatest risks of nuclear theft and terrorism." *Daedalus* 138, no. 4 (Fall 2009): 112-168.
- Buzan, Barry, Charles A. Jones, and Richard Little. *The Logic of Anarchy*. New York: Columbia University Press, 1993.
- Byman, Daniel and Matthew Kroenig. "Reaching Beyond the Ivory Tower: A How To Manual," *Security Studies* 25, no. 2 (2016): 277.
- Cable from Ambassador Yuan Zhongxin. "Minutes of Meeting between R.K. Nehru and Ambassador Yuan," September 06, 1953, History and Public Policy Program Digital Archive, PRC FMA 105- 00032-03, 12-14. Obtained by Dai Chaowu and translated by 7Brands. <http://digitalarchive.wilsoncenter.org/document/114752>.
- Cable from the Chinese Foreign Ministry. "Report on Negotiations regarding the Tibet issue between China and India'," November 24, 1950, History and Public Policy Program Digital Archive, PRC FMA 105-00011-02, 42-44.
- Carr, E.H. *The Twenty Years' Crisis 1919-1939*. London: Palgrave Macmillan, 1981.
- Carranza, Mario E. "Avoiding a Nuclear Catastrophe: Arms Control after the 2002 India-Pakistan Crisis." *International Politics* 40 (2003): 313-339.
- Ceasefire Violations. Indo-Pak Conflict Monitor (accessed November 13, 2020); available from www.indopakconflictmonitor.org.
- Chakma, Bhumitra. "Pakistan's Post-test Nuclear Use Doctrine," in *The Politics of Nuclear Weapons in South Asia*, ed. Bhumitra Chakma. Farnham: Ashgate Publishing Limited, 2011.
- Chakma, Bhumitra. *The Politics of Nuclear Weapons in South Asia*. Farnham: Ashgate Publishing Limited, 2011.

- Chari, P. R., and D. Suba Chandran. *Armed Conflicts in South Asia, 2010: Growing Left-Wing Extremism and Religious Violence*. New Delhi: Routledge, 2011.
- Chari, P. R., Pervaiz Iqbal Cheema, and Stephen P. Cohen. *Four Crises and a Peace Process: American Engagement in South Asia*. Washington DC: Brookings Institution Press, 2007.
- Chari, P.R. "Reflections on the Kargil War," *Strategic Analysis* 33, no. 3 (2009): 360-364.
- Chari, P.R., Pervaiz Iqbal Cheema, and Stephen P. Cohen, *Four Crises and a Peace Process: American Engagement in South Asia*. Washington, DC: Brookings Institution Press, 2007.
- Chaudhuri, Rudra "Indian "Strategic Restraint" Revisited: The Case of the 1965 India-Pakistan War," *India Review* 17, no. 1 (2018), 62-72.
- Chauhan, Rishika "10 Differences Not Disputes: India's View of the Border After 1962," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller. New York, Routledge, 2020.
- Cirincione, Joseph. *Bomb Scare: The History and Future of Nuclear Weapons*. New York: Columbia University Press, 2007.
- Cohen, Avner. *Israel and the Bomb*. New York: Columbia University Press, 1998.
- Cohen, Eliot A. *The Big Stick: The Limits of Soft Power and the Necessity of Military Force*. New York: Basic Books, 2016.
- Cohen, Stephen P. *Shooting for a Century: The India-Pakistan Conundrum*. Washington, DC: Brookings Institution Press, 2013.
- Cohen, Stephen P., and Sunil Dasgupta. *Arming without Aiming: India's Military Modernization*. Washington DC: Brookings Institution Press, 2010.
- Colby, Elbridge. "If You Want Peace, Prepare for Nuclear War," *Foreign Affairs*, 97, no. 6 (2018): 25-32.
- Coll, Steve "India and Pakistan's Secret Kashmir Talks," *New Yorker*, February 23, 2009.
- Collier, David. "Understanding Process Tracing," *Political Science and Politics*, 44, no. 4 (2011): 823-830.
- Collins, Larry and Dominique Lapierre, *Freedom at Midnight*. New York: Harper Collins, 1975.

- Conflict in Ukraine, Global Conflict Tracker, *Council on Foreign Relations*, February 28, 2020.
- Coperlan, Dale C. "The Constructivist Challenge to Structural Realism: A Review Essay," *International Security* 25, no. 2 (Fall 2000): 187-212.
- Correlates of War project*. Accessed March 8, 2019. Available from <http://www.correlatesofwar.org>.
- Correlates of War project, National Material Capabilities v5, Militarized Interstate Dispute v4.3, and Territorial Change v6*. Accessed October 10, 2019. Available from www.correlatesofwar.org.
- Correlates of War project, Territorial Change v6*. Accessed October 26, 2019). Available from www.correlatesofwar.org.
- Correlates of War, Militarized Interstate Disputes v4.1*. Accessed August 30, 2018. Available from <http://www.correlatesofwar.org/data-sets/MIDs>.
- Dai, Chaowu. "China's Strategy for Sino-Indian Boundary Disputes 1950-1962," *Asian Perspective*, 43, no. 3 (2019): 440-456.
- Dalrymple, William. "A Deadly Triangle: Afghanistan, Pakistan and India," *Brookings Institution*, June 25, 2013.
- Dalton, Toby and George Perkovich, "Is a Pakistan-India War Just One Terrorist Attack Away?" *Carnegie Endowment for International Peace*, January 24, 2017.
- Dalton, Toby and Michael Krepon, "A Normal Nuclear Pakistan," *Carnegie Endowment for International Peace and Stimson*, 2015.
- Dalton, Toby and Tong Zhao, "At a Crossroads? China-India Nuclear Relations After the Border Clash," *Carnegie Endowment for International Peace*, August 19, 2020.
- Daniel H. Deudney, "Regrounding Realism: Anarchy, Security, and Changing Material Contexts," *Security Studies* 10, no. 1 (2000): 1-41.
- Davenport, Kelsey and Kingston Reif. "Nuclear Weapons: Who has What at a Glance," *Arms Control Association*, July 2019.
- Davis, Zachary S. *The India-Pakistan Military Standoff: Crisis and Escalation in South Asia*. New York: Palgrave Macmillan, 2011.
- Department of Defense, "Nuclear Posture Review 2018," Secretary's Preface. Accessed December 14, 2019. Available from <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>

