Risking Nuclear Escalation: The Characteristics of War from the Sino-Soviet and Kargil Wars

A Monograph

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Several potentially significant implications for the United States Army's way of war result from the constraints, limitations, and altered character of war caused by nuclear weapons. First, army commanders, at battalion level and above, will have to assume significantly greater tactical risk to limit and control the risk of strategic escalation. Second, the United States Army will probably have to fight at a much slower tempo and use more constrained methods than typical American operations. Finally, tactical advantages and successes will derive largely from political and strategic advantages achieved from information operations and the international community.

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Abstract

Risking Nuclear Escalation: The Characteristics of War from the Sino-Soviet and Kargil War, by MAJ Zachary L. Morris, Service, 56 pages.

This monograph examines the potential characteristics of a future conflict between nuclear-armed adversaries based on the only two historical cases of direct conflict between nuclear powers: the 1969 Sino-Soviet War, and the 1999 Kargil War between India and Pakistan. This paper argues that these two wars suggest five key characteristics of conflicts between two nuclear powers: first, nuclear confrontations are risky and difficult to control; second, information operations and the international community have a significant impact on the outcome; third, military leaders will probably encourage escalation; fourth, military operations will face severe political and strategic constraints, and; finally, horizontal escalation is significantly more destabilizing in conflicts than vertical escalation. Based on these conflicts and characteristics, current US Army doctrine and concepts are ill-suited for future war against nuclear-armed near-peer threats because the risk of escalation will require significant political and strategic constraints, and future operations should remain extremely limited in size and scope.

Several potentially significant implications for the US Army's way of war result from the constraints, limitations, and altered character of war caused by nuclear weapons. First, army commanders, at battalion level and above, will have to assume significantly greater tactical risk to limit and control the risk of strategic escalation. Second, the US Army will probably have to fight at a much slower tempo and use more constrained methods than typical American operations. Finally, tactical advantages and successes will derive largely from political and strategic advantages achieved from information operations and the international community.

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Acronyms

CCS	Cabinet Committee on Security
CFL	Cease-Fire Line
FM	Field Manual
IAF	Indian Air Force
LoC	Line of Control
MDO	Multi-Domain Operations
NH-1A	National Highway 1A
UN	United Nations

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Introduction

In October 2017, the US Army published the new *Field Manual (FM)* 3-0*, Operations*. *FM 3-0* serves as the new doctrine for American large-scale combat operations against peer, or near-peer, adversaries and explicitly focuses on America's big four potential rivals: Russia, China, North Korea, and Iran.[1] As the world becomes more complex and dangerous, and potential flash points for conflict grow in Ukraine, Syria, North Korea, and the South and East China Seas, the US Army must prepare for a potential conflict against near-peer rivals. However, three of these four primary rivals – Russia, China, and North Korea – possess nuclear weapons, and *FM 3-0* does not account for this strategic reality.[2] As few as 100 Hiroshima-sized fifteen kiloton nuclear explosions could produce enough smoke to cripple global agriculture and destroy most of humanity.[3] Considering that most nuclear warheads possess yields between 100 and 500 kilotons, even a single exchange could have a global impact.[4] The potential impact of nuclear weapons, on both the global population and future war, means that nuclear issues, strategy, and doctrine should influence how the US Army prepares for and thinks about future war.

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[1] US Department of the Army, *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), Foreword.

[2] Nick Routley, "How Many Nuclear Weapons Each Country in the World Has," Business Insider, August 14, 2017, accessed January 26, 2019, https://www.businessinsider.com/how-many-nuclear-weapons-each-country-in-the-world-has-2017-8.

[3] Alan Robock and Owen Brian Toon, "Local Nuclear War, Global Suffering," *Scientific American* 302, no. 1 (January 2010): 76.

[4] Hans M. Kristensen and Robert S. Norris, "United States Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 2 (2018): 121; Hans M. Kristensen and Robert S. Norris, "Russian Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 3 (2018): 186; Robert S. Norris and Hans M. Kristensen, "French Nuclear Forces, 2008," *Bulletin of the Atomic Scientists* 64, no. 4 (September/October 2008): 53; Hans M. Kristensen and Robert S. Norris, "Chinese Nuclear Forces, 2018," *Bulletin of the Atomic Scientists* 74, no. 4 (2018): 290; Robert S. Norris and Hans M. Kristensen, "The British Nuclear Stockpile, 1953-2013," *Bulletin of the Atomic Scientists* 69, no. 4 (2013): 70.

US Army doctrine and concepts currently display many issues, either ignoring nuclear concerns or pushing adversaries to employ nuclear weapons, and increases the risk of escalation.[5] Two critical problems in the American way of war and doctrine are immediately apparent. First, America has, in recent history, emphasized decisive victory and regime change for success. Since the Vietnam War, few adversary governments have survived an American onslaught. Regime change or decisive victory, which threatens the vital interests and internal stability of an adversary, are escalatory and could easily encourage a nation to use nuclear weapons to stabilize the conflict or deter further actions.

Second, Army doctrine espouses many escalatory tactics and concepts to achieve victory. For example, *FM 3-0* encourages traditional aspects of modern American war such as attacking potentially dual-use capabilities including command-and-control functions, integrated air defense systems, integrated fire commands, and even nuclear capabilities.[6] Attacking these systems is extremely escalatory, especially within the borders of a nuclear-armed state. Adversaries will probably view these attacks as a preliminary step towards a disarming first strike or enabling a decisive American victory – increasing a "use it or lose it" mentality.[7] The doctrine also advocates other concepts which are indirectly escalatory, such as rapid advances, deep penetrations, and annihilating enemy forces.[8] Deep penetrations, rapid maneuver, exploitation of seams and gaps, or annihilating significant forces could all be escalatory depending on the

[5] US Army, *FM 3-0, Operations* (2017), 2-51, 7-8, & 7-45 – 7-46; US Department of the Army, *TRADOC Pamphlet 525-3-1*, *The U.S. Army in Multi-Domain Operations 2028* (Washington, DC: Government Printing Office, 2018); Zachary L. Morris, "Nuclear Constraints and Concepts of Future Warfare," The Strategy Bridge, August 7, 2018, accessed January 26, 2019, https://thestrategybridge.org/the-bridge/2018/8/7/nuclear-constraints-and-concepts-of-future-warfare; Zachary L. Morris, "Emerging U.S. Army Doctrine: Dislocated with Nuclear-Armed Adversaries and Limited War," *Military Review* (January-February 2019): 27-32.

[6] US Army, *FM 3-0*, *Operations* (2017), 2-51, 7-8, 7-45, 7-46.

[7] Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca, NY: Cornell University Press, 1991), 65-67; Morris, "Emerging U.S. Army Doctrine," 30.

[8] US Army, *FM 3-0, Operations* (2017), 7-46; Morris, "Emerging U.S. Army Doctrine," 30.

context and threat to the adversary's interests and political stability. Thus, US doctrine, and the traditional American way of war, creates some significant issues in a future conflict between nuclear-armed peers.

Conventional American tactics would likely encourage adversaries employing nuclear weapons; those adversaries are already considering how to use nuclear weapons. While Russia maintains a high threshold for nuclear use, Russian doctrine explicitly states that the "Russian Federation shall reserve the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destruction… as well as in the event of aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy."[9] Since 1990, Russia has also extensively explored the concept of "escalate to deescalate," and includes nuclear concepts or strikes in most of their major exercises.[10] Due to Russia's internal structure, and the strength of the US military, any significant direct conflict between the two powers could easily escalate to an existential crisis, and encourage nuclear use.

China and North Korea are also considering nuclear weapons extensively, and a conflict against either nation could easily cross the nuclear threshold. China maintains a "no first use" pledge, but Caitlin Talmadge has argued that China would likely face extreme pressure to employ nuclear weapons if attacked by an overwhelming American conventional force – especially if China believes the United States desires decisive victory or regime change.[11] The United States

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[9] Embassy of the Russian Federation in the United Kingdom and Northern Ireland, "Military Doctrine of the Russian Federation," Press Releases, June 29, 2015, section III, paragraph 27, accessed January 26, 2019, https://rusemb.org.uk/press/2029; Olga Oliker, *Russia's Nuclear Doctrine: What We Know, What We Don't, and What That Means* (Washington, DC: Center for Strategic and International Studies, 2016), 3.

[10] Elbridge Colby, "If You Want Peace, Prepare for Nuclear War: A Strategy for the New Great-Power Rivalry," *Foreign Affairs* 97, no. 6 (November/December 2018): 27 & 29; Olga Oliker, "Moscow's Nuclear Enigma: What is Russia's Arsenal Really For?" *Foreign Affairs* 97, no. 6 (November/December 2018): 52 & 54; Morris, "Nuclear Constraints and Concepts of Future Warfare."

[11] Caitlin Talmadge, "Would China Go Nuclear?: Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States," *International Security* 41, no. 4 (Spring 2017): 50; Caitlin Talmadge, "Beijing's Nuclear Option: Why a U.S.-Chinese War Could Spiral Out of Control,"

should also expect any significant conflict with North Korea to cross the nuclear threshold.[12] North Korea, and Kim Jong Un, have demonstrated explosive rhetoric, limited restraint, considerable fear, and extensive nuclear testing, which strongly suggest that any large-scale conventional war against North Korea would quickly become nuclear. These potential adversaries also value internal stability and regime control as vital core interests, and any conflict against the United States, if fought the way American doctrine and concepts espouse, would threaten that stability and encourage nuclear use. Thus, understanding potential nuclear dynamics in war is a vital issue for future success.

This monograph examines the potential characteristics of a future conflict between nuclear-armed adversaries based on the only two historical cases of direct conflict between nuclear powers: the 1969 Sino-Soviet War and the 1999 Kargil War between India and Pakistan. This paper argues that these two wars suggest five key characteristics of conflicts between two nuclear powers: first, nuclear confrontations are risky and difficult to control; second, information operations and the international community have a significant impact on the outcome; third, military leaders will probably encourage escalation; fourth, military operations will face severe political and strategic constraints, and; finally, horizontal escalation is significantly more destabilizing in conflicts than vertical escalation (see table 1). Based on these conflicts and characteristics, current US Army doctrine and concepts are ill-suited for future war against nuclear-armed near-peer threats because the risk of escalation will require significant political and strategic constraints, and future operations should remain extremely limited in size and scope.

The methodology for this paper emphasizes primary and secondary sources from nuclear theory and both the Sino-Soviet War and the Kargil War to examine potential future

Foreign Affairs 97, no. 6 (November/December 2018): 45 & 48-49; Morris, "Emerging U.S. Army Doctrine," 30.

[12] Morris, "Emerging U.S. Army Doctrine," 30.

characteristics of war between nuclear powers. However, there are several necessary caveats for this research. First, because this study explores potential characteristics of a hypothetical future

Table 1. Key Characteristics of War in a Conflict Between Nuclear Powers

1	Nuclear confrontations are risky and difficult to control.
2	Information operations and the international community have a significant impact on the outcome.
3	Military leaders will probably encourage escalation.
4	Military operations will face severe political and strategic constraints.
5	Horizontal escalation is significantly more destabilizing in conflicts than vertical escalation.

Source: Author.

conflict, findings include significant uncertainty. Second, only two historical cases exist, which significantly limits the ability to draw firm conclusions. Third, both cases present challenges for analyzing future characteristics of war between nuclear powers. Both conflicts occurred as part of a historical rivalry within the context of enduring border tensions in remote regions. Further, one, or both, sides in each conflict possessed an extremely limited and immature nuclear capability. Finally, sources are limited and are often biased. Few sources provide a Pakistani perspective of the Kargil War, and most are exceedingly biased. The Sino-Soviet War remains an understudied topic and few sources exists. Further, many of the sources that do exist are inaccessible due to linguistic limitations or state security restrictions.[13] Thus, while these cases can provide insight on a future conflict between nuclear powers, any concrete conclusions are difficult to substantiate. Despite these limitations, this topic remains important because the number of nuclear powers are growing and will lead to more direct confrontations in the future. Additionally, these two examples are our only concrete historical cases, and both are understudied in the United States. Further, many of the caveats are mitigated by drawing only the broadest and simplest conclusions supported by each case to highlight for the future.

[13] Michael S. Gerson, *The Sino-Soviet Border Conflict: Deterrence, Escalation, and the Threat of Nuclear War in 1969* (Alexandria, VA: Center for Naval Analyses, 2010), 1.

This paper follows in five parts. The first explains relevant aspects of nuclear war theory. The second gives a brief historical review of the Sino-Soviet War and highlights key pieces of evidence for analysis. The third examines the 1999 Kargil War and provides further evidence for analysis. The fourth section analyzes both historical cases and highlights the five key lessons, or characteristics, that are relevant for future conflicts or nuclear crises. Finally, the conclusion relates these lessons to current issues and discusses salient implications for the future. Before examining the historical cases, the next section discusses nuclear theory to enable a better understanding of several key concepts.

Nuclear Theory

Much of today's thinking about nuclear war, and deterrence, is based on unproven theories.[14] The US military, and most studies on war against peer adversaries often ignore the nuclear dimension and treat nuclear weapons as irrelevant to the course of the potential conflict.[15] The US Army is especially derelict; *FM 3-0* does not mention any potential impacts of the nuclear dimension other than stating that escalation is a concern of the joint force commander.[16] While the new Multi-Domain Operations (MDO) manual's limited nuclear discussion is better than previous papers, the MDO concept largely ignores the nuclear dimension.[17] However, throughout the Cold War, much of America's deterrence and great power competition rested on nuclear weapons, not conventional forces.[18] Leaders, especially US Army leaders, should dispose

[14] Gerson, *The Sino-Soviet Border Conflict,* 2.

[15] Talmadge, "Beijing's Nuclear Option," 44.

[16] US Army, *FM 3-0, Operations* (2017), 4-1, 4-18, 4-21, 5-3, 7-3; Morris, "Emerging U.S. Army Doctrine," 30. These pages are the only reference in *FM 3-0* to nuclear aspects of a conflict and constitute the extent of guidance provided for managing nuclear escalation at the tactical level.

[17] Stephen Townsend, "Accelerating Multi-Domain Operations: Evolution of an Idea," Modern War Institute, July 23, 2018, accessed January 26, 2019, https://mwi.usma.edu/accelerating-multi-domain-operations-evolution-idea/; Kelly McCoy, "The Road to Multi-Domain Battle: An Origin Story," Modern War Institute, October 27, 2017, accessed January 26, 2019, https://mwi.usma.edu/road-multi-domain-battle-origin-story/; US, Department of the Army, *The U.S. Army in Multi-Domain Operations 2028.*

[18] Colby, "If You Want Peace, Prepare for Nuclear War," 26.

of the illusion that nuclear weapons will not have a significant impact on operations.[19] Instead, they should understand the theory and historical examples that may shed light on future conflicts. Understanding the theory, and historical examples, generally indicates that fighting a war against a nuclear power, even a limited conflict, would be exceedingly difficult and heavily constrained.

