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戰略競爭?—Strategic Competition?

LT COL SCOTT D. M^CDONALD, USMC, RETIRED

Since the publication of the Trump administration's first *National Security Strategy (NSS)* on 18 December 2017, there has been much discussion about the extent to which a state of strategic competition exists between the United States and the People's Republic of China (PRC). As many commentators note, neither the existence of competition nor the ideas in the *NSS* are particularly new.¹ However, a difference in tone, attributed at least in part to the unabashed use of "America First" to describe the strategy, has led many to view it as more competitive than past strategies.²

Across the Pacific, an increasingly assertive PRC, led by an ever more authoritarian Xi Jinping, has also caused many to hypothesize that the PRC is shedding Deng Xiaoping's admonition to "hide your strength and bide your time" in favor of a proactive foreign policy.³ Moves by the PRC to claim sovereignty over disputed territories—as well as the water—in the South China Sea, efforts to establish alternative international financial institutions, and development of military capabilities aimed directly at US capabilities also suggest the PRC is taking a competitive stance toward the United States.

Yet, since the end of the Cold War, US policy makers have labored to establish an international system where states could work cooperatively toward mutually agreeable solutions and resolve disputes through consultation and dialogue. While no one was naïve enough to suggest states would not have differing interests, it has largely been assumed in the United States that all people could agree on fundamental principles. Though those decades saw multiple armed conflicts, it was thought rogue actors would eventually be brought to heel and the world would enter a more enlightened age in which disputes would be resolved peacefully.

With that context, the potential return of great-power competition is causing Washington to reexamine the nature of its relationship with the PRC and re-evaluate policy options for dealing with this situation. As Fu Xiaoqiang noted in analyzing General Secretary Xi's comments to the June 2018 Central Conference on Foreign Affairs Work, "According to Xi Jinping thought on diplomacy, the correct view of history, overall situation and one's own position need to be established to fully grasp the international situation."⁴ In other words, to understand the bilateral relationship, one must have a general understanding of not only the international environment but also the interests of each party and the interplay between those interests. This idea was echoed by PRC foreign minister Wang Yi,

who recently called for think tanks in both countries to frame the relationship by compiling lists of areas of cooperation, disputes that can be resolved, and issues beyond resolution.⁵ In short, to improve the relationship, both sides must understand the nature of the relationship and the other's perception of it to craft policy that does not lead to armed conflict.

This article aims to lay the groundwork for further analysis by providing an overview of what *strategic competition* is. After defining strategic competition, the second section will take a brief diversion to discuss the relationship between—and potential for—cooperation and competition. The third and fourth sections will consider how competition is viewed from the US and PRC perspectives, before drawing conclusions in the final section about the current and future nature of the relationship.

Strategic Competition

For the purpose of this article, the context of strategic competition will be confined to the policies, actions, and outcomes of states acting within the international system. To ensure common understanding, this context should begin with definitions of key terms in both English and Chinese. According to the *Oxford English Dictionary (OED)*, *strategy* is the “art or practice of planning the future direction or outcome of something; formulation or implementation of a plan, scheme, or course of action, esp. of a long-term or ambitious nature.” *Strategic* is defined as “relating to, or characterized by the identification of long-term or overall aims and interests and the means of achieving them; designed, planned or conceived to serve a particular purpose or achieve a particular objective.”⁶ Similarly, the *Xinhua Dictionary* defines strategy (战略; *zhànlüè*)⁷ as “concerning war’s overall plans and guidance. It, according to the elements of military affairs, politics, economy, geography, etc. of both hostile parties, considers the relationship between every aspect and phase of the overall war situation, to formulate the preparation and use of military forces.”⁸ These definitions point to a general agreement in the two languages. In both traditions, strategy deals with identifying the ultimate objectives of an enterprise to array the tools one has to use appropriately. While the English definition focuses more directly on top-level interests, the Chinese definition includes the range of factors that influence “overall plans and guidance.” Therefore, this article will take the perspective that the strategic affairs concern those matters that a state’s leadership view as fundamental to their survival as a state, commonly referred to as national or state interests.

One definitional difference lies in the inclusion of the conduct of war within the Chinese definition. Though there are other words for strategy in Chinese, 战略 is the one that would normally be used in this context. One alternative

possibility that avoids the use of the character for war is 策略 (*cèlüè*). This has the benefit of suggesting policies, plans, or schemes (策), rather than fighting, but the definition denotes that it is part of and serves 战略.⁹

Competition is easier to parse. *OED* provides “[t]he action of endeavouring to gain what another endeavours to gain at the same time; the striving of two or more for the same object; rivalry,”¹⁰ while the *Xinhua* definition for 竞争 (*jìngzhēng*) is “mutually vying to beat each other.”¹¹ In fact, the character translated as “beat” could also be translated as “defeating” or “being superior to,” but leaving it as “beat” allows the definition to suit many types of interstate competition.

For consistency, and in an attempt to meet both linguistic traditions, this article defines strategic competition as *active rivalry between states that perceive their fundamental interests under threat by the opposite party*. This definition omits the specific actions taken to protect and advance the fundamental interests of a state, because any particular action need not be part of a rivalry with another state or take place at the expense of another state’s fundamental interests. The interests of any two states do not of necessity conflict; however, that is the level of analysis on which that competition characterized as “strategic” takes place. Those interests could be pursued in isolation or through cooperation. A state of competition only exists where and when the interests the parties are in conflict, threaten the achievement of the other party’s, or are desired by both, but incapable of being shared.

Competition and Cooperation

In the post–Cold War world, the United States has gone out of its way not to identify an “enemy.” The lone exception was the George W. Bush administration’s labeling “terrorism” an enemy following the attacks on the World Trade Center: “The enemy is not a single political regime or person or religion or ideology. The enemy is terrorism—premeditated, politically motivated violence perpetrated against innocents.”¹² Even this statement avoids pinning that title on any human or group thereof, focusing instead on an action. As a liberal trading nation, the United States does not want “enemies” and seeks relationships of mutual noninterference or cooperation where feasible.