- Diehl, Paul and Gary Goertz. *War and Peace in International Rivalry*. Ann Arbor, M.I.: University of Michigan Press, 2000.
- Dittmer, Lowell. *South Asia's Nuclear Security Dilemma: India, Pakistan, and China*. Armonk: M. E. Sharpe, 2005.
- Doyle, James E. *Nuclear Safeguards, Security, and Nonproliferation*. Oxford: Elsevier, 2008.
- Doyle, Michael. *Ways of War and Peace: Realism, Liberalism, and Socialism*. New York: Norton, 1997.
- Dunn, Lewis A. *Controlling Nuclear Proliferation*. London: IISS, Adelphi Paper No. 263, Winter 1991.
- East-West Bengal Boundary Alignment Agreement Between Pakistan and India. August 21, 1952 and January 22, 1954, *United Nations Treat Series*, UNTS Vol No. 207.
- Evera, Stephen Van. *Causes of War: Power and the Roots of Conflict*. New York: Cornell University Press, 1999.
- Fact Sheet: The Indus Waters Treaty 1960 and the Role of the World Bank, *World Bank*, June 11, 2018.
- Farley, Robert. "How China Defeated India in a Terrifying 1962 War," *The National Interest*, February 11, 2020.
- Farley, Robert. "How the Soviet Union and China Almost Started World War III," *National Interest*, February 9, 2016.
- Feaver, Peter Douglas, "Neooptimists and the Enduring Problem of Nuclear Proliferation," *Security Studies* 6, no. 4 (Summer 1997): 126-136.
- Fitzpatrick, Mark. "How Japan Could Go Nuclear," *Foreign Affairs*, October 3, 2019.
- Foreign Ministry Spokesperson Zhao Lijian's Regular Press Conference, Ministry of Foreign Affairs of the People's Republic of China, September 7, 2020.
- Fravel, M. Taylor. *Active Defense: China's Military Strategy Since 1949*. Princeton: Princeton University Press, 2019.
- Fravel, M. Taylor. *Strong Borders, Secure Nation: Cooperation and Conflict in China's Territorial Disputes*. Princeton: Princeton Press, 2008.
- Fravel, M. Taylor. "Stability in a Secondary Direction: China and the Border Dispute with India after 1962," in *Routledge Handbook of China-India*

- Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller, 169-179. London: Routledge, 2020.
- Freedom in the World 2009: Progress in South Asia, *Freedom House*. Accessed November 11, 2017. Available from <https://freedomhouse.org/report/freedom-world/freedom-world-2009>
- Fukuyama, Francis. *The End of History and the Last Man*. New York: Free, 1992.
- Gaddis, John Lewis. *The Long Peace: Inquiries into the History of the Cold War*. New York: Oxford University Press, 1987.
- Galtung, Johan. "Violence, Peace and Peace Research," *Journal of Peace Research* 6, no. 3 (1969): 167-191.
- Ganguly, Sumit "The Doklam Dispute in Context," *Foreign Affairs*, August 9, 2017.
- Ganguly, Sumit and William R. Thompson, eds., *Asian Rivalries: Conflict, Escalation and Limitation on Two-Level Games*. Stanford, CA: Stanford University Press, 2011.
- Ganguly, Summit, and Devin T. Hagerty. *Fearful Symmetry: India-Pakistan Crises in the Shadow of Nuclear Weapons*. New Delhi: Oxford University Press, 2005.
- Garver, J. W. *Protracted Contest: Sino-Indian Rivalry in the Twentieth Century*. Seattle, University of Washington Press, 2001.
- Gates, Robert M. *From the Shadows*. New York: Simon and Schuster, 1996.
- Gavin, Francis J. *Nuclear Statecraft: History and Strategy in America's Atomic Age*. Ithaca, NY: Cornell University Press, 2012.
- George, Alexander L. and Andrew Benet. *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press, 2005.
- Gilpin, Robert "The Theory of Hegemonic War," *Journal of Interdisciplinary History* 18, no. 4 (1988): 591-613.
- Gilpin, Robert. *The Political Economy of International Relations*. Princeton, NJ: Princeton University Press, 1987.
- Goldstein, Lyle J. "Do Nascent WMD Arsenal Deter? The Sino-Soviet Crisis of 1969," *Political Science Quarterly* 118, no. 1 (2003): 53-80.
- Goldstein, Lyle J. "Return to Zhenbao Island: Who Started Shooting and Why It Matters." *The China Quarterly* 168 (2001): 985-997.