Nuclear deterrence theory's central argument is that nuclear weapons induce caution in international behavior and reduce the likelihood of any direct conflict between nuclear-armed states because both potential adversaries are vulnerable to nuclear attack.[20] Numerous authors argue that nuclear weapons limit the incidence of war, severely constrain the use of conventional force in a war, or create considerable risks of nuclear escalation in a direct conflict or crisis.[21] These authors often assert that nuclear weapons make military victory largely impossible, the status quo will usually remain, and nuclear capabilities will overshadow conventional forces effects.[22] However, not all authors agree on the precise dangers of nuclear weapons, and significant debate has emerged about the value or danger of nuclear proliferation.[23] Proliferation optimists argue that more nuclear-armed states improve global security, because nuclear weapons deter war and reduce overall global violence.[24] Proliferation pessimists argue that more nuclear-armed states decrease stability and peace because some states will engage in preventive wars,

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[19] Talmadge, "Beijing's Nuclear Option," 45.

[20] Peter R. Lavoy, ed., *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict* (Cambridge, UK: Cambridge University Press, 2009), 29; Gerson, *The Sino-Soviet Border Conflict,* 54.

[21] Several prominent sources include Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 2008), 20, 24, 104-105, 110; Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons* (Ithaca, NY: Cornell University Press, 2010), 18, 20-21; Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: An Enduring Debate*, 3rd ed. (New York: W. W. Norton, 2013), 9, 32, 162-163; Posen, *Inadvertent Escalation*.

[22] Lavoy, *Asymmetric Warfare in South Asia*, 30.

[23] The best source outlining the debate between proliferation pessimists and proliferation optimists is Sagan and Waltz, *The Spread of Nuclear Weapons: An Enduring Debate*.

[24] Sagan and Waltz, *The Spread of Nuclear Weapons*, x & 3-40.

more nuclear accidents will occur, conflicts enable inadvertent escalation, and nuclear weapons provide a shield behind which states may commit aggression.[25] This debate has contributed to the concept of the "stability-instability paradox."

The "stability-instability paradox," first coined by Glenn Snyder, examines if mutual nuclear possession, and a stable relationship like mutually assured destruction, encourages, or permits, aggression and war below the nuclear threshold in the belief that neither side will employ nuclear weapons.[26] Under this theory, two adversaries possessing nuclear weapons, in relative parity, or at a minimum with a secure second strike capability, could wage significant conventional war against each other. However, the theory does not account for the reality that nuclear weapons will remain vulnerable to attack, conventional successes could threaten core interests and encourage escalation, war heightens alertness and reduces nuclear triggers, political leaders cannot foresee all effects, and actions are often misunderstood or misinterpreted.[27] These potential issues highlight the uncertain character of war, and its inherent fog and friction.[28] Further, both the Sino-Soviet War and the Kargil War provide evidence against the "stability-instability paradox."

The concepts of vertical and horizontal escalation are also relevant to the two case studies. Escalation is "an increase in the intensity or scope of conflict that crosses threshold(s)

[25]Sagan and Waltz, *The Spread of Nuclear Weapons*, x, 41-81.

[26] Glenn H. Snyder, "The Balance of Power and the Balance of Terror," in *The Balance of Power*, ed. Paul Seabury (Scranton, PA: Chandler Publishing Co., 1965), 185-201; Gerson, *The Sino-Soviet Border Conflict*, 4-5, 53-54; Lavoy, *Asymmetric Warfare in South Asia*, 32; Posen, *Inadvertent Escalation*, 9. Mutually Assured Destruction (MAD) is a United States nuclear doctrine based on both adversaries possessing enough nuclear weapons to guarantee unacceptable damage on each other in retaliation for a nuclear attack.

[27] Posen, *Inadvertent Escalation*, 12.

[28] Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984) 85, 87, 89, 119-121, 140.

considered significant by one or more of the participants."[29] Vertical and horizontal escalation refer to different aspects of escalation theory.[30] Vertical escalation means increasing the intensity of the conflict, either in the size of forces employed or capabilities of those forces.[31] Vertical escalation can also refer to increasing the scope of war objectives; however, those objectives remain focused on the specific problem or area of the conflict. Horizontal escalation means expanding the conflict beyond the initial area of operations geographically.[32] Horizontal escalation can also mean expanding the conflict objectives into other problems, areas, or venues. The United States often combines both vertical and horizontal escalation in war by increasing capabilities and force structure, and expanding conflict objectives or linking problems together.

Understanding the basic outlines of these theories and concepts is critical for gaining insights into potential future nuclear conflicts. As Carl von Clausewitz explained, theory is an important prism to examine history through when conducting a critical analysis.[33] Basic working theories are required as intellectual tools for critical analysis to help highlight similarities and peculiar differences in each situation or event and develop firm conclusions or potentially appropriate actions. Both the 1969 and 1999 conflicts shed some interesting light on these concepts. The 1969 Sino-Soviet War, discussed next, begins the historical examination of direct conflict between nuclear powers.

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[29] Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds* (Santa Monica, CA: RAND Corporation, 2008), 8.

[30] M. C. Fralen, *Escalation: A Theory for the 90's* (Newport, RI: Naval War College, 1994) 4, 12; Morgan, Mueller, Medeiros, Pollpeter, and Cliff, *Dangerous Thresholds*, 18; The Science of Security Analysis, "Horizontal vs Vertical Escalation," The Science of Security Analysis, December 17, 2017, accessed January 26, 2019, http://scienceofsecurityanalysis.com/2017/12/17/horizontal-vs-vertical-escalation/; Sagan and Waltz, *The Spread of Nuclear Weapons*, 3.

[31] Fralen, *Escalation: A Theory for the 90's*, 4, 12; Morgan, Mueller, Medeiros, Pollpeter, and Cliff, *Dangerous Thresholds*, 18.

[32] Ibid.

[33] Clausewitz, *On War*, 156-157.

The Sino-Soviet War

The 1969 Sino-Soviet War was caused by broad ideological and political tensions, but clearly demonstrates the limited nature of conflict between two nuclear powers. The Sino-Soviet War depicts the significant risks of miscalculation or inadvertent escalation, and difficulty in controlling a crisis once it begins. Military leaders on both sides encouraged escalation, and horizontal escalation nearly caused the crisis to spiral out of control. International actors and information operations were also critical influences on the conflict and the eventual negotiated peace. The limited nature of the war, risk, and external influences are all visible in the severely constrained military operations and strict control exercised by political leadership during the crisis. These constraints and influences significantly impacted the nature of military operations in 1969 and contributed to the complex strategic environment.

The evolution of Sino-Soviet relations leading up to 1969 is complex and varied, ranging from deep military and economic cooperation to outright hostility. While the relationship between Joseph Stalin and Mao Zedong was functional, though sometimes tense, relations declined precipitously under Nikita Khrushchev.[34] Under Khrushchev, deep ideological fissures became visible along with tension over leadership of the communist world.[35] By 1956, Khrushchev had said "conflict with China is inevitable."[36] Tension continued to grow, and by 1959 border tension began to surface.[37] The border tension and conflict were physical manifestations of broader

[34] Gerson, *The Sino-Soviet Border Conflict*, 6-7; Lorenz M. Luthi, *The Sino-Soviet Split: Cold War in the Communist World* (Princeton, NJ: Princeton University Press, 2008).

[35] Chen Jian, Mao's China and the Cold War (Chapel Hill: University of North Carolina Press, 2001), 67-71; Gerson, *The Sino-Soviet Border Conflict*, 7-8.

[36] Gerson, *The Sino-Soviet Border Conflict*, 7.

[37] Ibid., 11; Arthur A. Cohen, "The Sino-Soviet Border Crisis of 1969," in *Avoiding War: Problems of Crisis Management*, ed. Alexander L. George (Boulder, CO: Westview Press, 1991), 271; Thomas W. Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," *American Political Science Review* (December 1972), 1177.

political and ideological hostility.[38] The specific dispute centered on differing interpretations of the 1860 Treaty of Peking, which identified the Amur and Ussuri rivers as forming the eastern border between China and Russia.[39] Disagreements arose because of the perceived inequality of the Treaty of Peking, and the potential location of the exact border.[40] Negotiations over the border dispute began in February 1964, but broke down in July.[41] By July 1964, Mao was convinced Russia posed a looming threat, and relations continued declining in 1965 leading to both sides beginning a military buildup.[42]

Leonid Brezhnev's ouster of Nikita Khrushchev, on October 14, 1964, initially raised hopes that Sino-Soviet relations would improve.[43] However, the ideological and political tensions continued, and in 1965 the Soviet Union began a major military buildup in the Far East, including nuclear forces.[44] China added to the regional instability when Mao initiated the Chinese Cultural Revolution in May 1966.[45] Three key events in 1968 triggered the conflict in 1969. First, on January 5, 1968, a Sino-Soviet skirmish on Qiliqin Island resulted in four Chinese deaths.[46] These

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[38] Gerson, *The Sino-Soviet Border Conflict*, 10.

[39] Ibid.

[40] Ibid., 10-11. China maintained the border should be drawn at the *thalweg*, the international norm of using the center of the main channel of the river as the boundary. Russia argued that no international norm created a law making the *thalweg* the boundary, and according to the Treaty of Peking the border runs along the Chinese bank. Disagreement on the proper border line related to the rivers meant that numerous disputed islands existed. Importantly, through the Soviet Union claimed Zhenbao Island, Zhenbao clearly lay on the Chinese side of the channel, helping justify China's future actions there.

[41] Ibid., 12-13.

[42] Ibid., 13-15.

[43] Harry Gelman, *The Soviet Far East Buildup and Soviet Risk-Taking Against China* (Santa Monica, CA: RAND Corporation, 1982), 16; Gerson, *The Sino-Soviet Border Conflict*, 16.

[44] Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton, NJ: Princeton University Press, 2014), 141; Gerson, *The Sino-Soviet Border Conflict*, 16.

[45] Austin Ramzy, "China's Cultural Revolution, Explained," *The New York Times*, May 14, 2016, accessed January 27, 2019, https://www.nytimes.com/2016/05/15/world/asia/china-cultural-revolution-explainer.html.

[46] Gerson, *The Sino-Soviet Border Conflict*, 19.

were the first battle deaths in a long series of border altercations and skirmishes, and significantly raised tensions.[47] Second, on August 20, 1968, Soviet forces invaded Czechoslovakia to quell the Prague Spring.[48] The invasion – and Brezhnev Doctrine, which claimed the Soviet Union's right to intervene in socialist countries – caused Mao significant concern.[49] Third, from 27 December 1968 to 25 February 1969, border tensions increased significantly including nine incidents on and around Zhenbao Island, and for the first time, the use of weapons to fire warning shots.[50] These increasing tensions caused China's Heilonghiang and Shenyang Military Regions to recommend escalating the tension by attacking near Zhenbao Island at the end of January 1969.[51]

During the growing tension and acrimony, nuclear dynamics in the region continued to evolve. In 1949, the Soviet Union tested its first nuclear weapon.[52] By 1969, the Soviet Union had a large and diverse nuclear arsenal estimated at over 10,000 warheads.[53] China and Russia signed the New Defense Technical Accord on October 15, 1957, which committed Moscow to assist Beijing in developing a prototype nuclear bomb.[54] However, by 1959, the Soviet Union reneged on all nuclear assistance, and eventually withdrew all advisors from China in August

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[47] Gerson, *The Sino-Soviet Border Conflict*, 19.

[48] Amos Chapple, "Invasion: the Crushing of the Prague Spring," Radio Free Europe Radio Liberty, August 10, 2018, accessed January 27, 2019, https://www.rferl.org/a/crushing-of-prague-spring-1968/29420107.html; Gerson, *The Sino-Soviet Border Conflict*, 20.

[49] Nicholas Rostow, "Law and the Use of Force by States: The Brezhnev Doctrine," *Yale Journal of International Law* 7, no. 2 (1981): 209; Gerson, *The Sino-Soviet Border Conflict*, 20.

[50] M. Taylor Fravel, *Strong Borders Secure Nation: Cooperation and Conflict in China's Territorial Disputes* (Princeton, NJ: Princeton University Press, 2008), 208-209; Gerson, *The Sino-Soviet Border Conflict*, 21.

[51] Fravel, *Strong Borders Secure Nation*, 211-212; Gerson, *The Sino-Soviet Border Conflict*, 21.

[52] Olga Oliker, "Moscow's Nuclear Enigma," 52.

[53] Robert S. Norris and Hans M. Kristensen, "Global Nuclear Inventories, 1945-2010," *Bulletin of Atomic Scientists* 66, no. 4 (July/August 2010): 81; Gerson, *The Sino-Soviet Border Conflict*, 3.

[54] John Wilson Lewis and Xue Litai, *China Builds the Bomb* (Stanford, CA: Stanford University Press, 1988), 62; Gerson, *The Sino-Soviet Border Conflict*, 6.

1960.[55] However, China continued developing its nuclear capabilities, and, in October 1964, conducted its first nuclear test.[56] By 1969 China possessed rudimentary nuclear forces, numbering about fifty warheads capable of delivery by bombers and fewer than ten single-stage, liquid-fueled DF-2 medium range ballistic missiles.[57] Thus, while China possessed nuclear capabilities, China was still in its relative nuclear infancy.[58]

Deteriorating Sino-Soviet relations, escalating border violence, the ongoing Soviet military buildup, and the Soviet invasion of Czechoslovakia and Brezhnev Doctrine all combined to convince Mao that China must demonstrate strength and resolve against the perceived Soviet threat.[59] Although Chinese documentary materials remain scant, the available evidence emphasizes China's focus on deterrence, and that nuclear weapons had little impact on Mao's initial decision to attack the Soviet Union.[60] China essentially viewed its actions as defensive, and part of China's overall "active defense" or "offensive defense" concepts.[61] Interestingly, Mao believed the Soviet Union would back down, partially because of the perceived Soviet capitulation during the 1962 Cuban Missile Crisis.[62] However, as Mao would later find, he wildly

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[55] Gerson, *The Sino-Soviet Border Conflict*, 8-9.

[56] Talmadge, "Beijing's Nuclear Option," 45; Gerson, *The Sino-Soviet Border Conflict*, 3.

[57] Norris and Kristensen, "Global Nuclear Inventories, 1945-2010," 81; Talmadge, "Beijing's Nuclear Option," 49; Gerson, *The Sino-Soviet Border Conflict*, 41.

[58] Gerson, *The Sino-Soviet Border Conflict*, 3.

[59] Ibid., 7, 11, 16, 20, 24.

[60] Thomas L. Hughes, "Intelligence Note: Peking's Tactics and Intentions Along the Sino-Soviet Border," United States Depart of State Director of Intelligence and Research, June 13, 1969, accessed January 27, 2019, https://nsarchive2.gwu.edu/NSAEBB/NSAEBB49/sino.sov.6.pdf; Gerson, *The Sino-Soviet Border Conflict*, v, 24.