Since strategic cooperation or competition takes place at the level of states as they pursue their interests in the international environment, it is reasonable to assume that two large states operating globally are going to encounter some areas where their interests overlap and others where they conflict. Some disagreements will only concern methods, but others may rise to the level where the states find their interests threatened and a state of strategic competition will develop. However, there are likely to be a great many issues on which some level of cooperation is possible, especially if the two states do not desire warfare or open conflict. Thus,

across the range of issues confronted by a great power—or even a minor one—there will likely be many where interests align and cooperation is possible. To successfully navigate this environment, it is important to keep one's own state interests clearly in mind, as well as to understand that other states are also operating based on their perceived interests.

Avey, Markowitz, and Reardon argue that to begin understanding grand strategy as a discipline, linking state behavior and these underlying principles must first be understood.¹³ Therefore, the first step in evaluating whether a relationship is cooperative or competitive is to identify the interests involved. The Trump administration's 2017 *NSS* identifies four: (1) protect the American people, the homeland, and the American way of life; (2) promote American prosperity; (3) preserve peace through strength; and (4) advance American influence.¹⁴ Similarly, according to a public statement by then-State Councilor Dai Bingguo, the PRC maintains three state-level interests: (1) maintenance of the fundamental political system and state security; (2) state sovereignty and territorial integrity; and (3) the continued stable development of the economy and society.¹⁵ The relationship between these two stated concepts of state interests is the foundation on which the question of competition versus cooperation must be understood.

At first pass, these interests do not seem necessarily to be in conflict. Surely, shared interests in economic development should be a basis for cooperation, and all states have an interest in recognizing the principles of sovereignty and nonintervention. This identification seems obvious, but even where interests appear to overlap, cooperation can be seen not only as a solution to individual cases but also as a tool to influence other states. In fact, the Liberal Institutionalism School of international relations theory is built around the premise that the act of cooperating with states and conforming to institutions changes states and molds them to the norms of the institution and system.¹⁶ However, such change is not preordained. Much angst currently exists among US sinologists precisely because many thought that by cooperating with and engaging the PRC they could mold it to Western standards of conduct. As Walker and Ludwig note, the West has “been slow to shake off the long-standing assumption—in vogue from the end of the Cold War until the mid-2000s—that unbridled integration with repressive regimes would inevitably change them for the better, without any harmful effects on the democracies themselves.”¹⁷

The very refusal on the part of states such as the PRC to compromise with Western norms comes from a recognition that not all interests or policies are compatible. While cooperation can work on individual issues, it is hazardous to cooperate in areas where it would involve a compromise of one state's interests. As American philosopher Ayn Rand noted,

It is only in regard to concretes or particulars, *implementing a mutually accepted basic principle*, that one may compromise. For instance, one may bargain with a buyer over the price one wants to receive for one's product, and agree on a sum somewhere between one's demand and his offer. The mutually accepted basic principle, in such case, is the principle of trade, namely: that the buyer must pay the seller for his product. But if one wanted to be paid and the alleged buyer wanted to obtain one's product for nothing, no compromise, agreement or discussion would be possible, *only the total surrender of one or the other* (emphasis added).¹⁸

In other words, when states in a given situation agree on core principles—represented by the impact of that situation on their interests—they can work together for a mutually agreeable solution. However, when their fundamental principles are at odds, compromise is not possible without putting the security of one's state at risk. In fact, the very nature of state-level interests—representing factors that are perceived as existential—suggests issues of foreign relations are likely to be viewed in moral terms. As Harry Harding points out, this may increase the tendency to negatively evaluate the actions of another state.¹⁹ These perceptions can be compounded when two states have differing philosophical traditions, which support conflicting conceptions of morality. Consequently, actions seen as good by one state may be viewed as evil and intolerable by the other.

Therefore, the question of whether competition can be avoided and if cooperation is possible ultimately rests on the interests of states and how they are held, interpreted, and employed by the leaders of the states. To fully evaluate whether a state of strategic competition exists between the US and the PRC—and on what issues cooperation is possible—one must first explore how each state views its interests and its relationship with the opposite party.

US Perception of Strategic Competition

Since the end of the Cold War, the United States has been attempting to engage and cooperate with the PRC to derive economic benefits from the PRC's low-price labor market and to prevent the development of an antagonistic relationship with a large, rapidly developing, and nuclear-armed state. Though many US presidential candidates have maligned the PRC on the campaign trail, once taking office, it did not take too long for chief executives to see hazards in making enemies and benefits in protecting free trade.²⁰ Thus, though there were ups and downs in the relationship, for many years Americans perceived themselves as working with the PRC and believed their long-term interests were not opposed.

From the US perspective, it was assumed the PRC wanted the same things the United States did—economic prosperity for its people and a liberal international trade regime that benefited everyone. This international order has been a consis-

tent interest of the United States, currently represented in the stated interests of “American prosperity” and “American influence.”²¹ It seemed self-evident that the American-influenced international system was good for the PRC, as demonstrated by its economic growth and the emancipation of several hundred million people from poverty. Even after the Tiananmen massacre, the George H.W. Bush administration sought to keep the PRC connected to the interstate system. According to the 1990 *NSS*, the United States “strongly deplored the repression in China last June and we have imposed sanctions to demonstrate our displeasure. At the same time, we have sought to avoid a total cutoff of China’s ties to the outside world. Those ties not only have strategic importance, both globally and regionally; they are crucial to China’s prospects for *regaining the path of economic reform and political liberalization*” (emphasis added).²² A year later, the *NSS* was even more direct, stating, “Consultations and contact with China will be central features of our policy, lest we intensify the isolation that shields repression. *Change is inevitable in China*, and our links with China must endure” (emphasis added).²³