- Goldstein, Melvyn. *A History of Modern Tibet: The Calm Before the Storm: 1951-1955*. Los Angeles: University of California Press, 2009.
- Gomm, Roger, Martyn Hammersley and Peter Foster. *Case Study Method: Key Issues, Key Texts*. London: Sage 2009.
- Grieco, Joseph. "Realist Theory and the Problem of International Cooperation: Analysis with an Amended Prisoner's Dilemma Model," *Journal of Politics* 50: 600-624.
- Gupta, Dipak K. "The Naxalites and the Maoist Movement in India: Birth, Demise, and Reincarnation," *Democracy and Security* 3, no. 2 (2007): 157-188.
- Gupta, Karunakar. "The McMahon Line 1911-45: The British Legacy," *The China Quarterly* 47, (1971): 521-545.
- Hagerty, Devin T. "Nuclear Deterrence in South Asia: the 1990 Indo-Pakistani Crisis," *International Security* 20, no. 3 (Winter 1995): 79-114.
- Haqqani, Husain. *Pakistan: Between Mosque and Military*. Washington: Carnegie Endowment for International Peace, 2005.
- Hartz, Louis. *The Liberal Tradition in America*. New York: Harcourt Brace, 1955.
- Harvey, David. *A Brief History of Neoliberalism*. Oxford: Oxford University Press, 2007.
- Hensel, Paul R. "Territory: Geography, Contentious Issues, and World Politics," in John A. Vasquez, *What Do We Do About War?* New York: Rowman and Littlefield, 2012.
- Ho, Selina. "Power Asymmetry and the China-India Water Dispute," in *The China-India Rivalry in the Globalization Era*, ed. T. V. Paul. Washington, D.C., Georgetown University Press, 2018.
- Hobbes, Thomas. *Leviathan*. London: Wordsworth, 2014.
- Holsti, Kalevi J. *Peace and War: Armed Conflicts and International Order, 1648-1989*. New York: Cambridge University Press, 1991.
- Hook, Steven W., and Christopher M. Jones. *Routledge Handbook of American Foreign Policy*. New York: Routledge, 2011.
- Hook, Steven W., and John Spanier. *American Foreign Policy Since World War II*. Washington: CQ Press, 2010.

- Horowitz, Michael. "The Spread of Nuclear Weapons and International Conflict: Does Experience Matter?" *Journal of Conflict Resolution* 53, no. 2 (2009): 234-257.
- Huth, Paul K. and Todd L. Allee. *The Democratic Peace and Territorial Conflict in the Twentieth Century*. Cambridge: Cambridge University Press, 2002.
- Huth, Paul K. *Standing Your Ground: Territorial Disputes and International Conflict*. Ann Arbor: University of Michigan Press, 1996.
- Hymans, Jacques. *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy*. Cambridge: Cambridge University Press, 2006.
- Ikenberry, John G. *After Victory*. Princeton, NJ: Princeton University Press, 2001.
- International Institute for Strategic Studies, Chapter Six: Asia, *The Military Balance 2019*, London: IISS, Vol. 119, 2019.
- International Institute for Strategic Studies. *The Military Balance 2011: The Annual Assessment of Global Military Capabilities and Defence Economics*. London: Routledge, 2011.
- Izuyama, Marie and Shinichi Ogawa. "The Nuclear Policy of India and Pakistan," *National Institute for Defense Studies, Japan, Security Reports*, no. 4 (March 2003): 59-89.
- Jacob, Happymon. "Toward a Kashmir Endgame? How India and Pakistan Could Negotiate a Lasting Solution," *United States Institute of Peace*, August 2020.
- Jacob, Happymon. *Ceasefire Violations in Jammu and Kashmir: A Line of Fire*. Washington, D.C., United States Institute of Peace, 2017.
- Jaffrelot, Christophe. "Ceasefire Violations in Kashmir: A War by Other Means?" *Carnegie Endowment for International Peace*, October 24, 2018.
- Jalal, Ayesha. *The State of Martial Rule: The Origins of Pakistan's Political Economy of Defence*. London: Cambridge University Press, 1990.
- James, Kevin. "Can India or Pakistan Break Deterrence?" *The National Interest*, April 22, 2019.
- James Martin Center for Nonproliferation Studies, North Korea Missile Test Database, *Nuclear Threat Initiative*, March 31, 2020.
- Jamir, Opangmeren. "Understanding India-Pakistan Water Politics since the Signing of the Indus Waters Treaty." *Water Policy* 18, no. 5 (2016): 1070-1087.

- Jane Lavender, "Russia Drops 'Father of All Bombs' on ISIS Senior Commanders," *The Mirror*, September 9, 2017.
- Jason Davidson, "The Roots of Revisionism: Fascist Italy, 1922–1939," *Security Studies* 11, no. 4 (2002): 125-159.
- Jerel A. Rosati, "Cycles in Foreign Policy Restructuring: Politics of Continuity and Change in U.S. Foreign Policy," in *Foreign Policy Restructuring: How Governments Respond to Global Change*, eds. Jerel A. Rosati, Joe D. Hagan, and Martin W. Sampson III, Columbia, S.C.: University of South Carolina Press, 1994.
- Jervis, Robert. "Cooperation Under the Security Dilemma," *World Politics* 30 (1986): 167-214.
- Jervis, Robert. "The Political Effects of Nuclear Weapons: A Comment," *International Security* 13, no. 2 (Autumn 1988): 80-90.
- Jervis, Robert. *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon*. Ithaca, NY: Cornell University Press, 1989.
- Johnson, Dominic D. P. and Monica Duffy Toft. "Grounds for War: The Evolution of Territorial Conflict," *International Security* 38, no. 3 (Winter 2013/14): 7-38.
- Johnston, Alastair Iain. "China's New 'Old Thinking': The Concept of Limited Deterrence," *International Security* 20, no. 3 (Winter 1995/96): 5-42.
- Johnston, Alistair Iain. "Is China a Status Quo Power?" *International Security* 27, no. 4 (2003): 5-56.
- Jones, Seth G. *In the Graveyard of Empires: America's War in Afghanistan* New York: W. W. Norton, 2009.
- Jones, Seth G., Nicholas Harrington, and Joseph S. Bermudez Jr. "Dangerous Liaisons: Russian Cooperation with Iran in Syria," *Center for Strategic and International Studies*, July 2019.
- Joshi, Yogesh. "Angels and Dangles: Arihant and the Dilemma of India's Undersea Nuclear Weapons," *War on the Rocks*, January 14, 2019.
- Kaczmarek, Marcin. *Russia-China Relations in the Post-Crisis International Order*, First Ed. London: Routledge, 2015.
- Kahn, Herman. *On Thermonuclear War*. New York: Free Press, 1960.
- Kahn, Herman. *Thinking About the Unthinkable in the 1980s: A Revisiting of the Classic Work on Nuclear War*. New York: Simon and Schuster, 1984.