[61] Paul H.B. Godwin, "Change and Continuity in Chinese Military Doctrine, 1949-1999," in *Chinese Warfighting: The PLA Experience Since 1949*, eds. Mark A. Ryan, David M. Finkelstein, and Michael A. McDevitt (Armonk, NY: M. E. Sharp, 2003), 25; Gerson, *The Sino-Soviet Border Conflict*, 24. An active defense relies on offensive actions for fundamentally defensive purposes.

[62] Gerson, *The Sino-Soviet Border Conflict*, 11.

miscalculated and misunderstood Soviet capabilities and intentions.[63] On February 19, 1969, the General Staff and Ministry of Foreign Affairs approved the "Zhenbao Island Counter-Interference Struggle Plan."[64] China selected Zhenbao Island as the site to attack because it was clearly on the Chinese side of the *thalweg*, Zhenbao was going to be allocated to China in the failed 1964 border talks, and the Chinese bank was elevated and only 100 meters from the island compared to 400 meters for the Soviets (see figure 1).[65] These strategic and tactical advantages combined to make Zhenbao the ideal site to give the Soviet Union a bloody nose and sharp lesson.

On March 2, 1969, Chinese troops initiated the plan to give the Soviet Union a bloody nose and ambushed a group of Soviet border guards on Zhenbao Island in the Ussuri River.[66] On the night of 1-2 March, a battalion of Chinese troops infiltrated Zhenbao and dug in defensive positions.[67] The next morning, twenty to thirty Chinese border guards visibly marched across the

[63]Yang Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," *Cold War History* 1, no. 1 (August 2000): 22; Fravel, *Strong Borders Secure Nation*, 215; Luthi, *The Sino-Soviet Split*, 345; Cohen, "The Sino-Soviet Border Crisis of 1969," 269; Gerson, *The Sino-Soviet Border Conflict*, 27.

[64] Gerson, *The Sino-Soviet Border Conflict*, 21.

[65] Neville Maxwell, "How the Sino-Russian Boundary Conflict was Finally Settled: From Nerchinsk 1689 to Vladivostok 2005 via Zhenbao Island 1969," *Critical Asian Studies* (June 2007), 247; Gerson, *The Sino-Soviet Border Conflict*, 21; Fravel, *Strong Borders Secure Nation*, 213; Cohen, "The Sino-Soviet Border Crisis of 1969," 277. The *thalweg* refers to the main and deepest channel of the river and is often used as the international norm for international boundaries.

[66] Lyle J. Goldstein, "Return to Zhenbao Island: Who Started Shooting and Why it Matters," *China Quarterly* 168 (December 2001): 985-986; Gerson, *The Sino-Soviet Border Conflict*, iii; Fravel, *Strong Borders Secure Nation*, 201; Gelman, *The Soviet Far East Buildup and Soviet Risk-Taking Against China*, 32; Central Intelligence Agency Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," The National Security Archive, April 28, 1970, accessed January 27, 2019, https://nsarchive2.gwu.edu/NSAEBB/NSAEBB49/; Neville Maxwell, "The Chinese Account of the 1969 Fighting at Chenpao," *China Quarterly* 56 (October-December 1973): 731.

[67] James M. Baker, "Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute" (Master's Thesis, University of Arizona, 1976), 26-27; Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," 1188-1189; Gerson, *The Sino-Soviet Border Conflict*, 23. The Chinese troop strength was estimated at approximately 300-350 men.

ice towards Zhenbao.[68] When a platoon of Soviet border guards approached to demand that the Chinese leave, the Chinese sprang the battalion ambush.[69] After nearly two hours of fighting, and

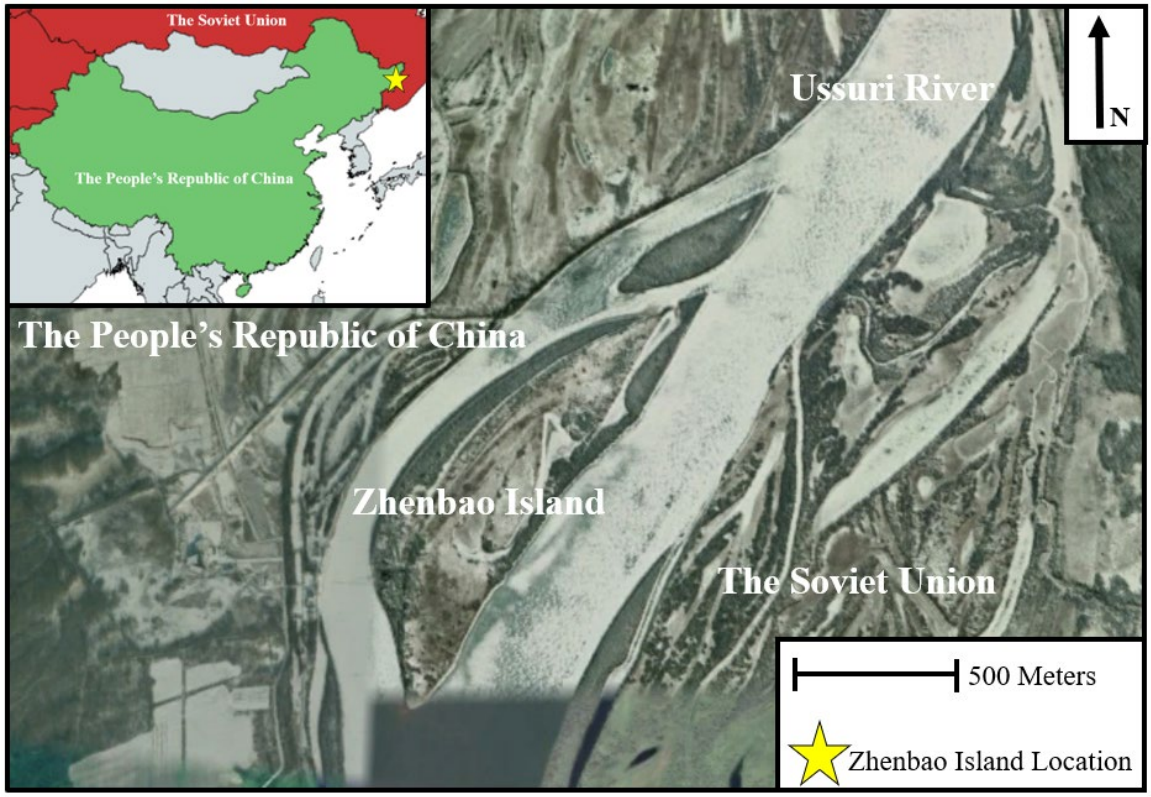

Figure 1. Zhenbao Island Location and Local Geography. Adapted by the author from "Zhenbao Island," *Digital Globe*, last modified December 26, 2017, accessed February 25, 2019, https://evwhs.digitalglobe.com/; "Mapchart.net," Map Chart, accessed February 25, 2019, https://mapchart.net/world.html.

Soviet reinforcements from another border outpost, the Chinese withdrew from Zhenbao.[70] The fight eventually claimed an unknown number of Chinese casualties, and killed thirty-one Soviets and wounded fourteen.[71] Both sides promptly issued statements and blamed the other for the

[68] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 26-27; Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," 1188-1189; Gerson, *The Sino-Soviet Border Conflict*, 23.

[69] Ibid.

[70] Ibid.

[71] Gerson, *The Sino-Soviet Border Conflict*, 3; Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 27.

violence, and massive protests broke out in both Moscow and Beijing.[72] However, contrary to Mao's expectations, the Soviet Union escalated the crisis and counter attacked on 15 March.[73]

On 15 March, another battle broke out on Zhenbao when the Soviet Union retaliated.[74] Compared to 2 March, both sides escalated vertically, using more forces and firepower.[75] During the nine-hour fight, a Chinese regiment battled a Soviet regiment supported by fifty tanks and armored personnel carriers, artillery, and air support.[76] The Soviets fired approximately 10,000 artillery rounds, flew thirty-six aircraft sorties, deployed top-secret T-62 tanks, and fired new BM-21 mobile rocket launchers on Zhenbao.[77] During the battle, the Soviets won decisively, resulting in a reported 800 Chinese deaths compared to sixty Soviets killed.[78] Immediately following the battle, Moscow alerted the Strategic Rocket Forces in the Far East, finally ending the alert on 20 March 1969.[79] In response, Mao readied his nuclear forces, saying, "We are now confronted with a formidable enemy…Our nuclear bases should be prepared… for the enemy's

[72] Gerson, *The Sino-Soviet Border Conflict*, 23-24.

[73] Ibid., 27.

[74] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 28; Gerson, *The Sino-Soviet Border Conflict*, 25.

[75] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 28; Gerson, *The Sino-Soviet Border Conflict*, 26.

[76] Gerson, *The Sino-Soviet Border Conflict*, 26; Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 28-29. Chinese strength was approximately 2,000 men. The Soviet Union claimed it was outnumbered 10:1 during the battle.

[77] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 28; Gerson, *The Sino-Soviet Border Conflict*, 26.

[78] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 29.

[79] Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 50; Gerson, *The Sino-Soviet Border Conflict*, 26.

air bombardment."[80] However, Mao also recognized he had miscalculated, and attempted to tamp down the crisis somewhat by ordering the People's Liberation Army to "not fight anymore."[81]

The Soviet Union's response to the Sino-Soviet War emphasized coercive diplomacy integrating limited force and nuclear threats to bring Beijing to the negotiating table. The Soviet Union wanted to punish China for its aggression, demonstrate Soviet strength and resolve, and avoid a protracted conflict and major war.[82] The Soviet Union executed this strategy by seeking to open negotiations on multiple occasions and in multiple forums.[83] The Soviet Union combined these diplomatic offers with increasing nuclear and conventional threats. Over time these threats grew more provocative and specific, but followed the Soviet pattern of denying the threats and denouncing Chinese claims of Soviet hysteria and war-mongering.[84] In June, the Soviets emphasized the threats by moving bomber units from the west to Mongolia and Siberia where they conducted practice strikes on mock Chinese nuclear facilities.[85] The Soviet Union also promoted Colonel-General Vladimir Tolubko to command the Far Eastern Military District.[86] Because Tolubko had been the Deputy Commander of the Strategic Rocket Forces, Beijing could not miss the apparent threat.[87] Additionally, several Soviet military leaders, including the Defense

[80] Gerson, *The Sino-Soviet Border Conflict*, 26.

[81] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 30; Gerson, *The Sino-Soviet Border Conflict*, 27.

[82] Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," 1199-1200; Gerson, *The Sino-Soviet Border Conflict*, 28.

[83] Central Intelligence Agency Directorate of Intelligence, "Intelligence Memorandum: Sino-Soviet Border Talks: Problems and Prospects," The National Security Archive, November 10, 1969, accessed January 27, 2019, https://nsarchive2.gwu.edu/NSAEBB/NSAEBB49/, 9; Gerson, *The Sino-Soviet Border Conflict*, 28-30.

[84] Gerson, *The Sino-Soviet Border Conflict*, 29.

[85] Ibid., 32.

[86] Ibid., 33; Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 75.

[87] Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 75; Gerson, *The Sino-Soviet Border Conflict*, 33-34.

Minister, advocated a preventive unrestricted nuclear attack to "once and for all get rid of the Chinese threat."[88]

China's initial responses to Soviet coercive diplomacy were muted, and Beijing generally avoided both diplomatic responses or moving up the escalatory ladder.[89] Though a definitive explanation does not exist, China may have demonstrated a muted response for several reasons.[90] First, Mao may have been focused on domestic issues, especially the Cultural Revolution and Ninth Congress of the Communist Party of China scheduled for April 1969.[91] Second, tensions with Moscow were potentially useful for domestic political purposes.[92] Third, China apparently did not believe a major war was likely because they thought the Soviet Union was a "paper tiger," and felt little urgency to negotiate after the 15 March battle.[93] However, in June and July the border again flared up, and China accused the Soviets of inciting as many as 429 incidents.[94] The most significant clash since Zhenbao occurred on 13 August in the Tielieketi area of the Xinjiang region.[95] During the battle, Soviet troops using armor, two helicopters, and artillery, ambushed and killed thirty-eight Chinese soldiers.[96] This represented a horizontal escalation away from

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[88] Gerson, *The Sino-Soviet Border Conflict*, 44.

[89] Ibid., 29.

[90] Ibid., 30.

[91] Ibid.

[92] Ibid., 30; Fravel, *Strong Borders Secure Nation*, 214-215.

[93] Gerson, *The Sino-Soviet Border Conflict*, 31.

[94] Ibid., 33.

[95] William Burr, "Sino-American Relations, 1969: The Sino-Soviet Border War and Steps Towards Rapprochement," *Cold War History* 1, no. 3 (April 2001): 85; Cohen, "The Sino-Soviet Border Crisis of 1969," 285-286; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 34; Gerson, *The Sino-Soviet Border Conflict*, 33.

[96] Cohen, "The Sino-Soviet Border Crisis of 1969," 285-286; Gerson, *The Sino-Soviet Border Conflict*, 33; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 34; Burr, "Sino-American Relations, 1969," 85.

Zhenbao and moved tension near the Chinese border with Kazakhstan (see figure 2). Horizontal escalation, towards Tielieketi, was especially concerning because China perceived it was vulnerable in the west.[97] The combination of Colonel-General Tolubko's promotion, escalating border violence, and international nuclear threats caused China to reassess the situation and recognize the nuclear danger of the crisis.[98]

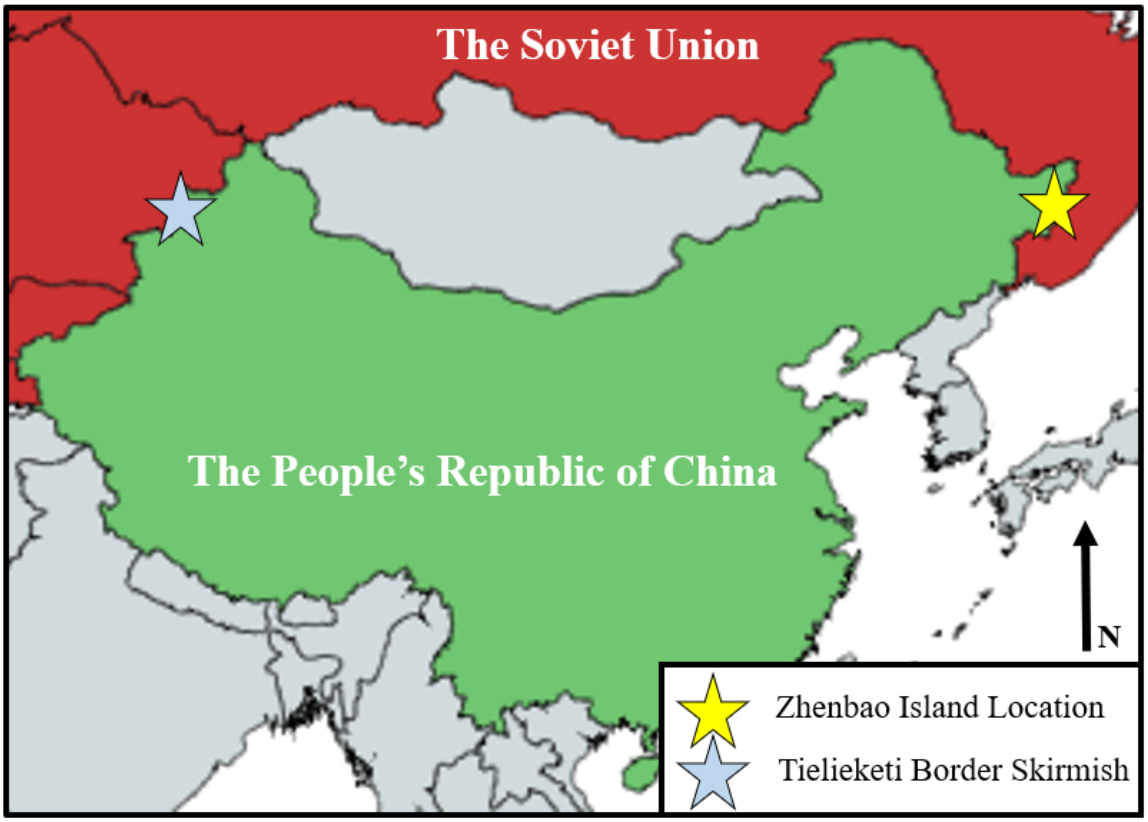

Figure 2. The Tielieketi Border Skirmish and Horizontal Escalation. Adapted by the author from "Mapchart.net," Map Chart, accessed February 25, 2019, https://mapchart.net/world.html.