A decade later, Pres. Bill Clinton’s last *NSS* had moved from ensuring the PRC did not drift away to identifying that a “stable, open, prosperous [PRC] that respects the rule of law and assumes its responsibilities for building a more peaceful world is clearly and profoundly in our interests.”²⁴ Two years later, the Bush administration identified “the possible renewal of old patterns of great power competition,” but was optimistic that, “recent developments have encouraged our hope that a *truly global consensus about basic principles is slowly taking shape*” (emphasis added).²⁵ In 2010, the Obama administration continued to “pursue a positive, constructive, and comprehensive relationship” with the PRC and welcomed them to take on “a responsible leadership role in *working with the United States and the international community to advance priorities* like economic recovery, confronting climate change, and nonproliferation” (emphasis added).²⁶

As represented in successive strategies by administrations from both major US political parties, many in the US policy-making community believed the authoritarian nature of the PRC would be changed by cooperation with the US, its incorporation into the international community, and the expanding wealth of its people. However, the last decade has suggested the PRC’s authoritarian system is being maintained and consolidated. Meanwhile, its leadership has decided to spread its influence beyond its borders, threatening the international system, which Washington worked to build and maintain in accordance with US interests.

These trends have led many in the US security policy community to change their minds regarding the effectiveness of US engagement with the PRC.²⁷ This trend emerged during the Obama administration, when the sense that cooperation was not producing the desired results contributed to “The Pivot to Asia,” a

policy designed to reallocate US foreign policy effort and resources to the Indo-Pacific.²⁸ However, despite island seizures, debt diplomacy, dollar diplomacy, and island building, it was not until General Secretary Xi consolidated power and had his term limits removed at the 19th Party Congress in October 2017 that the West seemed to really believe that engagement had failed.

In the December 2017 *NSS*, the Trump administration concluded “after being dismissed as a phenomenon of an earlier century, great power competition returned” and named the PRC and Russia as actors competing with the United States.²⁹ Moreover, the *NSS* stated explicitly the need to “rethink the policies of the past two decades—policies based on the assumption that engagement with rivals and their inclusion in international institutions and global commerce would turn them into benign actors and trustworthy partners. For the most part, this premise turned out to be false.”³⁰

Although there have been critics of this competitive stance, in many ways it is tracking a change already taking place among China watchers. *The Economist* notes the recent concern about the PRC is not coming from long-term skeptics, rather from “Americans and Europeans who were once advocates of engagement, but have been disappointed by illiberal, aggressive choices made by Chinese rulers. They are not so much hawks as unhappy ex-doves.”³¹ At a recent Brookings Institution event, former Obama-era Senior Director for Asian Affairs in the National Security Council Evan Medeiros argued “the United States needs to face-up reality. Continuing to deny that our interests are diverging more than converging is dangerous. We could get rolled, or worst, it could embolden China to be more aggressive and assertive in pursuing its economic, political, and security interests.”³² Instead of a partner in economic development, many in the United States have now concluded, as Robert Ross has, that “China is also the first great power since prewar Japan to challenge US maritime supremacy, a post-World War II cornerstone of US global power and national security. The rise of China challenges US security in a region vital to security.”³³

In sum, the United States has been a consistent advocate of cooperation since the end of the Cold War. However, that cooperation was predicated on an assumption that long-term interests were aligned and that engagement with the PRC would ultimately change it into a more liberal state domestically and another “stakeholder” in the US-influenced liberal international order. That these changes did not occur, combined with a PRC increasingly interested in challenging that order, has caused the United States to rethink its approach. Thus, while Washington has not completely given up on cooperation, it now believes a state of competition exists and is beginning to alter US policies to meet that reality.

PRC Perception of Strategic Competition

Whereas US policy has reflected Western ideas of liberal institutionalism, the PRC's unique philosophical tradition and its authoritarian political system shape the PRC leadership's view of their interests and the international environment. The legacy of the traditional Chinese philosophy continues to inform the leadership's view of existence and the means by which they understand it.

Having come through the Century of Humiliation, the PRC is now primed to leverage its historical legacy and reclaim its place in the world. Harding argues this history is not simply academic, but "a set of facts and ideas and images that are alive in the minds of policymakers and the public today, thereby shaping the present and future of China's relationship with the rest of the world."³⁴ In a departure from Cultural Revolution rhetoric that criticized the old, General Secretary Xi has embraced this history, noting at the 19th Party Congress, that the PRC is "nourished by a nation's culture of more than 5,000 years . . . we have an infinitely vast stage of our era, a historical heritage of unmatched depth, and incomparable resolve that enable us to forge ahead on the road of socialism with Chinese characteristics."³⁵ The importance of traditional foundations is reflected in the People's Liberation Army's (PLA) view of strategy. According to the *Science of Military Strategy*, "Applied strategic theory receives foundational strategic theory, especially the guidance of one's own traditional military strategic thought, as well as influencing the development of foundational military strategic thought" (emphasis added).³⁶

One important factor in this cultural tradition is the concept of *shì* (勢), which lacks a direct English translation but most closely means "situational potential."³⁷ According to *shì*, any situation has a natural potential and will proceed along that course unless interrupted, like a stream flowing downhill. Also like that stream, once a situation is in motion and well along its course, it becomes difficult to change the speed and direction of what is now a large river. Conversely, near its source, it is relatively easy to alter the flow of a stream with a small dam. In this context, nature moves on naturally, fulfilling its potential. Xi alluded to this at Davos, noting that "[f]rom the historical perspective, economic globalization resulted from growing social productivity, and is a natural outcome of scientific and technological progress, not something created by any individuals or any countries" (emphasis added).³⁸ In other words, the current situation represents history fulfilling its potential. The easiest way to benefit from this is to join a trend in progress. As Xi notes later, the PRC leadership "came to the conclusion that integration into the global economy is a historical trend."³⁹ Note this is not a value judgment. It is presented as a metaphysical fact.