- Kant, Immanuel. *Perpetual Peace: A Philosophical Essay*. London: George Allen and Unwin, 1917.
- Kapoor, Amit. "Game theoretic approach to India-Pakistan conflict," *The Economic Times*, September 28, 2019.
- Karpin, Michael. *The Bomb in the Basement*. New York: Simon and Schuster, 2006.
- Kellogg, Thomas. "The China-India Standoff: What Does Beijing Want?" *Foreign Policy*, September 1, 2017.
- Keohane, Robert O. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton, NJ: Princeton University Press, 1984.
- Keohane, Robert O. and Joseph S. Nye. "Power and Interdependence in the Information Age," *Foreign Affairs* 77, no. 5 (1998): 81-94.
- Keohane, Robert O. "International Liberalism Reconsidered," in *The Economic Limits to Modern Politics*, ed. John Dunn, 165-194. Cambridge: Cambridge University Press, 1990.
- Khan, Feroz Hassan. *Eating Grass: The Making of the Pakistani Bomb*. Stanford, CA: Stanford University Press, 2012.
- Khan, Saira. *Nuclear Weapons and Conflict Transformation: The Case of India-Pakistan*. London: Routledge, 2009.
- Khan, Zafar. "Pakistan's Nuclear First-Use Doctrine: Obsessions and Obstacles," *Contemporary Security Policy*, 36, no. 1 (2015): 149-170.
- Kile, Shannon N. and Hans M. Kristensen, "Trends in World Nuclear Forces, 2017" *SIPRI Fact Sheet*, July 2017.
- Kissinger, Henry. *Nuclear Weapons and Foreign Policy*. New York: Harper and Row, 1957.
- Kohl, Wilfred L. *French Nuclear Diplomacy*. Princeton, NJ: Princeton University Press, 1971.
- Krepon, Michael. "South Asia Confidence-Building Measures (CBMs) Timeline," *Stimson*, April 17, 2017.
- Krepon, Michael, ed. *Nuclear Risk Reduction in South Asia*. New York: Palgrave, 2004.
- Kristensen, Hans M. "India's Missile Modernization Beyond Minimum Deterrence," *Federation of American Scientists*, October 4, 2013.

- Kristensen, Hans M. and Matt Korda. "Chinese Nuclear Forces, 2019," *Bulletin of the Atomic Scientists*, 75, no. 4 (2019): 171-178.
- Kristensen, Hans M. and Matt Korda. "Indian Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 6 (2018): 262-267.
- Kristensen, Hans M. and Robert S. Norris. "Indian Nuclear Forces, 2017," *Bulletin of the Atomic Scientists* 73, no. 4 (2017): 206-218.
- Kristensen, Hans M., Robert S. Norris and Julia Diamond. "Pakistan Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 5 (2018): 340-349.
- Kugelman, Michael. "India and Pakistan are Edging Closer to War in 2020," *Foreign Policy*, December 31, 2019.
- Kugelman, Michael and Robert M. Hathaway, eds. *Pakistan-India Trade: What Needs to Be Done? Why Does It Matter?* Washington, D.C.: Wilson Center Press, 2013.
- Kumar, Sunaina and Angela Stanzel. "The Balochistan Tinderbox," *European Council on Foreign Relations*, October 5, 2016.
- L., Xie, and Jia, S. *China's International Transboundary Rivers. Politics, Security and Diplomacy of Shared Water Resources*. London and New York: Routledge, 2018.
- Ladwig, Walter C. "A Cold Start for Hot Wars? The India Army's New Limited War Doctrine." *International Security* 32, no. 3 (2007/08): 158-190.
- Ladwig, Walter C. "Not the Spirit of Wuhan: Skirmishes between India and China," *RUSI*, May 21, 2020.
- Lalwani, Sameer and Gillian Gayner, "India's Kashmir Conundrum: Before and After the Abrogation of Article 370," United States Institute of Peace, August 2020.
- Lange, Glenn-Marie and Kevin Carey, eds., *The Changing Wealth of Nations 2018: Building a Sustainable Future*. Washington, D.C.: World Bank, 2018.
- Lavoy, Peter R. *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict*. New York: Cambridge University Press, 2009.
- Lebow, Richard. *Between Peace and War: The Nature of International Crisis*. Baltimore: John Hopkins University Press, 1984.
- Legro, Jeffrey W. *Rethinking the World: Great Power Strategies and International Order*. Ithaca, N.Y.: Cornell University Press, 2005.