In August, the Soviets began issuing nuclear threats through third party states. Whereas previous Soviet threats had used official newspapers and radio broadcasts, the new threats

[97] Lyle J. Goldstein, *Preventive Attack and Weapons of Mass Destruction: A Comparative Historical Analysis* (Stanford, CA: Stanford University Press, 2006), 79; Gerson, *The Sino-Soviet Border Conflict*, 33.

[98] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 35; Gerson, *The Sino-Soviet Border Conflict*, 39.

substantially increased Soviet credibility and political resolve.[99] The international community had already been watching events on the Sino-Soviet border and were concerned about nuclear escalation. In August, the Soviet leadership approached foreign capitals to inquire about their potential reactions to a Soviet nuclear attack on China.[100] The Soviets originally approached the United States as early as April, but on 18 August, Boris Davydov, the Second Secretary of the Soviet Embassy, asked William Stearman, a mid-level State Department official, directly "What the United States would do if the Soviet Union attacked and destroyed China's nuclear installations."[101] The Stearman-Davydov meeting ignited a debate in the Nixon Administration about US policy toward the proposal and broader US policy on the Sino-Soviet dispute.[102] The State Department generally believed a Soviet attack was unlikely, while Henry Kissinger, the Department of Defense, and some intelligence agencies thought an attack was more likely.[103] The United States eventually chose to remain neutral and balanced between Russia and China.[104] But

[99] Cohen, "The Sino-Soviet Border Crisis of 1969," 286; Gerson, *The Sino-Soviet Border Conflict*, 34; Directorate of Intelligence, "Intelligence Memorandum: Sino-Soviet Border Talks: Problems and Prospects," 9; William Rodgers, "Memo to the President: The Possibility of a Soviet Strike Against Chinese Nuclear Facilities," The National Security Archive, September 10, 1969, accessed January 27, 2019, https://nsarchive2.gwu.edu/NSAEBB/NSAEBB49/, 1-2.

[100] Gerson, *The Sino-Soviet Border Conflict*, 34; Cohen, "The Sino-Soviet Border Crisis of 1969," 286; Directorate of Intelligence, "Intelligence Memorandum: Sino-Soviet Border Talks: Problems and Prospects," 9; Rodgers, "Memo to the President: The Possibility of a Soviet Strike Against Chinese Nuclear Facilities," 1-2.

[101] William L. Stearman, "Memorandum of Conversation Between William L. Stearman and Boris N. Davydov," The National Security Archive, August 18, 1969, accessed January 27, 2019, https://nsarchive2.gwu.edu/NSAEBB/NSAEBB49/, 1-2; Gerson, *The Sino-Soviet Border Conflict*, 35; Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 57. In April, the Soviets unofficially said in Boston that "eventually it would be necessary for the USSR to destroy China's nuclear arsenal, even if this meant using nuclear weapons."

[102] Burr, "Sino-American Relations, 1969," 87-95; Gerson, *The Sino-Soviet Border Conflict*, 35-36.

[103] Henry Kissinger, *White House Years* (Boston, MA: Little, Brown and Co., 1979), 1983; Gerson, *The Sino-Soviet Border Conflict*, 36; Rodgers, "Memo to the President: The Possibility of a Soviet Strike Against Chinese Nuclear Facilities," 2-4.

[104] Gerson, *The Sino-Soviet Border Conflict*, 37.

on 27 August, Richard Helms, the Director of the Central Intelligence Agency, publicly stated that the Soviets had probed the idea of attacking China's nuclear program.[105]

Immediately following Director Helms' statement, China began preparing for major war.[106] Beijing began establishing senior working groups, mobilizing the population, dispersing critical industries, digging air-raid shelters, stockpiling supplies, and mobilizing troops to the border.[107] As the crisis escalated, China's strategy essentially shifted to deterrence using conventional, rather than nuclear, forces by threatening a massive protracted "people's war."[108] China's war preparation did cause concern in the Soviet Union, because, while China's nuclear forces were relatively weak, China's massive conventional army threatened key Soviet strategic interests.[109] Threats to Vladivostok, Blagoveshchensk, Khabarovsk, and the Trans-Siberian Railroad forced Moscow to reconsider its coercive diplomacy.[110] While nuclear weapons were considered and plans probably existed, it appears Moscow's nuclear threats were part of its coercive diplomacy strategy and a conventional attack would have been more likely.[111] However, even though Moscow may not have planned on conducting a nuclear attack, once Beijing got the nuclear message, the crisis began to spiral out of control.

As the crisis began to escalate, Moscow returned to diplomatic engagement.[112] However, fog, friction, fear, and paranoia took hold in Beijing. Before the crisis ended, China was

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[105] Gerson, *The Sino-Soviet Border Conflict*, 40.

[106] Ibid.

[107] Ibid., 40-41.

[108] Ibid., 41-42.

[109] Ibid., 43-44.

[110] Ibid., 44.

[111] Ibid., 34, 44.

[112] Ibid., 46; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 37; Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," 281 & 283.

convinced that the Soviets were launching an attack three separate times. First, on 11 September, after agreeing to a high-level meeting at the Beijing airport, Chinese leaders became convinced the Soviets would use the opportunity to attack with commandos and nuclear bombers.[113] Following the meeting, China's leaders fear peaked again upon discovering the Soviet premier never disavowed a nuclear strike, and Beijing increased war preparation.[114] War preparation included transferring elite military units from the south to the north, moving air defense forces north, forming new tank divisions, and building more air-raid shelters.[115] China also conducted its first underground nuclear test on 23 September, followed by testing a thermonuclear device on 29 September.[116] Moscow responded on 26 September by suggesting formal negotiations begin in October.[117] Beijing responded favorably and negotiations were set to begin on 20 October.[118] However, China remained fearful, especially on 1 October, Chinese National Day.[119] On 1 October, the Chinese military was placed on "first-degree combat readiness," and China dispersed airplanes, placed obstacles on runways, and armed airport workers.[120] The third incident resulted from China's fear of a decapitating strike during the planned 20 October meeting. On 14 October,

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[113] Gerson, *The Sino-Soviet Border Conflict*, 46-47.

[114] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 39-40; Gerson, *The Sino-Soviet Border Conflict*, 48; Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 76.

[115] Gerson, *The Sino-Soviet Border Conflict*, 48; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 40.

[116] Burr, "Sino-American Relations, 1969," 94; Gerson, *The Sino-Soviet Border Conflict*, 49.

[117] Gerson, *The Sino-Soviet Border Conflict*, 49.

[118] Ibid.

[119] Ibid.; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 40.

[120] Gerson, *The Sino-Soviet Border Conflict*, 50; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 40.

Mao suggested all Central Party, military, and civilian leaders leave Beijing.[121] All leaders and officials immediately dispersed to other cities or hardened wartime command centers.[122] On 18 October, China's Defense Ministry, without Mao's prior approval, issued Number 1 Order, which directed regional commands, especially the three northern commands, to disperse and prepare for war.[123] Number 1 Order also instructed China's strategic forces, the Second Artillery, to execute "launching preparations."[124] This was the first, and only, time China's nuclear weapons were placed on combat alert.[125] Luckily, either Moscow did not see the preparations, or chose to ignore them and continued to deescalate the crisis. On 20 October, the Soviet Union and China finally began negotiating. Negotiations were protracted and complex, but the crisis, and first direct conflict between nuclear powers, ended.

The Kargil War

Following the 1969 Sino-Soviet War, the 1999 Kargil War between India and Pakistan is the only other historical case of war between nuclear powers. The Kargil War demonstrated many of the same characteristics as the Sino-Soviet War. In 1999, escalation remained a risk and was difficult to control, military leaders on both sides encouraged escalation, and concern over horizontal escalation increased conflict instability. The international community and information operations played a similarly decisive role in constraining the conflict and enabling India's success. Finally, political leaders exercised strict control over military operations and severely constrained the military's actions on both sides. These constraints had a dramatic impact on the

[121] Gerson, *The Sino-Soviet Border Conflict*, 50; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 41.

[122] Gerson, *The Sino-Soviet Border Conflict*, 50.

[123] Ibid., 51.

[124] Ibid., 50.

[125] Ibid.

character of military operations. However, understanding the Kargil War requires grasping the complex and historic rivalry between India and Pakistan.

The Kargil War has a complex history rooted in the enduring rivalry and competition between India and Pakistan over the state of Jammu and Kashmir. Kashmir, as the region is commonly called, became, and remains, important for three primary reasons: geography, ideology, and psychological or political value.[126] The First Kashmir War, fought from 1947-1948, resulted in the United Nations (UN) mediated Karachi Agreement, which established a Cease-Fire Line (CFL) bisecting Kashmir.[127] Importantly, the CFL displayed few characteristics of a permanent boundary and both countries viewed the CFL as temporary and subject to future revision.[128] The Karachi Agreement also left significant ambiguity in the CFL location north of point NJ 9842, due to the glacial terrain.[129] In December 1971, Pakistan suffered its largest

[126] Lavoy, *Asymmetric Warfare in South Asia*, 42-43; Jasit Singh, eds., *Kargil 1999: Pakistan's Fourth War for Kashmir* (New Delhi, India: The Institute for Defence Studies and Analyses, 1999), 2-3. Geographically, Kashmir lies at the intersection of Afghanistan, India, China, and Pakistan, and is only approximately 30 miles from Islamabad and borders China's two most volatile western provinces – Tibet and Xingjian. Four of the five major rivers supporting Western Pakistan also originate from, or flow through, Kashmir. These geographic aspects made Kashmir a vital economic resource for both India and Pakistan, which were agriculture-based economies in 1947. Ideologically Kashmir is important to Pakistan because it is predominantly Muslim, and Kashmir remains important to India because it fears if Kashmir breaks away other ethnic and religious minorities will also seek greater autonomy or independence. Finally, Kashmir has assumed enormous political and psychological value for both countries due to the incessant conflict fought there.

[127] Military Representatives of the Indian and Pakistani Governments, "Agreement Between Military Representatives of India and Pakistan Regarding the Establishment of a Ceasefire Line in the State of Jammu and Kashmir (Karachi Agreement)," United Nations Peacemaker, July, 27, 1949, accessed February 26, 2019, https://peacemaker.un.org/indiapakistan-karachiagreement49; Sunil Rao, "The Kargil Incident: Historical Analysis," *Indian Historical Review* 43, no. 1 (2016): 108; Lavoy, *Asymmetric Warfare in South Asia*, 44; Singh, *Kargil 1999*, 17.

[128] Lavoy, *Asymmetric Warfare in South Asia*, 44. The CFL did not follow traditional political boundaries or natural geographic barriers.

[129] Military Representatives of the Indian and Pakistani Governments, "Karachi Agreement," 4; Lavoy, *Asymmetric Warfare in South Asia*, 45, 52. The Cease-Fire Line (CFL) contained three types of boundaries in Kashmir. First, no clear demarcation existed in the extreme north connecting Point NJ 9842 to the Chinese border. The Karachi Agreement simply states that after Point NJ 9842 the line runs "thence north to the glaciers." Second, the CFL extends approximately 500 miles across the center of Kashmir. Finally, the southern 124 miles are known as the working boundary.

military defeat when India intervened in Pakistan's civil war and helped East Pakistan become independent Bangladesh.[130] Post conflict negotiations resulted in the Simla Agreement, which committed both parties to refrain from using force to resolve disputes, reestablished and renamed the CFL as the Line of Control (LoC), and established a bilateral framework for future relations between Pakistan and India.[131] However, the Simla Agreement did not clarify the northern LoC boundary or resolve the Kashmir issue (see figure 3).[132] Further, both parties interpreted the

Figure 3. The Disputed Jammu and Kashmir Area. US Central Intelligence Agency, "The disputed area of Kashmir," The Library of Congress, 2002, accessed February 25, 2019, https://www.loc.gov/resource/g7653j.ct000803/?r=-1.157,0.005,3.315,1.324,0.

[130] Rao, "The Kargil Incident," 113; Lavoy, *Asymmetric Warfare in South Asia*, 24.

[131] Indira Gandhi and Zulfikar Ali Bhutto, "Simla Agreement July 2, 1972," Government of India Ministry of External Affairs Public Diplomacy, July, 2, 1972, accessed February 26, 2019, https://mea.gov.in/in-focus-article.htm?19005/Simla+Agreement+July+2+1972; Lavoy, *Asymmetric Warfare in South Asia*, 47; Rao, "The Kargil Incident," 114.

[132] Lavoy, *Asymmetric Warfare in South Asia*, 47-48.

bilateral framework differently; while Pakistan argued multilateral mediation was critical, India argued that the agreement meant all disputes could only be resolved in bilateral talks, which forced Pakistan to find innovative and risky ways to bring India to the negotiating table and gain concessions.[133]

In April 1984, growing tension over the Siachen Glaciers, in the extreme northern area of Kashmir, resulted in a preemptive military occupation by India, followed by Pakistani counterattacks (see figure 4).[134] The dispute over the Siachen Glaciers resulted from different interpretations of the Karachi Agreement and Simla Agreement defining the boundary north of Point NJ 9842, and both sides have numerous justifications for their position.[135] Strategically the Siachen Glacier was important for both sides.[136] However, the loss of Siachen had several important impacts for Pakistan including internal political turmoil and significant embarrassment.[137] Further, Pakistan learned that they must defend vulnerable areas at all costs,

[133] Lavoy, *Asymmetric Warfare in South Asia*, 47.