Of course, the naturally developing potential may be less than ideal and a change may be desired. A corollary to *shì* is that to change a situation, one should act early

in a developing situation, where it requires less effort. This not only makes changes easier, as noted above, but also provides the one acting early more say in determining *how* a situation will develop. This has implications for the concept of initiative, but as Niou and Ordeskhook suggest, runs deeper than acting first. Their study of game theory and Sun Zi suggests “it is better to be the one who dictates which game is to be played or, equivalently, which player is to be assigned which position in the game”⁴⁰ In other words, by defining the terms of debate, the context for competition, or the rules of the game, a competitor gains an advantage in deciding victory.⁴¹ This logic clarifies the meaning of Sun Zi’s admonition to win without fighting.⁴² It is not that the victor has refrained from conflict, rather through understanding the situation, friendly conditions, and disposition of the adversary, he has set conditions—managed *shì*—to ensure victory will be achieved if battle is joined. In such a context, initiatives such as the Trans-Pacific Partnership appear as threats to PRC interests by constructing a set of new rules—shaping the developing regional order—in a manner that serves US interests.⁴³

Additionally, the world is itself a realm of constant change. Derived from LaoZi and the *Book of Changes* (道德经), Chinese philosophy views the world as a constant interplay of factors that are ceaselessly waxing and waning: “The doctrine of returning to the original is prominent in [LaoZi]. It has contributed in no small degree to the common Chinese cyclical concept, which teaches that both history and reality operate in cycles.”⁴⁴ Importantly, the duality of attributes, such as strength and weakness, requires that they move together. As one power rises, another will fall. As one Neo-Confucian put it, “There is nothing in the world which is purely yin (passive cosmic force) or purely yang (active cosmic force), as yin and yang are interfused and irregular. Nevertheless, there cannot be anything without the distinction between rising and falling, and between birth and extinction.”⁴⁵ Thus, there is no “win-win” result, when powers are pitted against each other. This identification makes it difficult for those educated in a Chinese context to see cooperation with an opposing power as efficacious.

All told, this strategic tradition suggests there is a constant interplay between forces. There is not “cooperation” between states; rather there is a natural give and take. Moreover, if one wants to influence that process, it is best to influence the situation early, before it has had a chance to develop. Taken together, these philosophical premises encourage those immersed in Chinese thought to view the environment as one where contrasting forces are vying for preeminence. If they want to be in charge of a new international order, they must act before their opponent has joined the game and attempt to set the terms of debate to favor their vision of the future, just as General Secretary Xi has encouraged the party to take an active part in leading the reform of the global governance system.⁴⁶

Beyond the Chinese cultural tradition, contemporary PRC policy is heavily influenced by its authoritarian political system. As a single-party state, what is good or bad for the PRC is interpreted through the lens of what is good or bad for its leadership—the party. From the party’s perspective “a country’s diplomacy should be seen as an extension or the externalization of management of its internal affairs.”⁴⁷ Since internal affairs are focused around the maintenance of Chinese Communist Party (CCP) authority, it is no surprise that national security is party-focused. According to Article 2 of the PRC’s National Security Law, “National security’ means a status in which the *regime*, sovereignty, unity, territorial integrity, welfare of the people, sustainable economic and social development, and other major interests of the state are relatively not faced with any danger and *not threatened internally or externally* and the capability to maintain a sustained security status” (emphasis added).⁴⁸ The regime (read: Party) is placed first, reinforcing Dai Bingguo’s 2009 emphasis on the political system as the top national interest. Article 3 reinforces this point, labeling political security as “fundamental.”⁴⁹

The centrality of party security is important because many US actions are viewed as a direct assault on CCP rule. In 2013, an internal party memo, known as *Document 9*, was circulated to warn party cadres of subversive trends. It argues principles such as “universal values,” civil society, nongovernmental organizations, and “absolute freedom of the press” are attempts to undermine party authority.⁵⁰ US leaders view these as the values of the globalized world and promote their universal adoption as a state interest in the *NSS*. However, to the CCP, they are direct threats to the authority of the party—the number-one interest of the PRC.

Together, these factors have led many in the PRC security establishment to conclude a state of competition with the United States is not only possible but already exists. According to Luo Xi, a researcher at the PLA Academy of Military Science and Renmin University, “following Chinese economic growth and military strengthening, China-US relations have already gradually developed into the most important strategic competition relationship in the Pacific area....”⁵¹ He goes on to characterize competition as intense, encompassing natural resources, strategic space, economic leadership, and rule drafting, among other tangible and intangible factors, ultimately stating that conflict cannot be avoided.⁵² In this context, the increasing tendency among US commentators and decision makers to see the relationship as a competition seems almost naïve by comparison to a commitment on the PRC side that competition is both the current state of the relationship and natural.

Conclusions

While cooperation does continue in some spheres, in many areas the US and PRC are approaching each other as competitors. It is in the interest of both

states to understand the nature of that competition, so they can avoid armed conflict. In doing so, it is necessary to look to the fundamental ideas that are driving not just the conviction that competition exists but also the decisions being made on how to wage it.

This article began by defining strategic competition and examining the interests of the US and PRC to explore the extent to which competition and cooperation were possible. Though on the surface, US and PRC interests do not necessarily have to conflict, subsequent analysis suggests they do at present. From the US perspective, successive administrations have attempted to cooperate with the PRC to bring it into an international system that was perceived as mutually beneficial and a fundamental interest of the United States. However, recent actions by the PRC appear focused on overturning that system, thereby undercutting US security. Similarly, the PRC sees US efforts to expand and reinforce “universal values”—a stated US interest in the past several administrations—as a direct threat to CCP authority, the PRC’s number-one interest. Until these fundamental conflicts are resolved, the US and PRC will be in a state of strategic competition.

In discussing the nature of strategic competition, this analysis has studiously avoided minutiae about missiles and maritime features, containment, and “anachronistic” alliances. Instead, by attempting to stay at the strategic level of state interests, it has identified the fundamental issues that lead to an existent state of competition. There will be many initiatives to address and resolve individual points of disagreement and amplify issues where there is cooperation. However, until differences are addressed at the level of state interests, one or both parties will continue to identify the relationship as competitive.