- Levesques, Antoine. "A New Normal for India-China Tensions?" *International Institute for Strategic Studies*, September 18, 2020.
- Levy, Adrian and Catherine Scott-Clark. *Deception: Pakistan, the United States, and the Secret Trade in Nuclear Weapons*. New York: Walker Publishing, 2007.
- Lewis, John and Xue Litai. *China Builds the Bomb*. Stanford, CA: Stanford University Press, 1988.
- Lidarev, Ivan. "History's Hostage: China, India and the War of 1962," *The Diplomat*, August 21, 2012.
- Lijphart, Arend. "Comparative Politics and the Comparative Method," *American Political Science Review* 65, no. 3 (1971): 682-693.
- Lobell, Steven E., Norrin M. Ripsman, and Jeffrey W. Taliaferro, *Neoclassical Realism, the State and Foreign Policy*. New York: Cambridge University Press, 2009.
- Lowenthal, Richard "Russia and China: Controlled Conflict." *Foreign Affairs* 49, no. 3 (1971): 507-509.
- Lowy Institute Asia Power Index, 2020 Edition, (accessed November 12, 2020); available from www.power.lowyinstitute.org
- Lubina, Michal. *Russia and China: A Political Marriage of Convenience – Stable and Successful*. Toronto: Verlag Barbara Budrich, 2017.
- Luthi, Lorenz M. "Restoring Chaos to History: Sino-Soviet-American Relations, 1969." *The China Quarterly* 210 (2012): 378–397.
- Machiavelli, *The Prince*. Cambridge: Cambridge University Press, 1998.
- Madan, Tanvi. "How the U.S. Viewed the 1967 Sikkim Skirmishes between India and China," *Brookings*, September 13, 2017.
- Malcone, David M. *Does the Elephant Dance? Contemporary Indian Foreign Policy*. London: Oxford University Press, 2012.
- Malik, Mohan. "The Stability of Nuclear Deterrence in South Asia: The Clash between State and Antistate Actors." *Asia Affairs* 30, no. 3 (2003): 178-199.
- Maoz, Zeev and Ben D. Mor. *Bound by Struggle: Strategic Evolution of Enduring International Rivalries*. Ann Arbor, M.I.: University of Michigan Press, 2002.

- Martin, Felix E. "Critical Analysis of the Concept of Peace in International Relations," *Peace Research* 37, no. 2 (2005): 45-59.
- Marwah, Onkar. "India's Military Intervention in East Pakistan, 1971–1972," *Modern Asian Studies* 13, no. 4 (1979): 549-580.
- Mastro, Oriana Skylar and Arzan Tarapore. "Asymmetric but Uneven: The China-India Conventional Military Balance," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller, 235-247. New York, Routledge, 2020.
- Matinuddin, Kamal. *The Nuclearization of South Asia*. London: Oxford University Press, 2002.
- Maxwell, Neville. *India's China War*. London: Cape, 1972.
- Mearsheimer, John J. "Back to the Future: Instability in Europe after the Cold War," *International Security* 15, no. 1 (Summer 1990): 5-56.
- Mearsheimer, John. *The Tragedy of Great Power Politics*. New York: W.W. Norton, 2001.
- Mearsheimer, John. *The Great Delusion: Liberal Dreams and International Realities*. New Haven: Yale University Press, 2018.
- Meher, Jagmohan. "Dynamics of Pakistan's Disintegration: The Case of East Pakistan 1947–1971," *India Quarterly* 71, no. 4 (2015): 300-317.
- Mendl, Wolf. *Deterrence and Persuasion: French Nuclear Armament in the Context of National Policy, 1945-1969*. New York: Praeger, 1970.
- Menon, Shivshankar. *Choices, Inside the Making of India's Foreign Policy*. Washington D.C.: Brookings, 2016.
- Military and Security Developments Involving the People's Republic of China 2020. *United States Department of Defense*, September 2020.
- Miller, Benjamin. *International and Regional Security: The Causes of War and Peace*. London: Routledge, Taylor and Francis Group, 2017.
- Miller, Nicholas L. and Tristan A. Volpe, "Abstinence or Tolerance: Managing Nuclear Ambitions in Saudi Arabia," *The Washington Quarterly* 41, no. 2 (2018): 27-46.
- Min-Seok, Kim. "The State of the North Korean Military," *Carnegie Endowment for International Peace*, March 18, 2020.
- Mir, Amir. *Talibanization of Pakistan: From 9/11 to 26/11*. New Delhi: Pentagon Security International Press, 2009.

- Mistry, Dinshaw. "Tempering Optimism about Nuclear Deterrence in South Asia," *Security Studies* 18, no. 1 (January 2009): 148-182.
- Mitra, Subrata K. "War and Peace in South Asia: A Revisionist View of India-Pakistan Relations," *Contemporary South Asia* 10, no. 3 (2001): 361-379.
- Mohan, C. Raja, and Samudra Manthan. *Sino-Indian Rivalry in the Indo-Pacific*. Washington, D.C., Carnegie Endowment for International Peace, 2012.
- Mohan, C. Raja. *Crossing the Rubicon: The Shaping of India's New Foreign Policy*, New York: Palgrave MacMillan, 2003.
- Morgenthau, Hans J. *Politics Among Nations: The Struggle for Power and Peace*. New York: Knopf, 1985.
- Mukherjee, Rohan and Darren J. Lim. "India is Our Brother, China is our Friend: Navigating Great Power Rivalry in Southern Asia," *War on the Rocks*, September 22, 2017.
- Mullick, Haider Ali Hussein. "The Naxalite Rebellions," *The American Interest* 9, no. 1 (2013): 20-35.
- Narang, Vipin. "Posturing for Peace? Pakistan's Nuclear Postures and South Asian Stability." *International Security* 34, no. 3 (2009): 38-78.
- Narang, Vipin. *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict*. Princeton, NJ: Princeton University Press, 2014.
- Naseem Bajwa, Farooq. *From Kutch to Tashkent: The Indo-Pakistan War of 1965*. London, England: Hurst, 2013.
- Nawaz, Shuja. *Crossed Swords: Pakistan, Its Army, and the Wars Within*. London: Oxford University Press, 2008.
- Nayak, Polly and Michael Krepon. "US Crisis Management in South Asia's Twin Peaks Crisis," *Stimson Center Report*, September 1, 2006.
- Nayak, Polly, and Michael Krepon. *The Unfinished Crisis: US Crisis Management after the 2008 Mumbai Attacks*. Stimson Center, 2012.
- Newhouse, John. *War and Peace in the Nuclear Age*. New York: Vintage Books, 1990.
- Nuclear Threat Initiative*, "China." Accessed November 16, 2020). Available from www.nti.org
- Nye, Joseph. "Nuclear learning and US-Soviet security regimes," *International Organization* 41, no. 3 (1987): 371-402.