[134] Singh, *Kargil 1999*, 77 & 81-82; Lavoy, *Asymmetric Warfare in South Asia*, 54.

[135] Singh, *Kargil 1999*, 68, 71, 73, 76-77 & 78-81; Military Representatives of the Indian and Pakistani Governments, "Karachi Agreement," 4; Lavoy, *Asymmetric Warfare in South Asia*, 53. India and Pakistan maintain different interpretations the Karachi Agreement's statement "thence north to the glaciers." India Argues the LoC extends northwesterly along the Saltoro Ridge to the Chinese border near K2. This argument follows the international norm of high crests separating watersheds. In mountainous terrain, the high crest marking the watershed is often the internationally accepted norm for settling boundary disputes, just like the *thalweg* (mid-channel) principle is often used to delineate boundaries on rivers. Pakistan's 1963 treaty with China, which ceded the Shaksgam valley to China, followed this same principle. Pakistan argues the LoC continues in a northeasterly direction and joins the Chinese border near the Karakoram Pass. Pakistan supports its claim through several arguments, including: the majority of foreign mountaineering expeditions in the area request permission from and pay fees to Pakistan; the publication of successive atlases and maps marked the area as Pakistani controlled; the communication infrastructure in the region is linked to Pakistan-occupied Kashmir; the population north of Point NJ 9842 is generally administratively dependent on Pakistan, and; the 1941 Census Report listed the area as a Muslim majority, approximately 79-99%.

[136] Singh, *Kargil 1999*, 71-72, 74 & 84. Strategically, India must retain the Siachen Glaciers, and uphold its claims and arguments, because failing to do so would significantly weaken India's position in several Sino-Indian border disputes. Further, Pakistani control of Siachen would imply control of the upper Nubra Valley, which would create a threat to Leh, Ladakh, and the Karakoram Pass, making it much more difficult for India to retain Kashmir.

[137] Lavoy, *Asymmetric Warfare in South Asia*, 16.

significant cross-LoC operations could avoid major military or political crises, and that high-altitude terrain was incredibly difficult to recapture.[138] After Siachen, both sides launched daring

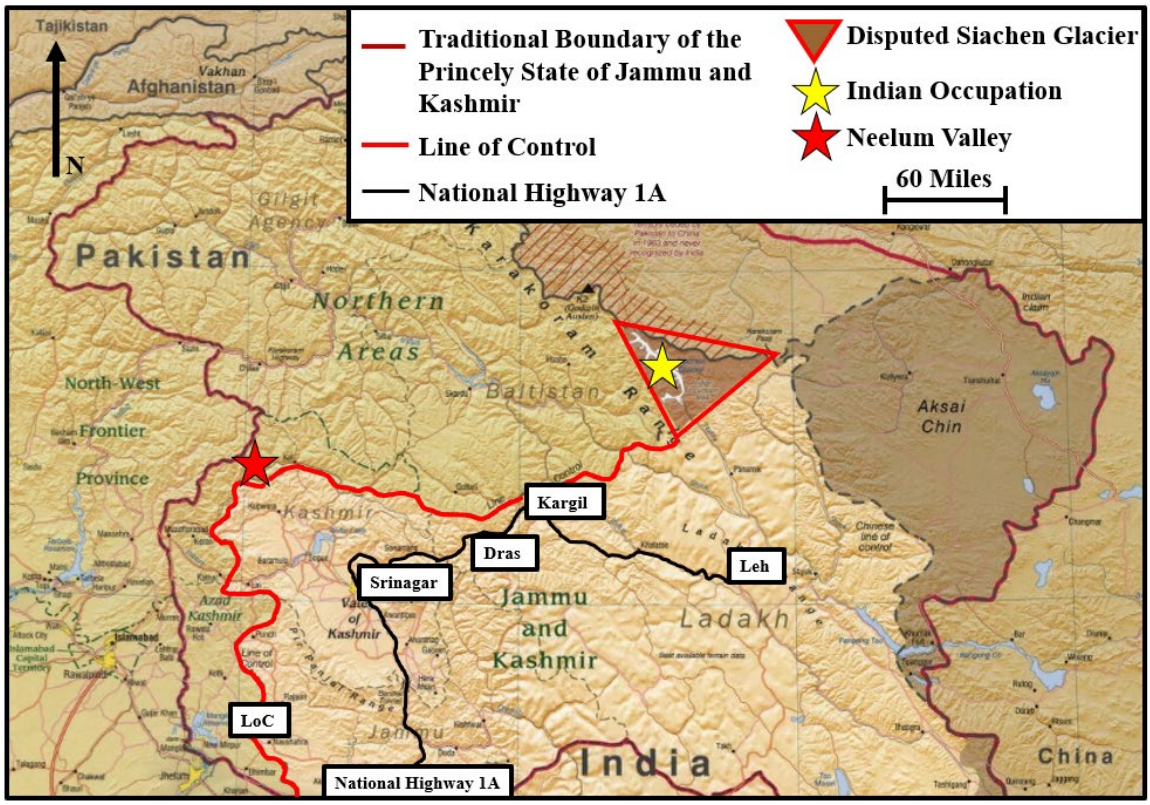

Figure 4. The Siachen Glaciers and Neelum Valley. Adapted from US Central Intelligence Agency, "Kashmir region," The Library of Congress, 2003, accessed February 25, 2019, https://www.loc.gov/item/2003626427/.

operations to seize opposing posts and inflict costs on each other.[139] In the mid-1990s, following a Pakistani supported insurgency in Kashmir, both sides increasingly mounted artillery attacks across the LoC.[140] Pakistan was generally at a disadvantage in the artillery duels and suffered considerably in the Neelum Valley, where Indian shelling of the Muzaffarabad-Kel road dislocated numerous civilians and created significant logistical problems for 10 Corps – the Pakistani headquarters exercising operational control over most of the LoC.[141] The Neelum

[138] Lavoy, *Asymmetric Warfare in South Asia*, 16, 33, 55.

[139] Ibid., 16, 55.

[140] Ibid., 17-18, 55.

[141] Ibid., 18, 57.

Valley became a major operational problem for Pakistan and one of the key grievances and issues which motivated the Kargil operation.

In May 1998, both India and Pakistan conducted a series of nuclear weapons tests.[142] The nuclear tests had two significant impacts. First, any future Indo-Pakistan crisis would have a nuclear dimension. Second, the tests raised the stakes of ongoing tension around the LoC and spurred hyperactive diplomacy to reach a settlement and defuse the tension.[143] The Lahore Declaration, signed on February 21, 1999, was the direct result of the nuclear tests and committed each nation to refrain from future nuclear tests, notify each other before any ballistic missile tests, uphold the Simla Agreement, and intensify efforts to resolve the Kashmir issue.[144] However, simultaneously with the bilateral talks and the Lahore Declaration, Pakistani troops began infiltrating across the LoC into the Kargil area.[145] It was in this complex environment – following Siachen, a decade of Kashmiri insurgency, border tension, and nuclear tests – that Pakistan planned and executed Operation Badar to infiltrate Kargil and sever India's National Highway 1A (NH-1A).[146]

Based on the complex history and strategic environment, numerous issues and objectives intertwined to motivate Pakistan towards Operation Badar. Fundamentally, Pakistan sought to internationalize the Kashmir issue, force India to the negotiating table, disrupt the growing consensus on permanently dividing Kashmir, and secure a better bargaining position over

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[142] Ashley J. Tellis, C. Christine Fair, and Jamison Jo Medby, *Limited Conflicts Under the Nuclear Umbrella: Indian and Pakistani Lessons From the Kargil Crisis* (Santa Monica, CA: RAND Corporation, 2001), 15; Azad Singh Rathore, *Kargil: The Heights of Bravery* (Partridge, India: Partridge Publishing, 2016), 23; Lavoy, *Asymmetric Warfare in South Asia*, 18.

[143] Rathore, *Kargil: The Heights of Bravery*, 24; Lavoy, *Asymmetric Warfare in South Asia*, 154.

[144] Rathore, *Kargil: The Heights of Bravery*, 24-26; Lavoy, *Asymmetric Warfare in South Asia*, 18, 154; Singh, *Kargil 1999*, 189.

[145] Rathore, *Kargil: The Heights of Bravery*, 29; Singh, *Kargil 1999*, 189.

[146] Lavoy, *Asymmetric Warfare in South Asia*, 19; Rao, "The Kargil Incident," 115.

Kashmir and Siachen.[147] Pakistan, especially the Army, wanted to regain prestige, avenge defeats in Siachen and 1971, reinvigorate and strengthen the mujahideen in Kashmir, and strengthen defensive positions along the LoC.[148] To achieve these strategic objectives, Pakistan planned to conduct a limited incursion across the LoC to seize key terrain and sever India's NH-1A (see figure 4).[149] Severing NH-1A would isolate the district of Leh, cut off communications and supplies to the Siachen Glaciers, threaten all Indian positions in Ladakh and northern Kashmir, and provide important bargaining leverage in future negotiations.[150]

However, Pakistan suffered from a flawed planning process disconnected from the strategic environment, dominated and driven by the army, and based on inaccurate assumptions.[151] Nevertheless, the Pakistani Army achieved significant strategic and operational surprise – largely due to the Lahore Peace Process – and successfully infiltrated 1,500-2,400 troops in five to eight battalions of Northern Light Infantry and Special Services Group units into Kargil between February and April.[152] The original plan called for occupying only thirty

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[147] Praveen Swami, *The Kargil War* (New Delhi, India: Left Word Books, 1999), 7; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 38; Lavoy, *Asymmetric Warfare in South Asia*, 61-62.

[148] Pervez Musharraf, *In the Line of Fire: A Memoir* (New York: Free Press, 2006), 88 & 91; Singh, *Kargil 1999*, 120-121 & 145-146; Rao, "The Kargil Incident," 115; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 38; Lavoy, *Asymmetric Warfare in South Asia*, 26-27. The Pakistan military was also concerned about a potential Indian offensive based on intelligence and a perceived military buildup, and thought a preemptive attack would disrupt India's operation.

[149] Rao, "The Kargil Incident," 115; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 38; Singh, *Kargil 1999*, 146.

[150] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 38; Rao, "The Kargil Incident," 115; Singh, *Kargil 1999*, 146.

[151] Lavoy, *Asymmetric Warfare in South Asia*, 5, 19, 46; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 17, 37, 39-40; Rao, "The Kargil Incident," 115; Musharraf, *In the Line of Fire*, 88-90. Pakistan's strategic planning process included numerous bad assumptions, poor contingency planning, inability to anticipate the environment and reactions, and isolated – or siloed – development which left key agencies and personnel outside the process.

[152] The Kargil Review Committee, *From Surprise to Reckoning: The Kargil Review Committee Report* (New Delhi, India: Sage Publications, 2000), 97-98, 253; Swami, *The Kargil War*, 16; Rao, "The Kargil Incident," 115-118; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 20; Lavoy, *Asymmetric Warfare in South Asia*, 8; V. P. Malik, *Kargil: From Surprise to Victory* (Uttar

positions, but Pakistan crept forward until they occupied over 130 positions across a sixty-five mile front and five to six mile depth (see figure 5).[153] These positions represented a significant strategic threat to India's position in Kashmir by constituting a robust defensive line over-watching key roads and passes.[154] However, India's initial response was slow and incoherent.[155]

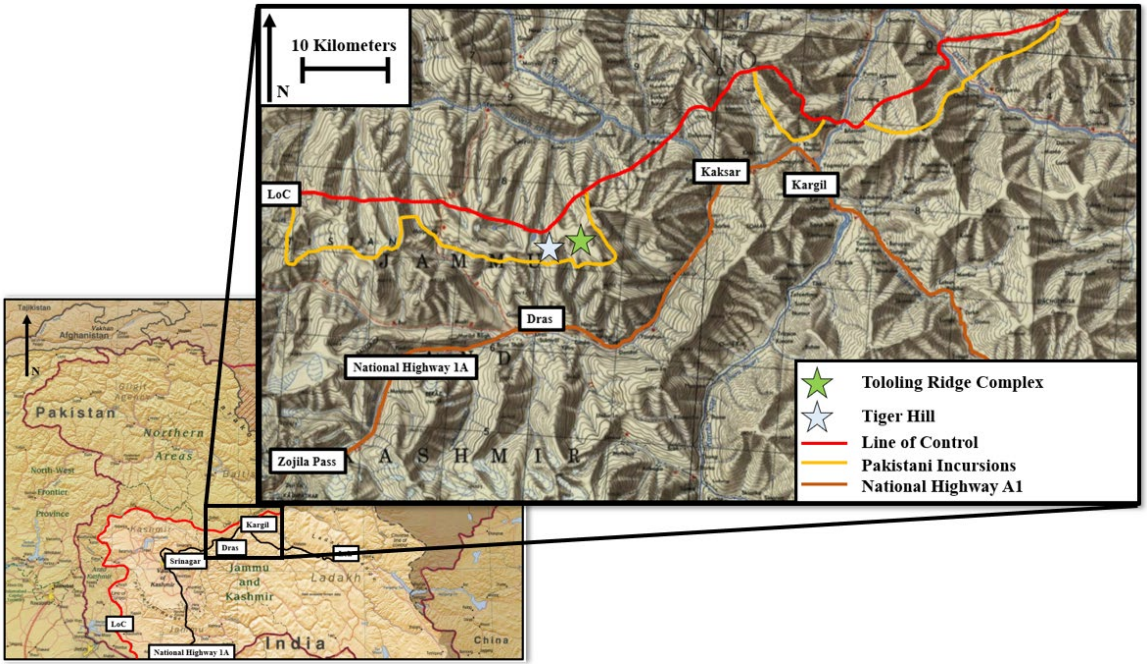

Figure 5. Pakistani Incursions Across the LoC. Adapted from US Central Intelligence Agency, "Kashmir region;" US Army Map Service, "Kargil, Jammu and Kashmir 1:250,000 Map Sheet NI 43-7," The Library of Congress, 1955, accessed February 25, 2019, https://www.loc.gov/resource/g7650m.gct00014/?sp=291&r=0.263,0.087,0.733,0.293,0; Singh, *Kargil 1999*, 150, 155, 157; Lavoy, *Asymmetric Warfare in South Asia*, 99-101; Musharraf, *In the Line of Fire*, 89, 92, 94; Malik, *Kargil: From Surprise to Victory*, 65, 67, 125, 146, 190; Rathore, *Kargil: The Heights of Bravery*, 57, 86, 103.

Pradesh, India: Harper Collins, 2006), 127. Pakistan achieved significant surprise largely because India withdrew their soldiers from many high-altitude border positions during the winter months which facilitated Pakistani infiltration.

[153] Lavoy, *Asymmetric Warfare in South Asia*, 20; Rao, "The Kargil Incident," 117.