Finally, the analysis above shows there are areas where the fundamental interests of these two states are diametrically opposed. Each state needs to make a sober evaluation of what interests are fundamental and cannot be traded away, as well as understand what interests the other state values similarly. These are areas where there will be no compromise, and where careful calculation and deliberate choice will be required by security practitioners in both states to ensure competition does not turn into armed conflict. ★

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Notes

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8. "对战争全局的筹划和指导。它依据敌对双方军事, 政治, 经济, 地理等因素, 照顾战争全局的各方面, 各阶段之间的关系, 规定军事力量的准备和运用。" *新华词典(Xinhua Cidian; New China Dictionary)*, (北京: 商务印书馆辞书研究中心, 2001), 1236. Author's translation.

9. "在政治斗争中, 为实现一定的战争任务, 根据形势的发展而制定的行动准则和斗争方式。他是战略的一部分, 并服从和服务于战略" (Within the political struggle, to achieve necessary war missions, the formulation of operational standards and manner of struggle, in accordance with the development of the situation). *新华词典(Xinhua Cidian: New China Dictionary)*, 99. Author's translation.

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26. NSS-2010, 43.
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Risks and Benefits of Autonomous Weapon Systems

Perceptions among Future Australian Defence Force Officers

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Abstract

The prospect of increasingly autonomous systems has seized the military imagination and rapidly generated an international debate surrounding the merits of a potential preemptive ban under international law. What has been missing to this point has been an in-depth consideration of how artificial intelligence, autonomous systems, and unmanned platforms would be perceived by the junior officers who will play a core role in their integration into future militaries. Drawing on a broad survey of officer cadets and midshipmen at the Australian Defence Force Academy conducted in 2019, this article provides an analysis of how perceived risks and benefits of autonomous weapon systems are influencing the willingness of these future defense leaders to deploy alongside them.

Introduction

The prospect of increasingly autonomous weapons systems (AWS) has seized the military imagination and featured prominently in strategic guidance, not just in the Australian Defence Force (ADF) but also from our allies, competitors, and nonstate actors. It is also becoming increasingly apparent that artificial intelligence (AI), trusted autonomous systems, and unmanned platforms will play a crucial role in the ADF's capacity to maintain a credible deterrent capability edge over potential challengers in the region. However, there have been no concentrated, published efforts to determine how military end users would perceive such systems.

Existing studies examining public opinion toward lethal autonomous weapon systems (LAWS) have been limited in scope and focused primarily on civilians in the United States. At the time of writing, the only publicly available Australian research is also civilian-focused. Over the past two years, the Campaign to Stop Killer Robots has conducted two surveys of Australian civilians and identified that more than half of respondents opposed autonomous weapons. Overall, while these papers provide a useful baseline understanding, they remain focused on civilians rather than the ADF.

Indeed, the literature generally seems to assume that military personnel would be more likely to support the use of LAWS than the civilian population. While trust has been raised as an essential factor, overall, this has not been reflected in the context of an empirical public opinion study. Therefore, the purpose of this article, and the underlying study, was to test this assumption among officer cadets and midshipmen at the Australian Defence Force Academy (ADFA) to identify which perceived risks and benefits of AWS are most influential on the willingness of these future defense leaders to deploy as part of manned-unmanned teams (MUM-T).

This article is divided across four sections that outline the results of the underlying study and highlight the main takeaways for discussion. The first substantive section of this article establishes a baseline understanding of the extent to which the respondents were willing to deploy into a combat environment as part of a MUM-T that included potentially lethal robots with varying levels of autonomous functionality. The next two sections consider a range of potential benefits and risks respectively and outline which were considered important to the respondent group, which informs an alternate, end user-based view of the key challenges to the effective integration of unmanned, AI-enabled or autonomous systems into the future ADF. Finally, this article will discuss three core conclusions that can be drawn from this study before concluding with policy and doctrinal recommendations.

Regardless of whether a preemptive development ban is imposed on lethal variants under international law, the impact of increasingly autonomous unmanned systems will be felt most keenly by the junior officers charged with leading MUM-Ts in combat. However, there is currently a dearth of published research that engages directly with active military personnel or questions how the emerging generation of officers perceive increasingly autonomous platforms and systems. In response to this gap, the Values in Defence and Security Technology Group conducted a survey of more than 800 officer cadets and midshipmen at the ADFA, Australia's premier tertiary military education institution. This article utilizes that dataset to inform an analysis of how the perceived risks and benefits of autonomous systems are influencing the willingness of these future defense leaders to deploy alongside them.

Prior Surveys of Perceptions toward Autonomous Weapon Systems

This study is believed to be the largest survey examining perceptions toward autonomous military technology among serving military personnel, at the time of writing. It was also the first survey of its kind to focus almost exclusively on Aus-

tralian military respondents, as prior published studies have been primarily focused on the United States.

Chronologically, Charli Carpenter conducted the first study of US public opinion toward AWS in 2013. More than half the respondents in this study said that they opposed autonomous weapon systems (with 39 percent expressing a strong opposition). Unfortunately, this initial study utilized leading and highly emotive terminology in its questions. This is a topic that the general public still has little knowledge or understanding of beyond their immediate association of *robotic weapons* with the *Terminator* movie franchise (although some may prefer *Transformers*). As Michael Horowitz's subsequent study confirmed, the influence of contextualized questioning is particularly important with this topic. Despite this concern, Carpenter's paper was an important first step in building our understanding of public attitudes toward this technology and is still widely referenced in academic literature and working papers produced as part of the ongoing High Contracting Parties to the Convention on Certain Conventional Weapons (CCW) meetings of the International Group of Experts on LAWS in Geneva.

A subsequent online survey, conducted by the Open Roboethics Institute in November 2015, was the first to include respondents outside of the United States. The results of this survey were fairly clear, with 85 percent of respondents saying that LAWS should not be used offensively and 67 percent supporting a ban. The most common reason for opposing LAWS was that only humans should be allowed to make the decision to end life.

Interestingly, in a 2016 study, Horowitz found that the baseline level of opposition to autonomous weapons dropped from 48 percent to 27 percent if autonomous weapons protected US soldiers and were more effective than remote-operated weapons. While Horowitz has not published a follow-on from this admittedly US-focused study, the key implication was that the manner in which autonomous systems are presented to the public is an important factor in whether they would be negatively received.