- Onuf, Nicholas Greenwood. *World of Our Making: Rules and Rule in Social Theory and International Relations*. Columbia, S.C.: University of South Carolina Press, 1989.
- Ordeshook, Peter “Engineering or Science: What is the Study of Politics?” in Jeffrey Friedman, ed., *The Rational Choice Controversy*. New Haven, CT: Yale University Press, 1995.
- Pakistan Nuclear Weapons: A Brief History of Pakistan’s Nuclear Program, *Federation of American Scientists* Backgrounder. Accessed June 2, 2015. Available from <http://www.fas.org/nuke/guide/pakistan/nuke/>.
- Palit, Amitendu. “Can India Decouple from China?” *The Diplomat*, November 1, 2020.
- Pape, Robert A. *Bombing to Win: Air Power and Coercion in War*. New York: Cornell University Press, 1996.
- Paul, T. V. *The India-Pakistan Conflict: An Enduring Rivalry*. Cambridge: Cambridge University Press, 2005.
- Paul, T.V. ed. *The China-India Rivalry in the Globalization Era*. Washington, D.C., Georgetown University Press, 2018.
- Paul, T.V., James J Wirtz, and Fortmann, Michel, *Balance of Power: Theory and Practice in the 21st Century*. Stanford, CA: Stanford University Press, 2004.
- Perkovich, George and Toby Dalton. *Not War, Not Peace? Motivating Pakistan to Prevent Cross-Border Terrorism*. New Delhi: Oxford University Press, 2016.
- Pervin, David J. “Building Order in Arab-Israeli Relations: From Balance to Concert?” in *Regional Orders: Building Security in a New World*, eds. David A. Lake and Patrick M. Morgan, 140-164. University Park: Pennsylvania State University Press, 1997.
- Pifer, Steven and Michael O’Hanlon. *The Opportunity: Next Steps in Reducing Nuclear Arms*. Washington, D.C.: Brookings Press: 2012.
- Raman, J. Sri. *Flashpoint: How the U.S., India and Pakistan Brought us to the Brink of War*. Monroe, Me: Common Courage Press, 2004.
- Rashid, Ahmed. *Pakistan on the Brink: The Future of America, Pakistan, and Afghanistan*. New York: Viking, 2012.
- Rasler, Karen and William R. Thompson, and Sumit Ganguly. *How Rivalries End*. Philadelphia: University of Pennsylvania Press, 2013.

- Rezaei, Farhad. *Iran's Nuclear Program: A Study in Proliferation and Rollback*. Cham, Switzerland: Palgrave Macmillan, 2017.
- Riedel, Bruce. *Avoiding Armageddon: America, India and Pakistan to the Brink and Back*. Washington, DC: Brookings Institution Press, 2013.
- Riedel, Bruce. *JFK's Forgotten Crisis: Tibet, the CIA, and Sino-Indian War*. Washington D.C., 2015.
- Riedel, Bruce. *The Search for Al Qaeda: Its Leadership, Ideology, and Future*. Washington: Brookings Institution Press, 2008.
- Ripsman, Norrin M. *Peacemaking from above, Peace from Below: Ending Conflict between Regional Rivals*. Ithaca: Cornell University Press, 2016.
- Rossow, Richard M., Joseph S. Bermudez Jr., and Kriti Upadhyaya, "A Frozen Line in the Himalayas," *Center for Strategic and International Studies*, August 2020.
- Roward, Michael. "The Bloody China-India Border Fight is a Lot Like the Last One," *Foreign Policy*, June 18, 2020.
- Roy, Tirthankar. *The Economy of South Asia: From 1950 to the Present*. London: Palgrave Macmillan, 2017.
- Ruble, Maria Rost. "Fantasy Counterfactual: A Nuclear-Armed Ukraine," *Survival* 57, no. 2 (2015): 145-156.
- Ruggie, John Gerard. *Constructing the World Polity: Essays on International Institutionalization*. New York: Routledge, 1998.
- Russett, Bruce, Christopher Layne, David Spiro, and Michael Doyle. "The Democratic Peace." *International Security* 19, no. 4 (1995): 164-178.
- Rywwin, Michael. "Russia and the Near Abroad Under Putin," *American Foreign Policy Interests* 37, no. 4 (2015): 229-237.
- Sagan, Scott D. "Why do States Build Nuclear Weapons? Three Models in Search of a Bomb." *International Security* 21, no. 3 (1996/97): 54-86.
- Sagan, Scott D. "More Will be Worse," in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons*, 46-87. New York, W.W. Norton and Company, 2012.
- Sagan, Scott D. "The Causes of Nuclear Weapons Proliferation," *Annual Review of Political Science* 14, (2011): 255-244.