[154] Swami, *The Kargil War*, 43, 48; Lavoy, *Asymmetric Warfare in South Asia*, 8, 15, 20, 21, 51; Musharraf, *In the Line of Fire*, 88, 90; Kargil Review Committee, *From Surprise to Reckoning*, 22. Pakistani positions overlooked the NH-1A road and Zojila Pass. Zojila Pass, which blocks the route south of Kargil on NH-1A, usually remains closed from October to June each year. However, in 1998-1999 the winter was surprisingly mild, and the Zojila Pass opened in early May.

[155] Lavoy, *Asymmetric Warfare in South Asia*, 21.

The first phase of the war began on May 3, 1999, when India discovered the Pakistani intrusion across the LoC.[156] After three shepherds reported men building bunkers and fighting positions on the peaks near Kargil, the 121 Infantry Brigade responded by conducting local patrols to evict the intruders.[157] However, initial Indian patrols were repulsed and suffered significant casualties as India slowly began to understand the extent and strength of the Pakistani positions.[158] On 19 May, the Indian Unified Headquarters conducted its first official meeting to discuss the 'emerging security' situation; but the Unified Headquarters still lacked a complete understanding of the Pakistani intrusion.[159] On 25 May, India's senior-most defense decision-making body, the Cabinet Committee on Security (CCS), met to develop a proper response to Pakistan's attack.[160] This meeting began the second phase of the war.[161] On 25 May, Prime Minister Atal Bihari Vajpayee determined that India's objectives were: first, contain Pakistan's advances; second, evict the intruders and restore the LoC; third, control escalation, and; fourth, leverage the international community.[162] India chose to significantly escalate the conflict vertically by conventionalizing the conflict, but with some severe constraints, while minimizing horizontal escalation.[163] To escalate vertically, and ensure success in the contested areas, India mobilized and deployed additional ground forces, increased artillery capability, and allowed air

[156] Swami, *The Kargil War*, 10; Lavoy, *Asymmetric Warfare in South Asia*, 20, 33; Rao, "The Kargil Incident," 116.

[157] Lavoy, *Asymmetric Warfare in South Asia*, 20, 33. Rao, "The Kargil Incident," 116; Swami, *The Kargil War*, 10.

[158] Lavoy, *Asymmetric Warfare in South Asia*, 20-21; Rao, "The Kargil Incident," 116.

[159] Malik, *Kargil: From Surprise to Victory*, 126; Swami, *The Kargil War*, 23.

[160] Swami, *The Kargil War*, 12, 21; Lavoy, *Asymmetric Warfare in South Asia*, 12.

[161] Swami, *The Kargil War*, 12.

[162] Rao, "The Kargil Incident," 118; Malik, *Kargil: From Surprise to Victory*, 124.

[163] Lavoy, *Asymmetric Warfare in South Asia*, 9, 26.

strikes for the first time since 1971.[164] To restrain the conflict, Prime Minister Vajpayee decided that no Indian forces would attack across the LoC and limited the ground forces employed during individual attacks.[165] Immediately after the 25 May CCS meeting, the Navy and Air Force began operations to support Army efforts to contain and evict the Pakistani forces.[166]

Indian air and naval operations were designed to minimize the risk of escalation while supporting ground operations and enabling political success during the conflict. The Indian Air Force (IAF) began Operation Safedsagar (White Sea) on 26 May focused on deterrence, defensive air patrols, and supporting ground operations.[167] The use of airpower in Kashmir constituted a significant vertical escalation because no air strikes had occurred since December 1971.[168] Prime Minister Vajpayee and Defense Minister George Fernandes limited escalation by notifying Pakistan before commencing air strikes, restricting air operations to the Indian side of the LoC, and ruling out deep or interdiction air strikes.[169] Strategic constraints, mountainous terrain, and Pakistani air defenses combined to limit the effectiveness of the air strikes and resulted in only two notable strikes and the loss of two aircraft and one helicopter.[170] The Indian Airforce Chief, Air Marshall A.Y. Tipnis, was unhappy about the restricted use of air power and publicly complained about not being able to attack Pakistani supply bases and artillery positions.[171] Importantly, however, the IAF served as a critical messaging instrument to signal

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[164] Lavoy, *Asymmetric Warfare in South Asia*, 21.

[165] Malik, *Kargil: From Surprise to Victory*, 116, 120 & 127-128; Lavoy, *Asymmetric Warfare in South Asia*, 33; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 22; Rao, "The Kargil Incident," 118.

[166] Lavoy, *Asymmetric Warfare in South Asia*, 21; Malik, *Kargil: From Surprise to Victory*, 126.

[167] Lavoy, *Asymmetric Warfare in South Asia*, 21; Rao, "The Kargil Incident," 120-122.

[168] Rao, "The Kargil Incident," 120; Lavoy, *Asymmetric Warfare in South Asia*, 21, 33.

[169] Rao, "The Kargil Incident," 121; Swami, *The Kargil War*, 13.

[170] Rao, "The Kargil Incident," 121; Swami, *The Kargil War*, 12.

[171] Swami, *The Kargil War*, 12.

Indian resolve while degrading the intruders' capability and morale, increasing Indian morale, and providing significant logistical support.[172] By July 12, 1999, when Operation Safedsgar ended, the IAF had conducted over 1,700 strike, escort, and reconnaissance sorties, approximately 460 defensive sorties, and 2,474 helicopter logistical sorties.[173]

The Indian Navy conducted Operation Talwar (Sword) to deter Pakistan and prevent escalation without direct engagement.[174] The Indian Navy repositioned the Western and Eastern Fleets for exercises near Pakistan, postured itself for a blockade around Karachi, and deployed an amphibious brigade to India's west coast.[175] Both the IAF and Indian Navy operations assisted political leaders limiting escalation by conducting operations under severe constraints that significantly increased tactical risk and inhibited operational capability. However, these constraints were necessary, and reciprocated by Pakistan.

After the conflict began, and India demonstrated the resolve to fight but in a limited manner, Pakistan responded by exhibiting significant restraint. Pakistan limited escalation by curtailing naval operations and restricting air patrols within Pakistan away from the LoC.[176] Pakistan also minimized escalation risks by not reinforcing occupied positions across the LoC or attacking India's vulnerable artillery positions.[177] Not introducing reinforcements or attacking vulnerable supply or artillery positions, with either aircraft or long-range artillery, helped keep the conflict relatively stable and gave political leaders both time and maneuver space. These

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[172] Rao, "The Kargil Incident," 122; Swami, *The Kargil War*, 13.

[173] Rao, "The Kargil Incident," 122.

[174] Ibid.

[175] Ibid.; Lavoy, *Asymmetric Warfare in South Asia*, 21.

[176] Lavoy, *Asymmetric Warfare in South Asia*, 33. For instance, Islamabad did not permit aircraft engaging vulnerable Indian aircraft across the LoC or bombing India's howitzers which were instrumental for retaking the heights but also were concentrated in relatively defenseless positions near NH-1A.

[177] Ibid.

restricted actions and self-imposed constraints, by both sides, were critical for limiting escalation and preventing conflict expansion.

Following the CCS meeting on 25 May, the Indian Army launched Operation Vijay (Victory) to contain and then evict the Pakistani intrusion.[178] India immediately deployed two army divisions (six brigades) and a significant portion of its artillery into the Kargil sector to evict the five to eight Pakistani battalions.[179] Fighting along the LoC generally involved sequential attacks by brigades using between one and three infantry battalions. Indian artillery would shape the battlefield for several days, followed by infantry attacks advancing slowly at night against platoon and company battle positions. These attacks resulted in intense hand-to-hand combat on the peaks and ended with local Pakistani counterattacks to dislodge the attackers. Tololing Ridge and Tiger Hill are good examples of the fighting that occurred along the LoC (see figure 6). Tololing Ridge and Tiger Hill were the most important strategic areas and biggest battles because they were Pakistan's largest penetration and greatest threat to NH-1A.[180] The 56th Mountain Brigade initially attacked Tololing Ridge with two infantry battalions over nine days and failed.[181] The second offensive involved over 120 guns and three infantry battalions from the 56th Mountain Brigade.[182] On 20 June, after seven days of hard fighting, the 56th Mountain Brigade recaptured Tololing Ridge.[183] Tiger Hill was recaptured on 8 July after a five-day battle involving

[178] Rao, "The Kargil Incident," 118; Lavoy, *Asymmetric Warfare in South Asia*, 21.

[179] Lavoy, *Asymmetric Warfare in South Asia*, 8, 33; Swami, *The Kargil War*, 15; Rathore, *Kargil: The Heights of Bravery*, 63-66.

[180] Rao, "The Kargil Incident," 116, 118-119; Lavoy, *Asymmetric Warfare in South Asia*, 21; Swami, *The Kargil War*, 13; Rathore, *Kargil: The Heights of Bravery*, 71.

[181] Rao, "The Kargil Incident," 119; Rathore, *Kargil: The Heights of Bravery*, 72-73.

[182] Rao, "The Kargil Incident," 119; Rathore, *Kargil: The Heights of Bravery*, 74-75. India employed 20 artillery batteries of six guns each for shaping fires and to support the advance of the infantry battalions.

[183] Lavoy, *Asymmetric Warfare in South Asia*, 21; Rao, "The Kargil Incident," 119; Rathore, *Kargil: The Heights of Bravery*, 71-79.

120 guns and two battalions from the 192nd Mountain Brigade.[184] Most other battles involved only one or two infantry battalions and significantly less artillery, thus illustrating the limited nature of the fighting.

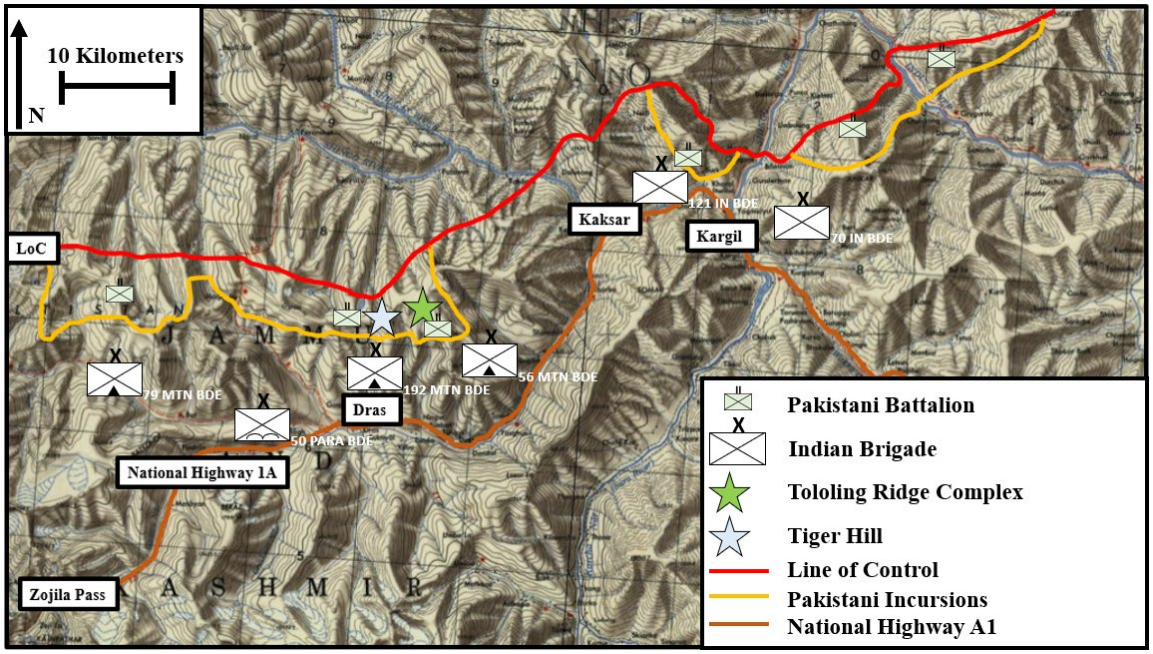

Figure 6. The Battle of Tololing Ridge and Tiger Hill. Adapted from US Army Map Service, "Kargil, Jammu and Kashmir 1:250,000 Map Sheet NI 43-7;" Lavoy, *Asymmetric Warfare in South Asia*, 127-128.

Capturing Tololing was critical because India's success broke the myth that high ground could not be recaptured, provided a foothold within Pakistani defenses, and prevented India from escalating the conflict.[185] India limited escalation by restricting operations from crossing the LoC, minimizing cross-LoC fires, and conducting slow sequential operations.[186] Before Tololing, the Indian military fought for permission to conduct across the LoC operations and considered horizontal escalation by attacking in other sectors across the international border.[187] In fact, both

[184] Rao, "The Kargil Incident," 119; Rathore, *Kargil: The Heights of Bravery*, 80-85.

[185] Lavoy, *Asymmetric Warfare in South Asia*, 9, 12-13, 21; Swami, *The Kargil War*, 13.

[186] Rao, "The Kargil Incident," 118; Malik, *Kargil: From Surprise to Victory*, 126; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 22; Lavoy, *Asymmetric Warfare in South Asia*, 33.

[187] Lavoy, *Asymmetric Warfare in South Asia*, 33-34; Malik, *Kargil: From Surprise to Victory*, 124, 128-129; Swami, *The Kargil War*, 18.

sides conducted a dangerous deterrent buildup of forces along the border. India sought to intensify pressure and threaten Pakistan by mobilizing and deploying over fifty-eight battalions to the border.[188] Pakistan responded by repositioning the 19th Infantry Division to the border and mobilizing additional forces.[189] Increasing tension along the border also resulted in veiled nuclear threats which increased escalation concerns.

The risk of nuclear escalation in 1999 was largely tied to the risk of a broader horizontal escalation and possibility of a large-scale conflict, especially as Pakistan tried to deter India's conventional buildup along the border.[190] On multiple occasions, Pakistan expressed concern over the risk of escalation and issued veiled threats to use the "ultimate" weapon; however, these threats were probably designed to deter India's conventional threats and draw international attention to Kashmir.[191] Although Pakistan denied both the threats and readying any actual systems, US President Bill Clinton received credible and unambiguous intelligence of Pakistani nuclear preparations. Further, many sources note that Pakistan activated at least one missile base and possibly readied several missile systems in June and July.[192] India recognized Pakistan's nuclear threats, and the Indian government was clearly concerned about escalation risks.[193] But, according to Indian Chief of Army Staff General V. P. Malik, India very nearly expanded and

[188] Rao, "The Kargil Incident," 120; Lavoy, *Asymmetric Warfare in South Asia*, 21; Swami, *The Kargil War*, 24; Malik, *Kargil: From Surprise to Victory*, 129.

[189] Lavoy, *Asymmetric Warfare in South Asia*, 13.

[190] Ibid., 42; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, x, 15.

[191] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 15 & 56; Lavoy, *Asymmetric Warfare in South Asia*, 10-11; Raj Chengappa, "Pakistan Threatened India with Nuclear Attack: Army Chief," *The Newspaper Today*, January 12, 2001.

[192] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 15, 56; Lavoy, *Asymmetric Warfare in South Asia*, 10-11.