Most recently, the Campaign to Stop Killer Robots commissioned two large-scale but limited surveys, the first in 2017 and the second in 2019. These surveys found opposition to autonomous weapons rising, hitting 61 percent in the second survey. The most common reasoning among those who opposed killer robots was that "machines should not be allowed to kill" and a concern that AWS would be unaccountable. Of the 1,000 Australian respondents in 2019 (out of 18,795 total respondents), 16 percent were supportive or strongly supportive and 59 percent were opposed or strongly opposed. Interestingly 25 percent of Australian respondents stated that they were unsure, the same rate as Canada and the United States and 8 percent higher than the survey average. This data was an important contri-

bution, given the argument that LAWS violate the principle of humanity, offend the public, and should thus be banned under the Martens Clause. However, the underlying surveys were quite limited in scope, with only those who indicated opposition being asked the survey's second question. Furthermore, their value for informing policy beyond supporting a general call for a ban is questionable, given Horowitz's findings that the composition of the question was influential when measuring public reaction to LAWS.

The underlying survey for this article accounted for these shortcomings by adopting a neutral language and utilizing a research design that questioned why the respondents held the expressed views. Among the core purposes of this article, therefore, is to submit into the literature a detailed exploration of how a series of risk-benefit factors affect perceptions toward autonomous systems among the next generation of ADF leaders.

Research Design

Reviewing the steadily growing discourse surrounding the development of increasingly autonomous weapon systems would support the generation of three hypotheses for how these future military leaders would perceive the risks and benefits associated with deploying alongside "killer robots," each of which will be tested in this article. Firstly, we could expect, based on the above surveys, to see a majority of respondents to either oppose or strongly oppose the use of machines that are "allowed to kill" without direct human control. Secondly, given the results that Horowitz found, this cohort's perception of autonomous weapon systems should skew dramatically toward opposition between scenarios based on how the system's level of meaningful human control is described. Finally, given the clear focus in publicly published doctrine documents from the Five Eyes states, we hypothesized that military respondents would place the highest value on potential risks and benefits of autonomous systems that relate to improving force protection, reducing procurement costs, and replacing humans in dull, dirty, or dangerous tasks. Interrogating this hypothesis was a key factor in developing the questions on importance of perceived risks and benefits.

The authors also acknowledge that this research design has two major limitations that must be noted. The first is that, as this is the largest survey of military officers to date, we cannot draw on extant literature to inform an expectation of the level of difference between this data and public opinion among the civilian population. However, extant research on attitudes toward the use of armed remote unmanned aerial vehicles (UAV) would suggest that junior military leaders would have a greater level of understanding than the general public, but that this would not necessarily translate into a significantly higher level of support. In response to

this gap in the literature, the underlying research instrument included a comparative scenario that presented respondents with hypothetical systems with varying levels of human control.

The second limitation is this article's focus on respondents from the ADF could raise legitimate questions about its generalizability. While acknowledging this concern, the authors make two contentions. The first is that, as the largest military-focused survey of its kind at the time of writing, the data itself offers a valuable insight upon which future studies of fellow militaries could be based. Second, the ADF is regarded as among the most capable and well-equipped militaries in the region, especially on a per capita basis. Furthermore, while a justifiable argument can be made that the ADF has sometimes proven a slow or inconsistent adopter of new innovations, it also has a history of successfully leveraging military technology to generate a sufficient competitive edge to maintain credible deterrence. Therefore, the attitudes expressed by these respondents could feasibly be used as a comparative basis for estimating servicemember perceptions in operationally and doctrinally similar militaries, both within the Five Eyes network and more generally among technologically advanced middle-power states.

Demographics

Before moving on to the substantive analysis and discussion, it is useful first to outline key features of the underlying dataset. This survey was conducted in early 2019 and, at the time of writing, is the most extensive study of military attitudes toward autonomous systems in terms of scale and detail. Reflecting their status as officer cadets and midshipmen, the respondents were almost exclusively young people (97.6 percent were between the ages of 18 and 24). Among the respondents, there was only limited female representation (26.8 percent), and more than 87 percent were born in Australia. Furthermore, while there was a roughly even distribution based on their year of study, a significant majority of respondents were from the Army (45 percent), with Royal Australian Air Force officer cadets and Royal Australian Navy Midshipmen accounting for the remaining 33 percent and 22 percent respectively.

The demographic breakdown of respondents has two important implications for this article. The first, and most obvious, is this data focuses the analysis on military personnel rather than the broader civilian population. This is admittedly a limitation of the scope; however, focusing on the end users separates this article from existing research of attitudes toward autonomous systems, which have been almost exclusively focused on the civilian population. Secondly, the authors are cognizant that their focus on junior officers arguably limits the applicability of its results to current defense policy and procurement. The authors would instead ar-

gue that the emerging nature of autonomous systems (and AI more broadly) means that it is critical that we understand how the decision makers of tomorrow understand the ethical, legal, practical, and operational potential, risks, and constraints of increasingly autonomous systems.

Willingness to Deploy Alongside Unmanned or Autonomous Systems

The first important takeaway from this study is a baseline understanding of the extent to which these young defense leaders would be comfortable, or not, to deploy into a conflict zone as part of a MUM-T, also known as a human-machine team. The MUM-T concept has become prominent in the public and policy discourse surrounding autonomous and unmanned systems. The underlying assumption with MUM-Ts centers on the contention that keeping humans in or on the Observe, Orient, Decide, and Act (OODA) loop somewhat mitigates the ethical and legal issues with killer robots, as well as reducing the technological and financial barriers to deploying potentially lethal autonomous systems. This study aimed to interrogate the assumption that military officers would be comfortable deploying into MUM-Ts with autonomous systems. Therefore, respondents were asked about their willingness to deploy in a team “involving robots to achieve a combat mission,” where the system was given varying levels of autonomous operation capacity. The response data is illustrated in figure 1.