- Sagan, Scott D. "Why Do States Build Nuclear Weapons? Three Models in Search of the Bomb," *International Security* 21, no. 3 (Winter 1996-1997): 54-86.
- Sagan, Scott D. *Inside Nuclear South Asia*. Stanford: Stanford University Press, 2009.
- Saint-Mezard, Isabwlle. "The Border Incident of Spring 2013: Interpreting China-India Relations," *Herodote*, 150, no. 3 (2013): 132-149.
- Salik, Naeem. *The Genesis of South Asian Nuclear Deterrence: Pakistan's Perspective*. Oxford: Oxford University Press, 2009.
- Sarkar, Jayita, "Managing nuclear risk in South Asia," *Bulletin of the Atomic Scientists*, 73:1 (2017), 59-61.
- Sarkar, Tuhina "India-Bhutan Relations," *The Indian Journal of Political Science* 73, no.2 (2012): 347-352.
- Sarkesian, Sam C., John Allen Williams, and Stephen J. Cimbala. *US National Security: Policymakers, Processes and Politics*. London: Lynne Rienner Publishers, 2008.
- Sawhney, Pravin "How China Turned the Tables on India and Converted the 1993 Agreement into a Land Grab," *The Wire*, August 2, 2020.
- Schaffer, Howard B., and Teresita C. Schaffer. *How Pakistan Negotiates with the United States: Riding the Roller Coaster*. Washington: United States Institute of Peace, 2011.
- Schelling, Thomas. *Arms and Influence*. New Haven, CT: Yale University Press, 1966.
- Sebastian Biba, "China-India River-Water Conflicts: Toward a Solution Through Launching a Cooperation Spiral." in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller, 209-224. New York, Routledge, 2020.
- Sechser, Todd S. and Mathew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*. Cambridge: Cambridge University Press, 2017.
- Senese, Paul Domenic and John A. Vasquez, *The Steps to War: An Empirical Study*. Princeton, N.J.: Princeton University Press, 2008.
- Shahzad, Syed Saleem. *Inside Al-Qaeda and the Taliban: Beyond Bin Laden and 9/11*. London: Palgrave Macmillan, 2011.

- Shankar, Mahesh "Territory and the China-India Competition," in *The China-India Rivalry in the Globalization Era*, ed. T.V. Paul, 27-54. Washington, D.C., Georgetown University Press, 2018.
- Shankar, Mahesh. "The Reputational Bases of India's China Policy: The Forward Policy and Beyond," *India Review*, 18, no. 5 (2019): 520-533.
- Siddiqui, Maha. "China Refuses to Share Hydrological Data as India Battles Floods," *News 18*, August 18, 2017.
- Singh, Ameya Pratap and Urvi Tembey. "India-China Relations and the Geopolitics of Water," *Lowy Institute*, July 23, 2020.
- Singh, Sushant, "Can India Transcend its Two-Front Challenge?" *War on Rocks*, September 14, 2020.
- Sinha, Uttam Kumar. "Towards Riparian Rationality. An Indian Perspective," in *China-India Relations: Cooperation and Conflict*, ed. K. Bajpai, J. Huang and K. Mahbubani, 167-181. London and New York: Routledge, 2016.
- SIPRI, "SIPRI Military Expenditure 1949-2019." Accessed November 10, 2020. Available from www.sipri.org
- SIPRI, World Nuclear Forces, January 2018, in SIPRI Yearbook 2018, Armaments, Disarmament and International Security Accessed November 10, 2019. Available from www.sipri.org
- Small, Melvin and J. David Singer. *Resort to Arms: International and Civil War, 1816-1980*. CA: Sage, 1982.
- Smith, Jeff M. *Cold Peace: China-India Rivalry in the Twenty-First Century*. London: Lexington Books, 2014.
- Sokolski, Henry D. *Pakistan's Nuclear Future: Worries Beyond War*. Carlisle: U.S. Army War College, Department of Defense, 2008.
- Solinge, Etel. *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*. Princeton, NJ: Princeton University Press, 2007.
- Suesse, Marvin. "Breaking the Unbreakable Union: Nationalism, Disintegration and the Soviet Economic Collapse," *The Economic Journal* 128, no. 615 (2018): 2933-2937.
- Summer, Brian Taylor. "Territorial Disputes at the International Court of Justice," *Duke Law Journal* 53, no. 6 (2004): 1779-1812.
- Suri, Jeremi. "Nuclear and the escalation of global conflict since 1945." *International Journal*, 2008: 1013-1029.

- Swami, Praveen “The Roots of Crisis – Post-Kargil Conflict in Kashmir and the 2001-2002 Near War,” in *The India Pakistan Military Standoff: Crisis Escalation in South Asia*, Zachary S. David, 19-52. New York: Palgrave Macmillan, 2011.
- Synder, Glenn H. and Paul Diesnig. *Conflict Among Nations: Bargaining, Decision Making, and System Structure in International Crises*. Princeton: Princeton University Press, 1977.
- Tack, Sim. “A Military Drive Spells out China’s Intent Along the Indian Border,” *Stratfor*, September 22, 2020.
- Taneja, Nisha and Samridhi Bimal and Anmol Nagpal. “Recent Trends in India-Pakistan Trade 2018-19,” *Indian Council for Research on International Economic Relations*, 2018.
- Taneja, Nisha, Samridhi Bimal, Taher Nadeem and Riya Roy. “India-Bhutan Economic Relations,” *Indian Council for Research on International Economic Relations*, August 2019.
- Taneja, Pradeep “Bilateral Economic Relations Amid Trade and Trust Deficits.” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selinia Ho and Manjari Chatterjee Miller, 291-302. New York, Routledge, 2020.
- Tankel, Stephen. *Storming the World Stage: The Story of Lashkar-e-Taiba*. New York: Columbia University Press, 2011.
- Tannenwald, Nina “The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use,” *International Organization* 53, no. 3 (Summer 1999): 433-468.
- Tarar, Ahmer. “A Strategic Logic of the Military Fait Accompli,” *International Studies Quarterly* 60, no. 4, (2016): 742-752.
- Tasleem, Sadia “Pakistan’s Nuclear Use Doctrine,” *Carnegie Endowment for International Peace*, June 30, 2016.
- Tellis, Ashley J., C. Christine Fair, and Jamison Jo Medby. *Limited Conflicts Under the Nuclear Umbrella: Indian and Pakistani Lessons from the Kargil Crisis* Washington DC: RAND Corp Press, 2001.
- Tellis, Ashley. *India’s Emerging Nuclear Posture*. Santa Monica, CA: RAND, 2001.
- Text of the “Agreement Between Government of India and Government of the Islamic Republic of Pakistan on Bilateral Relations (Simla Agreement).” Accessed October 1, 2020). Available from

https://www.usip.org/sites/default/files/file/resources/collections/peace_agreements/ip_simla_07021972.pdf

The Correlates of War project, Militarized Interstate Disputes (v4.1) 1816–2010. Accessed August 1, 2017. Available from www.correlatesofwar.org.