[193] Malik, *Kargil: From Surprise to Victory*, 128-129; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 56.

escalated the conflict in the middle of June 1999.[194] Reports also indicated that Indian nuclear capabilities were readied during the crisis for deterrence.[195] India also threatened to attack across the LoC and stoked fears of nuclear escalation if the international community did not weigh in.[196] Even as the threats and risks remained indirect and obscure, both sides struggled reading each other's messages and intent. The US national security advisor, Sandy Berger, said that "India and Pakistan don't know much about each other's capabilities, red lines, doctrine. I think the closest we came to a nuclear conflict, other than the 1962 Cuban missile crisis, was in 1999."[197] The fear of nuclear escalation drove the international community to intervene quickly to end the conflict, but not in the way Pakistan expected.[198]

The international community and information environment played an instrumental role in the Kargil War at the strategic level by limiting escalation and defusing the conflict.[199] While Pakistan wanted to internationalize the Kashmir issue, Pakistan started the media battle late, rationalized the attack *ex post facto*, and did not understand the international environment or the impact nuclear weapons would have on the crisis.[200] Pakistan's strategy failed and Islamabad was surprised by the unanimous international condemnation and isolation, which grew as the crisis continued.[201] International leaders perceived Pakistani actions as aggressive and a dangerous

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[194] Lavoy, *Asymmetric Warfare in South Asia*, 12; Malik, *Kargil: From Surprise to Victory*, 146-147.

[195] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 57.

[196] Swami, *The Kargil War*, 35.

[197] Lavoy, *Asymmetric Warfare in South Asia*, 28.

[198] Ibid., 10, 12.

[199] Ibid., 12, 29; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 58; Rao, "The Kargil Incident," 117.

[200] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 5, 44, 54.

[201] Ibid., 5, 8, 11, 23; Lavoy, *Asymmetric Warfare in South Asia*, 28, 42.

source of instability.[202] The United States, Britain, Russia, China, France, Saudi Arabia, the UN, the G-8, and other Pakistani allies all condemned the attack and placed strong pressure on Islamabad to withdraw.[203] The international reaction, isolation, and resultant Pakistani internal public opinion, drove Pakistan towards its decision to withdraw and demonstrated the power of world opinion and importance of information operations.[204] India adroitly used media and information operations to shape domestic and international responses by consistently conveying its policy of responsibility and restraint, and simultaneously describing India's victimization to the international community.[205] New Delhi's clear information victory resulted in India successfully maintaining and growing domestic and international support, encouraging restraint during the conflict, and degrading Pakistan's position in Kashmir.[206] As the situation continued deteriorating, Prime Minister Nawaz Sharif and General Pervez Musharraf realized by late June that Pakistan's position was untenable and began seeking a resolution to the conflict before being militarily defeated.[207]

As the international situation continued to deteriorate, Prime Minister Sharif became increasingly desperate to end the confrontation and sought American intervention to mediate.[208] On 26-27 June, General Anthony Zinni, Commander of the United States' Central Command, and Deputy Assistant Secretary of State Gibson Lanpher met with General Musharraf to discuss the

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[202] Lavoy, *Asymmetric Warfare in South Asia*, 28.

[203] Ibid., 29, 42, 134-137; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 11, 23.

[204] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 11, 23.

[205] Ibid., 6, 55; Lavoy, *Asymmetric Warfare in South Asia*, 34.

[206] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 21-22, 24, 31, 54; Swami, *The Kargil War*, 21; Lavoy, *Asymmetric Warfare in South Asia*, 34.

[207] Lavoy, *Asymmetric Warfare in South Asia*, 34; Swami, *The Kargil War*, 9, 21; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 11.

[208] Lavoy, *Asymmetric Warfare in South Asia*, 135.

structure and timing of Pakistan's withdrawal.[209] Talks broke down as Pakistan continued demanding a reciprocal withdrawal by India.[210] However, by 2 July, Sharif began to call President Clinton directly asking for help.[211] On 4 July, Prime Minister Sharif made an emergency trip to Washington for a meeting with President Clinton.[212] The Blair House Summit on July 4, 1999, resulted in a Pakistani decision to unilaterally withdraw behind the LoC.[213] Following the 4 July meeting, both sides appear to have agreed on an unofficial cessation of ground and air operations.[214] Indian and Pakistani military leaders officially met at Attari on 11 July and agreed on a withdrawal plan.[215] Pakistan originally agreed to withdraw by 16 July, but was granted an extension by India to 17 July.[216] After some Pakistani troops remained across the LoC on 18 July, India resumed its offensive against several isolated pockets until 26 July when the LoC was officially declared restored.[217] After substantial fears of escalation, over 1,500 Indian casualties, and between 350 and 1,700 Pakistani casualties, the crises ended.[218]

Analysis

Both the 1969 Sino-Soviet War and 1999 Kargil War contain many lessons for current leaders at all levels of war. Both conflicts demonstrate several similar characteristics of war, which could have a dramatic impact on the nature of any future conflict between nuclear powers.

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[209] Swami, *The Kargil War*, 36.

[210] Ibid.

[211] Lavoy, *Asymmetric Warfare in South Asia*, 136.

[212] Ibid., 136-137.

[213] Ibid., 137-141.

[214] Ibid., 121.

[215] Ibid.

[216] Ibid.

[217] Ibid., 118.

[218] Ibid., 122.

These characteristics emphasize the risk, difficulty of control, and severe constraints created by nuclear weapons. The following five key characteristics are critical for understanding future conflicts, beginning with the risks nuclear confrontations pose.

First, nuclear confrontations and crises are inherently risky and difficult to control, and inadvertent escalation can occur easily. In both the Sino-Soviet War and Kargil War, no party desired a wider war or a nuclear conflict.[219] However, significant nuclear escalation occurred, including mobilizing bases, placing nuclear forces on alert, conducting exercises, and conveying veiled and explicit nuclear threats.[220] While these conflicts probably did not reach the level of risk associated with some other crises, such as the 1962 Cuban Missile Crisis, both clearly portray the risks associated with any conflict between nuclear powers. They also reveal the impact of uncertainty, fog, friction, and fear on crisis decision-making. Leaders should not assume they can control a crisis, adeptly manage escalation, or easily fight a war against a nuclear power. Further, these limited conflicts, fought to a large degree in the political and diplomatic realm, will probably emphasize the importance of information operations and the impact of the international community.

Second, information operations and the international community had a significant impact in both conflicts. The risk of nuclear weapons, and potential global impact of these weapons, forced the international community's attention and involvement. In 1969, international actors conveyed threats and messages to both actors, and served as a check on continued escalation.[221]

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[219] Hughes, "Intelligence Note: Peking's Tactics and Intentions Along the Sino-Soviet Border"; Gerson, *The Sino-Soviet Border Conflict*, v, 24, 28; Robinson, "The Sino-Soviet Border Dispute: Background, Development, and the March 1969 Clashes," 1199-1200; Lavoy, *Asymmetric Warfare in South Asia*, 10-12.

[220] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 15, 56; Lavoy, *Asymmetric Warfare in South Asia*, 10-11; Chengappa, "Pakistan Threatened India with Nuclear Attack: Army Chief;" Gerson, *The Sino-Soviet Border Conflict*, 33, 35; Directorate of Intelligence, "Intelligence Report: The Evolution of Soviet Policy in the Sino-Soviet Border Dispute," 57, 75; Stearman, "Memorandum of Conversation Between William L. Stearman and Boris N. Davydov," 1-2.

[221] Gerson, *The Sino-Soviet Border Conflict*, 34; Cohen, "The Sino-Soviet Border Crisis of 1969," 286; Directorate of Intelligence, "Intelligence Memorandum: Sino-Soviet Border Talks: Problems and

Soviet, and Chinese, threats and messages had a significant strategic impact during the conflict, far outweighing the impact of any military action. Several nations, including the United States, condemned escalatory actions, and the United States mobilized nuclear forces to deter a potential Soviet attack.[222] Further, China remained acutely aware of international pressures and America's position on the conflict, and the Soviet Union probed the international community before taking significantly escalatory steps.[223] In 1999, India clearly won the information battle, and mobilized significant international support.[224] Even Pakistan's erstwhile allies condemned Pakistan's actions and isolated Islamabad.[225] Further, canceled military and economic support, combined with a deteriorating military situation, placed even more pressure on Pakistan. Eventually, Prime Minister Nawaz Sharif sought President Clinton's assistance in ending the conflict.[226] Both conflicts highlight the importance of information operations and gathering international support for success. Information operations and international politics clearly impacted both conflicts in more significant ways than military operations. Thus, military leaders must focus on the political and information impacts of any operation or decision in these conflicts, and control or limit actions appropriately.

Third, political leaders will need to control the tendency of military organizations to push towards escalation. Clausewitz highlighted the concept that war will always trend towards the

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Prospects," 9; Rodgers, "Memo to the President: The Possibility of a Soviet Strike Against Chinese Nuclear Facilities," 1-2.

[222] Gerson, *The Sino-Soviet Border Conflict*, 34-38; Cohen, "The Sino-Soviet Border Crisis of 1969," 286; Directorate of Intelligence, "Intelligence Memorandum: Sino-Soviet Border Talks: Problems and Prospects," 9; Rodgers, "Memo to the President: The Possibility of a Soviet Strike Against Chinese Nuclear Facilities," 1-2.

[223] Gerson, *The Sino-Soviet Border Conflict*, 34-38.

[224] Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 21-22, 24, 31, 54; Swami, *The Kargil War*, 21; Lavoy, *Asymmetric Warfare in South Asia*, 34.

[225] Lavoy, *Asymmetric Warfare in South Asia*, 29, 42, 134-137; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 11, 23.

[226] Lavoy, *Asymmetric Warfare in South Asia*, 135.

absolute form if unchecked, and the military will often press for escalation because of the fear of losing the initiative or control over the conflict.[227] For example, during the 1962 Cuban Missile Crisis, many military leaders advocated a full scale invasion of Cuba or a sustained bombing campaign, both of which would have probably resulted in a nuclear exchange.[228] Further, in Vietnam, the US military planned operations that included the use of nuclear weapons without President Johnson's knowledge or approval.[229] In both 1969 and 1999, the militaries pushed for escalatory measures and required stringent political control. In 1969, following the initial Chinese attack, Soviet military leaders were eager to retaliate, advocated 'eliminating the Chinese threat forever,' and argued for a preventative nuclear strike on Chinese nuclear facilities.[230] In 1999, much of Operation Badar was likely instigated by the Pakistani military, which had a poor view of the Lahore Peace Process.[231] Meanwhile, the Indian military continually recommended escalatory steps, including horizontal and vertical escalation such as massive force and cross border attacks.[232] Only stringent civilian strategic and political control prevented the militaries from escalating each conflict, which could easily have resulted in a nuclear exchange.

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[227] Clausewitz, *On War*, 579-581; Posen, *Inadvertent Escalation*, 8.

[228] Robert J. McMahon, *The Cold War: A Very Short Introduction* (Oxford, UK: Oxford University Press, 2003), 92; Graham Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (New York: Addison-Wesley Educational Publishers Inc., 1999), 225.

[229] Theo Milonopoulos, "How Close Did the United States Actually Get to Using Nuclear Weapons in Vietnam in 1968?" War on the Rocks, October 24, 2018, accessed February 27, 2019, https://warontherocks.com/2018/10/how-close-did-the-united-states-actually-get-to-using-nuclear-weapons-in-vietnam-in-1968/.

[230] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 32.

[231] Singh, *Kargil 1999*, 120-121, 145-146; Rao, "The Kargil Incident," 115; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 38; Lavoy, *Asymmetric Warfare in South Asia*, 26-27.

[232] Lavoy, *Asymmetric Warfare in South Asia*, 33-34; Malik, *Kargil: From Surprise to Victory*, 124 & 128-129; Swami, *The Kargil War*, 18.

Fourth, during both wars the strategic and political leaders imposed severe constraints on military operations and exercised considerable centralized control. All the governments recognized that the conflicts were a political dialogue and carefully negotiated both the outcome of the conflict and the mode of conduct.[233] In 1969, Chinese leaders constrained operations by overseeing and approving all planned operations, even small potential engagements, and limiting the forces employed and geographic area of operations.[234] During the 15 March battle, leaders monitored the engagement from special headquarters in Beijing's Jingxi Hotel, and Chinese Premier Zhou Enlai even had to give the order to fire.[235] The Soviets exercised similar levels of political control: on 15 March the Soviet commander, Colonel Leonov, requested additional forces, but the reserves were delayed because Leonid Brezhnev or Marshal Andrei Grechko had to authorize any reinforcements.[236] In 1999, Pakistani leaders refrained from deploying reinforcements or reserves into the battle area or employing the Pakistani Air Force to engage the IAF.[237] The Indian Central Cabinet constrained India's operations geographically and in size. India did not cross the LoC, and limited the forces employed. Further, India notified Pakistan prior to taking any escalatory step, for instance by calling the Pakistani government before the IAF began operations against Pakistani targets on the Indian side of the LoC.[238] Thus, many of the operations each military undertook were heavily constrained, and often controlled in a very centralized manner at the strategic and political levels to minimize the risk of escalation.

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[233] Schelling, *Arms and Influence*, 135, 142; Clausewitz, *On War*, 605.

[234] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 29.

[235] Ibid.

[236] Ibid., 32. Leonid Brezhnev was the Soviet Communist Party's General Secretary, and Marshall Andrei Grechko was the Defense Minister. Both were traveling on 15 March, Brezhnev to Hungary and Grechko to India.

[237] Lavoy, *Asymmetric Warfare in South Asia*, 33.

[238] Rao, "The Kargil Incident," 121; Swami, *The Kargil War*, 13.

One of the most significant ways political and strategic leadership constrained military operations was geographically. Each side sought to identify and recognize geographic boundaries and markers that could assist in limiting escalation, such as borders or rivers.[239] Further, each conflict was fought in remote and austere regions with limited access and few strategic interests, which also minimized the risk of escalation. In 1969, China generally limited its operations to Zhenbao Island – which was only one square kilometer – and the immediate area.[240] China also limited the depth of its artillery fire to the immediate border region. The Soviet Union similarly constrained its forces, maneuvering on Zhenbao Island and only firing artillery four miles across the border on 15 March.[241] The Soviets did moderately escalate on 13 August; however, even that attack only crossed the Chinese border a few miles.[242] In 1999, Pakistan limited its incursion to a maximum depth of five to six miles across a front of approximately sixty-five miles.[243] Pakistan also refrained from expanding the battle area. Indian leadership ordered that no forces cross the LoC anywhere, and limited the majority of its artillery and air strikes to the Indian side of the LoC.[244] Further, only extremely limited amounts of artillery or air strikes – all fired or released from the Indian side of the LoC – penetrated across the LoC to the Pakistani side, and most only went a few miles over the LoC. The severely restricted geographic area of operations worked in

[239] Schelling, *Arms and Influence*, 132, 134, 159, 164.

[240] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 29.