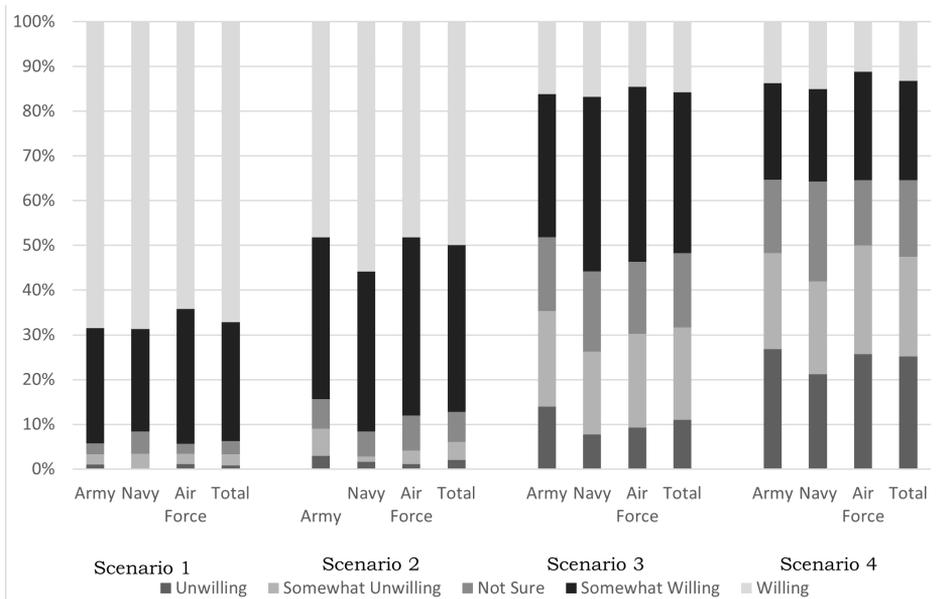


Figure 1. Willingness to deploy alongside autonomous systems

There are three main conclusions regarding military perceptions of autonomous systems that can be drawn from these initial data points. The first is that this data illustrated that a significant relationship exists between the perceived level of independence of the “robot” and a willingness to deploy across each of the three MUM-T scenarios. Where the autonomous systems were either entirely under human control or were limited to preprogrammed functions, the vast majority of respondents were willing or somewhat willing to deploy alongside autonomous systems. This would cover a variety of currently deployed systems that, for example, provide landing assistance to human pilots. However, when the autonomous system could exercise “preprogrammed decision making” in the use of force in predefined areas (which correlates with semi-autonomous weapon systems), there was a significant negative shift, although the level of willing and somewhat willing respondents retained a slim majority (51.7 percent). Scenario three also marked a significant increase in the rate of uncertainty in responses, which rose 16.6 percent from 6.8 percent in scenario two. In the case of scenario four, where the system would meet commonly used definitions for a LAWS, there was a considerable increase in respondents that would be unwilling to deploy alongside such systems, cementing this as the only scenario in which a majority of respondents would not deploy. However, it is also important to note that the number of respondents that were “willing” remained similar and above 10 percent in both scenarios (15.8 percent and 13.2 percent respectively). Opposition to this level of autonomy is unsurprising given the findings of prior research, which admittedly focused on civilians; however, it does support a conclusion that, while a minority would be currently willing, the majority of this cohort harbors a discomfort with deploying alongside autonomous systems with the independent capability to apply force.

Secondly, this data supports the assertion that questions construction and discursive practice is particularly influential with autonomous systems, even for military officers. Note that 3.3 percent (27 respondents) would be either unwilling (7 respondents) or somewhat unwilling to deploy alongside a system that “need[s] a human operator [to] control every function” and an additional 24 were uncertain. Where the system was under human control but could “independently perform some preprogrammed functions,” twice as many were unwilling (2.1 percent, or 17 respondents) or somewhat unwilling (3.9 percent, or 32 respondents) to deploy in the MUM-T, and a further 55 respondents were uncertain. While a statistically minor segment of the cohort, these results provide an interesting illustration of the discursive effect in the case of autonomous systems and the existence of an additional wariness toward machines utilizing potentially lethal force. Consider that, from a purely function-based perspective, these descriptions could apply to a variety of systems that are already in use with the ADF. It is unlikely

that this cohort would be unwilling to deploy in a combat unit that utilized remote turrets (such as the Bushmaster Protected Mobility Vehicle), automatic target identification (such as the Phalanx Close-In Weapons System) or autonomous navigation with human-controlled strike capability (such as MQ-9 Reaper unmanned combat aerial vehicle [UCAV]). This further reinforces the need for detailed, fact-based training for military personnel to dispel remaining myths and address concerns among junior leaders regarding autonomy in military systems.

Finally, while this pattern of responses remained consistent, there was some interesting variation apparent when the data was analyzed on the basis of parent service branch. For example, Navy midshipmen were notably more willing to deploy alongside autonomous systems in scenario two yet were more uncertain in scenarios three and four. Indeed, 41.9 percent of naval respondents were unwilling or somewhat unwilling in scenario four, compared to 48.2 percent (Army) and 50 percent (Air Force). Contrastingly, the Army respondents had the highest levels of opposition across all four scenarios; for example, 14 percent of Army respondents were unwilling to deploy in scenario three compared to only 7.8 percent of Navy midshipmen and 9.3 percent of Air Force officer cadets. The Air Force respondents were broadly consistent with their Army colleagues yet displayed less uncertainty in scenarios three and four. This variance, while interesting, cannot be explained solely by differences in organizational culture between the services, because this cohort consisted of trainee-officers whose military experience had been chiefly tri-service at the time of the survey. Therefore, their distinct responses to these scenarios suggest that there must also be other factors at play beyond the natural biases generated by their service branch's weapon systems and mission. The logical next step in this research was, therefore, to explore what potential benefits and risks of autonomous systems are most influential in building these perceptions among the next generation of defense leaders.