The Correlates of War project, Territorial Changes (v5) 1816–2014. Accessed August 1, 2017. Available from www.correlatesofwar.org.

The Lahore Declaration, signed February 21 1999, United States Institute of Peace; available from https://www.usip.org/sites/default/files/file/resources/collections/peace_agreements/ip_lahore19990221.pdf.

Thomas, Gary and Kevin Myers, *The Anatomy of the Case Study*. London: Sage 2015.

Thompson, Julia. “The Dynamics of Violence along the Kashmir Divide, 2003–2015,” *The Stimson Center*, 2015.

Thucydides, *The Peloponnesian War*. London: Oxford University Press, 2009.

Tien-size, Fang. “Solving a Solved Problem: The Tibet Issue in China-India Relations,” in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller, 195–208. London: Routledge, 2020.

Toft, Monica Duffy. *The Geography of Ethnic Violence*. Princeton, N.J.: Princeton University Press, 2010.

Treaty of Friendship Between India and Bhutan, 8 August 1949, signed at Darjeeling, India. Available at: www.refworld.org

Trenin, Dmitri. “True Partners? How Russia and China See Each Other,” *Center for European Reform*, February 2012, 5.

Treverton, Gregory F. and Seth G. Jones, *Measuring National Power*. Washington, D.C.: RAND Press, 2005.

Umland, Andreas. “The Ukraine Example: Nuclear Disarmament Doesn’t Pay,” *World Affairs* 178, no. 4 (Winter 2016): 45–49.

United Nations Office on Genocide Prevention and the Responsibility to Protect. Accessed November 11, 2017. Available from <http://www.un.org/en/genocideprevention/about-responsibility-to-protect.html>.

United Nations Treaty Collection, United Nations Treaty Series Online. Accessed November 9, 2017. Available from <https://treaties.un.org>.

- United Nations, "Agreement between India and Pakistan on Border Disputes (East Pakistan)," Peace Agreements Database, October 9, 1958. Accessed November 9, 2017. Available from <https://treaties.un.org>.
- United Nations, "Text of the Taskent Agreement." Accessed October 1, 2017. Available from https://peacemaker.un.org/sites/peacemaker.un.org/files/IN%20PK_660110_TashkentDeclaration.pdf
- Van Evera, Stephen. *Causes of War: Power and the Roots of Conflict*. New York: Cornell University Press, 1999.
- Van Evera, Steven. "Primed for Peace: Europe after the Cold War," *International Security* 15, no. 3 (Winter 1990/1991): 7-57.
- Vasquez, J. and M.T. Henahan, "Territorial Disputes and the Probability of War, 1816–1992," *Journal of Peace Research* 38, no. 2 (2001): 123-138.
- Vasquez, John A. and Marie T. Henahan, *Territory, War, and Peace*. London: Routledge, 2001.
- Vasquez, John A. *The War Puzzle*. Cambridge: Cambridge University Press, 1993.
- Vasquez, John A., and Brandon Valeriano. "Classification of Interstate Wars." *The Journal of Politics* 72, no. 2 (2010): 292-309.
- Vasudevan Sridharan, "India Bolsters Defence on Border with China by Building 44 new roads," *South China Morning Post*, January 17, 2019.
- Walt, Stephen M. *The Origins of Alliances*. New York: Cornell University Press, 1987.
- Walter C. Ladwig, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (Winter 2007): 162-178.
- Waltz, Kenneth N. "More May Be Better," *The Spread of Nuclear Weapons*, ed. Scott Sagan and Kenneth N. Waltz, 3-45. New York, W.W. Norton and Company, 2012.
- Waltz, Kenneth N. "Nuclear Myths and Political Realities," *American Political Science Review* 84 (September 1990): 731-745.
- Waltz, Kenneth. *Theory of International Politics*. Long Grove, IL: Waveland Press, 1979.
- Wendt, Alexander. "Constructing International Politics," *International Security* 20, no. 1 (1995): 71-81.

- Wolfers, Arnold. *Discord and Collaboration*. Baltimore, MD: Johns Hopkins Press, 1962.
- Xiaowen, Hu. "The 1950s in China-India Relations," in *Routledge Handbook of China-India Relations*, ed. Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller, 87-104. London: Routledge, 2020.
- Y. Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," *Cold War History* 1, no.1 (2000): 23-56.
- Yoshihara, Toshi and James R. Holmes ed. *Strategy in the Second Nuclear Age: Power, Ambition, and the Ultimate Weapon*. Washington: Georgetown University Press, 2012.
- Yusuf, Moeed W. "The Pulwana Crisis: Flirting with War in a Nuclear Environment," *Arms Control Association*, May 2019.
- Zia, Ather. "LoC: The Line "out" of Control in the Region of Kashmir," *American Quarterly* 71, no. 4 (2019): 1037-1048.
- Zutshi, Chitralekha ed, *Kashmir: History, Politics, Representation*. London: Cambridge University Press, 2017.