[241] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 28.

[242] Cohen, "The Sino-Soviet Border Crisis of 1969," 285-286; Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 34; William Burr, "Sino-American Relations, 1969: The Sino-Soviet Border War and Steps Towards Rapprochement," *Cold War History* 1, no. 3 (April 2001): 85.

[243] Lavoy, *Asymmetric Warfare in South Asia*, 20; Rao, "The Kargil Incident," 117.

[244] Malik, *Kargil: From Surprise to Victory*, 116, 120, 127-128; Lavoy, *Asymmetric Warfare in South Asia*, 33; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, 22; Rao, "The Kargil Incident," 118.

conjunction with other constraints, such as the size of forces employed, to minimize the risk of escalation.

Another significant constraint employed by all the governments was the size of forces utilized during each conflict. In 1969, China maintained approximately forty-seven divisions on the Sino-Soviet border, while the Soviets had about thirty-one divisions on the border.[245] However, the 2 March battle consisted of only one Chinese battalion, and approximately two companies of Soviet troops.[246] The 15 March battle, the largest of the war, employed only a regiment on each side.[247] Finally, the 13 August attack consisted of one Soviet battalion against a Chinese platoon or company.[248] In 1999, Pakistan employed approximately five to eight battalions across the entire front, and refused to deploy additional forces or reserves even though substantial resources existed (see figure 7).[249] India deployed two divisions against the Pakistani incursion, but conducted sequential operations and only utilized between one and three battalions in the fighting at any one time. Further, on Tololing Ridge, the biggest battle of the war, India only employed three maneuver battalions with substantial artillery and air support.[250] Sequencing operations over time allowed the governments in each war to achieve gains slowly, while allowing political dialogue to carry on and minimizing the risk of escalation. Of note, tactically it appears that artillery served an important function in each conflict for sending messages and enabling maneuver in the constricted geographic spaces. Artillery seems to have limited impacts

[245] Narang, *Nuclear Strategy in the Modern Era*, 141.

[246] Baker, *Conflict on the Ussuri: The 1969 Sino-Soviet Border Dispute*, 27-28. About 300-350 Chinese soldiers fought 70 Soviets and reinforcements of about 100-200 men.

[247] Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," 25. 2,000 Chinese fought one Soviet mechanized infantry battalion, one armor battalion, and four artillery battalions.

[248] Ibid., 34. 300 Soviet soldiers ambushed 30-70 Chinese soldiers.

[249] Lavoy, *Asymmetric Warfare in South Asia*, 127-128.

[250] Rao, "The Kargil Incident," 119; Rathore, *Kargil: The Heights of Bravery*, 74-75.

on escalatory fears, provided all fires remained within the geographic confines of the severely restricted area of operations. This leads to the final lesson about escalation risks in a conflict between nuclear adversaries.

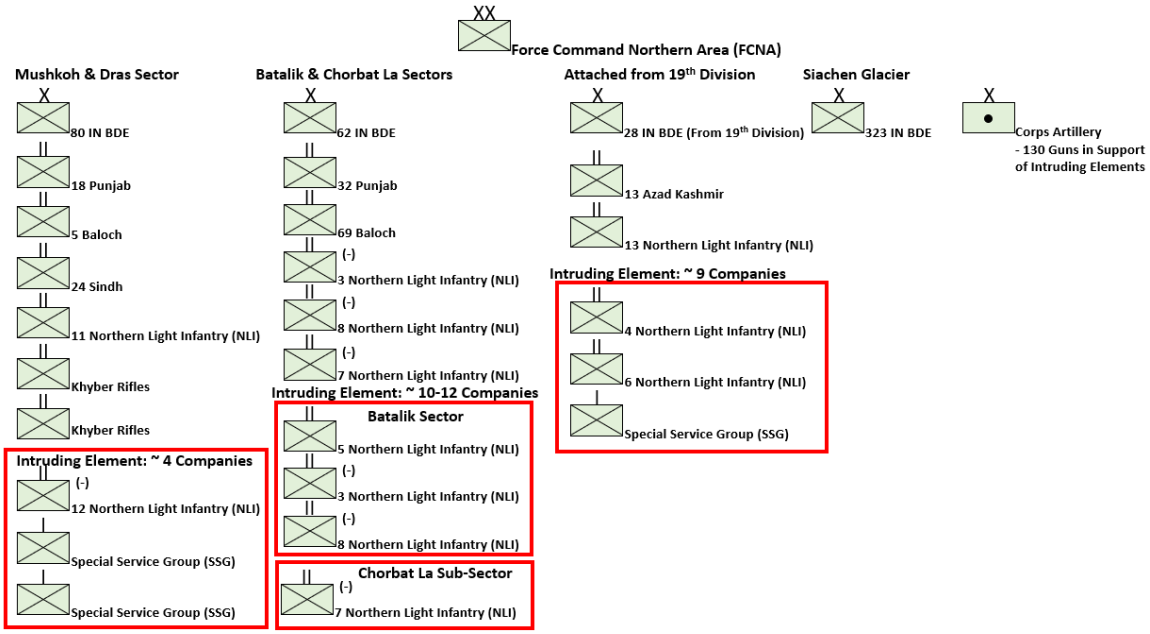

Figure 7. Pakistan's Force Command North Area Structure During the 1999 Kargil War. Data from Lavoy, *Asymmetric Warfare in South Asia*, 127-128.

A fifth qualified lesson, from both 1969 and 1999, is that horizontal escalation is far more dangerous than vertical escalation. Both conflicts exhibited significant but constrained vertical escalation, by adding forces or capabilities, and extremely limited horizontal escalation. The only noteworthy horizontal escalation occurred on August 13, 1969, when the Sino-Soviet conflict shifted from Zhenbao to Tielieketi. This horizontal shift had a significant impact on Chinese thinking and drastically escalated the conflict – especially in conjunction with increasingly public nuclear threats and messages.[251] India's threats of horizontal escalation, and buildup on the border, had a dramatic impact on Pakistan and sparked significant concerns about nuclear escalation on both sides and internationally.[252] Thus, in future conflicts, the geographic area of

[251] Gerson, *The Sino-Soviet Border Conflict*, 33; Goldstein, *Preventive Attack and Weapons of Mass Destruction*, 79.

[252] Lavoy, *Asymmetric Warfare in South Asia*, 42; Tellis, Fair, and Medby, *Limited Conflicts Under the Nuclear Umbrella*, x, 15.

operations may be tightly constrained and very dangerous to expand. A severely limited geographic area of operations could pose substantial difficulties for any attacker, as offensive actions will have limited maneuver space, probably require frontal attacks, and face difficulties bringing massed fires or airpower to bear.

These cumulative risks and constraints represent a complex and difficult environment created by nuclear-armed adversaries. Further, each characteristic highlights the dramatic impact nuclear weapons can have on any conflict between nuclear powers. Understanding these characteristics points to several issues in American doctrine and concepts, and several implications for the future.

Conclusion

The analysis of these two historical case studies demonstrates that both the 1969 Sino-Soviet War and 1999 Kargil War display several similar characteristics, which could easily have significant impacts on any future conflict between nuclear powers. This paper argues that these two wars suggest five key characteristics (see table 1). First, nuclear confrontations and crises are risky, difficult to control, and inadvertent escalation can occur easily. Second, information operations and the international community have a dramatic impact on the conflict and outcome, especially because the political and strategic levels dominate any military actions in the eventual results. Third, political and strategic leaders must control the military's natural proclivity to escalate, which could inherently undermine risk and escalation management. Fourth, in future nuclear confrontations, military leaders will fight under severe political and strategic constraints and limitations. These constraints will significantly limit physical access, geographic space for operations, and the scope of capability and forces employed. Finally, horizontal escalation is significantly more destabilizing and escalatory than vertical escalation. These characteristics, if true, have profound implications for US Army doctrine and concepts in a future conflict.

Based on these conflicts and characteristics, current US Army doctrine and concepts appear ill-suited for future war against nuclear-armed near-peer threats because the risk of escalation will require significant political and strategic constraints, and future operations will probably remain extremely limited in size and scope. Recent doctrine and concepts are primarily focused on large-scale combat operations against great powers.[253] However, large-scale military force is rarely better than a blunt instrument.[254] Much of the doctrine and concepts advocate typical American methods for success that are aggressive, dangerous, and could dramatically increase the risk of nuclear escalation. In fact, recent army doctrine and concepts may only apply effectively for adversaries like Iran, which possess a reasonably capable military but lack nuclear weapons. This analysis suggests the Army, and wider military, may have to refocus (see figure 8). According to Michael Howard, any future-oriented military doctrine or concept is wrong; the critical doctrine task before war is minimizing egregious errors and enabling adaptation in conflict.[255] Leaving a critical aspect, like nuclear weapons, out of doctrine and future concepts essentially guarantees the concepts and doctrine are erroneous and invalid regarding future great power conflicts. Further, the speed and destructive power of nuclear weapons may limit the US Army's ability to adapt in conflict. Thus, the Army's doctrine and concepts are probably dangerously incorrect and need reexamination.

Potentially significant implications for the US Army's way of war result from the constraints, limitations, and altered character of war caused by nuclear weapons. The current US Army way of war emphasizes achieving success by destroying or defeating the "enemy's armed forces and military capabilities" using aggressive offensive operations based on maneuver and

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[253] US Army, *FM 3-0: Operations* (2017), Foreword.

[254] Richard K. Betts, "Is Strategy an Illusion?" *International Security* 25, no. 2 (Fall 2000): 49.

[255] Robert H. Scales, "Forecasting The Future of Warfare," War on the Rocks, April 9, 2018, accessed February 26, 2019, https://warontherocks.com/2018/04/forecasting-the-future-of-warfare/; Michael Howard, "Military Science in an Age of Peace," Chesney Memorial Gold Medal Lecture, October 3, 1973, printed in *The RUSI Journal* 119, No. 1 (March 1974): 3-11.

massed effects to achieve surprise and shock.[256] However, nuclear weapons limit conflict and make destroying or completely defeating an adversary's military infeasible. One

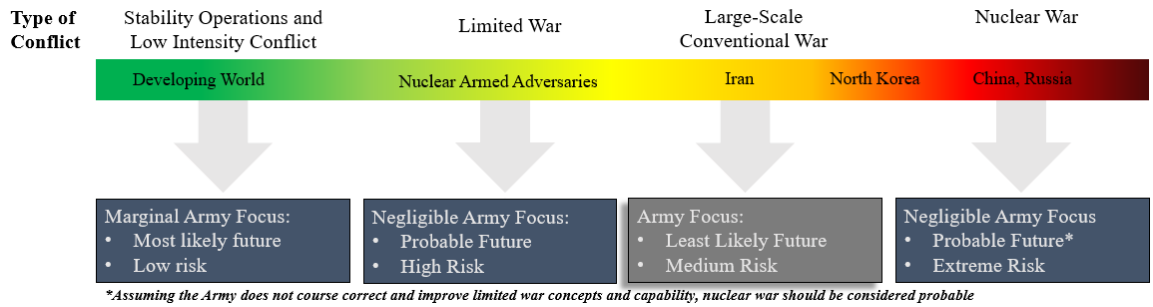

Figure 8. Potential Near Future Conflict Spectrum and Army Focus. Created by the author, originally published in Morris, "Emerging U.S. Army Doctrine," 29.

critical implication is that army commanders, at battalion level and above, will have to assume significantly greater tactical risk to limit and control the risk of strategic escalation. Strategic risk associated with nuclear weapons will probably force tactical and operational commanders to rethink the idea of risk, success, and appropriate actions. Further, the military, and senior leaders, will have to reframe the idea of military necessity to prevent escalation – such as accepting significant losses, attritional frontal attacks, limited targets and shaping operations, poor maneuver options, and failures. A radical change in risk calculus could easily have a dramatic effect on both the character of war, and how the army fights in a future conflict.

A second implication is that the US Army will probably have to fight at a much slower tempo and use more constrained methods than typical American operations. A slow tempo should allow politicians and adversaries to maintain enough control of the situation to prevent inadvertent escalation. Politicians and adversaries will need time and space to conduct political dialogue, signal each other, and understand the methods of limiting conflict. Further, a slow tempo and restrained methods will emphasize conflict stability and incremental steps towards success. Incremental steps and stability may require not exploiting success, not destroying vulnerable enemy forces, or allowing the adversary to retain significant capabilities throughout

[256] US Army, *FM 3-0: Operations* (2017), 1-1, 1-17, 2-41, 7-1.

the conflict. For example, an adversary with nuclear weapons could hinder US strategic and operational mobility by confining the battlespace to limited areas, denying the option of deep envelopment attacks, and force the army to fight a slow grinding frontal attack with a few battalions and limited fires capabilities. These changes are anathematic to American military leaders, would cause significant consternation, and force a dramatically new way of fighting on the Army.

The final implication is that tactical advantages and successes will largely derive from political and strategic advantages achieved from information operations and the international community. Rather than ground commanders creating their own advantages and success, ground forces will depend on tacitly negotiated advantages and disadvantages from the political level of war. Thus, tactical leaders and strategic leaders will require a closer link than in most conflicts. Further, the United States will probably have to build a strong international consensus and coalition before fighting a nuclear-armed opponent or face significant international backlash and possible failure. The United States will probably have to wait for active and clear aggression by an adversarial nuclear power to generate sufficient strategic support for action. However, as American adversaries continue operating adeptly below the threshold of war and limiting their overt aggression, the United States' options will remain limited. The state that appears as the aggressor will likely face significant international and information problems – like Pakistan – and ultimately fail as a result. Thus, unless an adversary begins a direct conflict, war in the future will likely continue requiring slow, indirect proxy efforts or extremely limited operations to block "salami slicing" tactics.

Severely limited, small, and possibly indirect proxy wars will require a substantial shift in thinking by the US Army. These conflicts will require deeper integration of strategic considerations by tactical commanders and will significantly change how the Army fights and operates. Not thinking about these changes and challenges ahead of time simply increases the risk of mistakes, and mistakes in a conflict between nuclear powers could easily result in an

unthinkable nuclear exchange. In 1898, Ivan Bloch wrote *La Guerre Future* in which he predicted that war, especially using old methods, was no longer an effective instrument of policy.[257] Because of technological and social changes, attacks and success in war appeared impossible and would result in destroying nations and millions of men. Europe ignored Bloch's warnings and fought World War I and World War II, in which millions of people perished and multiple states collapsed. Nuclear weapons impose a similar challenge on military leaders today. Fighting wars using old methods and ideas will probably encourage nuclear escalation and result in millions of deaths and the destruction of states. Innovative ideas and methods, and understanding likely constraints, limitations, and characteristics of war, are vital for both future success and preventing a nuclear apocalypse.

[257] Michael Howard, *War in European History*, updated ed. (Oxford, UK: Oxford University Press, 2009), 105; Peter Paret, ed., *Makers of Modern Strategy: From Machiavelli to the Nuclear Age* (Princeton, NJ: Princeton University Press, 1986), 511-512.

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