Perceived Benefits of Autonomous Systems

The second component of this study engaged directly with this question, questioning what level of importance these junior officers placed on a range of identified risks and benefits associated with autonomous systems. In this section of the survey, respondents were asked to rank how influential each of a list of benefits (fig. 2) was to their views on deploying alongside autonomous systems along a Likert scale. The results of this component provide valuable insights for future training and familiarization practices, as increasingly autonomous systems, as well as distinct platforms, are progressively integrated into the future ADF. While most respondents listed each of the 10 benefits as "somewhat important" or "important," when one looks closer at the data, there are three takeaways worth highlighting.

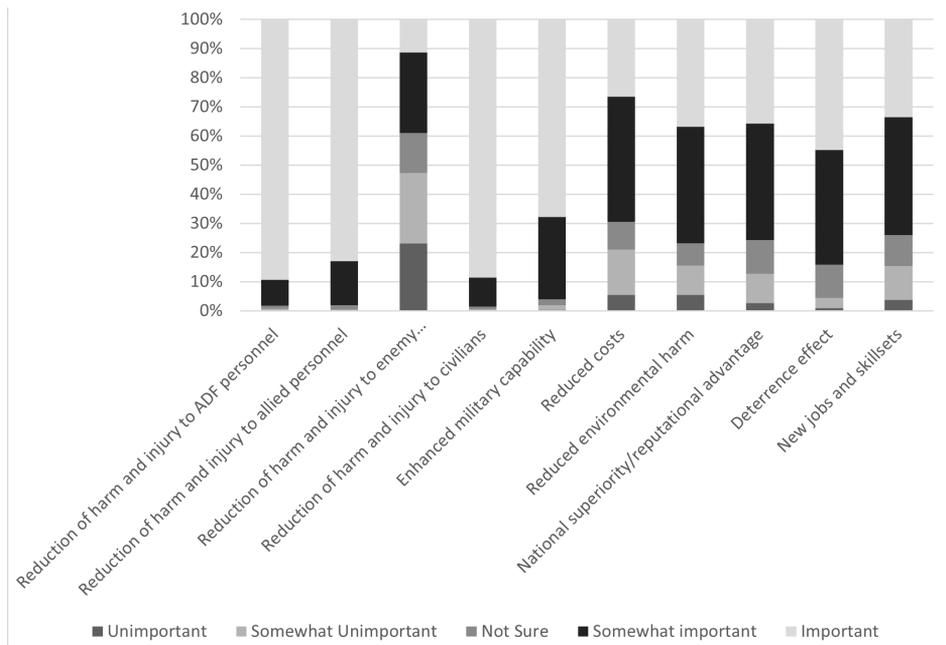


Figure 2. Importance of perceived benefits of AWS

First, it is worth noting that the one significant exception to this pattern was when respondents were asked about the potential of autonomous systems to reduce harm or injury to enemy combatants. This factor was a notable outlier, with less than 12 percent listing it as a significant influence on their view of autonomous systems. This is particularly telling when it is contrasted against the other three harm reduction factors (which focused on the ADF, allied personnel, and civilians), which were clearly the most influential factors, being listed as important by 83–89 percent of respondents. The authors acknowledge that this data point could be interpreted with some skepticism, given the cohort’s status as young, inexperienced officer cadets and midshipmen; however, this same argument also highlights the core importance of identifying this discrepancy. These are soldiers, sailors, and airmen who will have command authority and oversight over increasingly autonomous systems in a future combat zone. The fact that the reduction of harm and injury to enemy combatants was so widely dismissed is a warning sign, especially when considering the expected importance of counterinsurgency and urban operations in the future operating environment, and this should prompt the provision of further targeted ethics training for these officer cadets and midshipmen.

Second, this data suggests that several of the benefits traditionally touted in favor of adopting autonomous systems are of less importance to the end user than expected. Aside from the risk of harm to enemy personnel, the least important

potential benefits were reduced costs and new jobs and skill sets. These two factors were the only others that a significant number of respondents considered somewhat unimportant (15.5 percent and 11.7 percent respectively) and were only considered important by 26.5 percent and 33.6 percent of respondents. Interestingly, these factors also had the highest rate of being selected as somewhat important. The results for the remaining variables were similar, while each was listed as unimportant by less than 7 percent of respondents, they were only listed as important at an average rate of 40 percent. This suggests that training and messaging around autonomous systems should focus on the potential to protect host-nation and partner forces, as well as to improve the accuracy and reliability of targeting to protect civilians more effectively from unintentional engagement.

Finally, the data from this question displayed a more significant service branch variation than was seen in the previous question. Unsurprisingly, given their greater willingness to deploy alongside autonomous systems, Naval midshipmen were overall more likely to describe a benefit as important, while Air Force officer cadets had the least “important” results yet the most “somewhat important.” Interestingly, Air Force respondents were half as likely to list harm to enemy combatants as unimportant and were more likely to list this factor as somewhat important than either other service. Contrastingly, overall Army officers assigned significantly less importance to each benefit, with the notable exceptions being the harm reductions to ADF, allied, and civilians. For example, Army respondents were twice as likely to regard harm reduction to enemy combatants as unimportant than Air Force and 10.2 percent higher than Navy midshipmen. A similar difference can be seen with reduced costs, which twice as many Army officer cadets viewed as unimportant compared to their peers. Overall, the benefits data reinforces the need for individual service branches to supplement central efforts to integrate autonomous systems with training and exercises that reflect the specific platforms and domains they operate within.

Perceived Risks of Autonomous Systems

The final survey question to discuss in this article focused on determining the influence of a series of 13 potential risks on the willingness of the respondents to deploy in MUM-Ts. This question provided a valuable insight into which risks that this cohort of future defense leaders considered to be the most important—a perception that can guide future efforts to build trust among defense personnel as well as focus attention, within the military context, rather than considering the full range of concerns raised by prior civilian-focused studies. Overall, this data (figs. 3A and 3B) illustrated that respondents placed greater importance of operational risks—such as safety, accuracy, and loss of human control—than on the

procurement and maintenance costs of autonomous systems or their potential to be organizationally disruptive within the ADF.

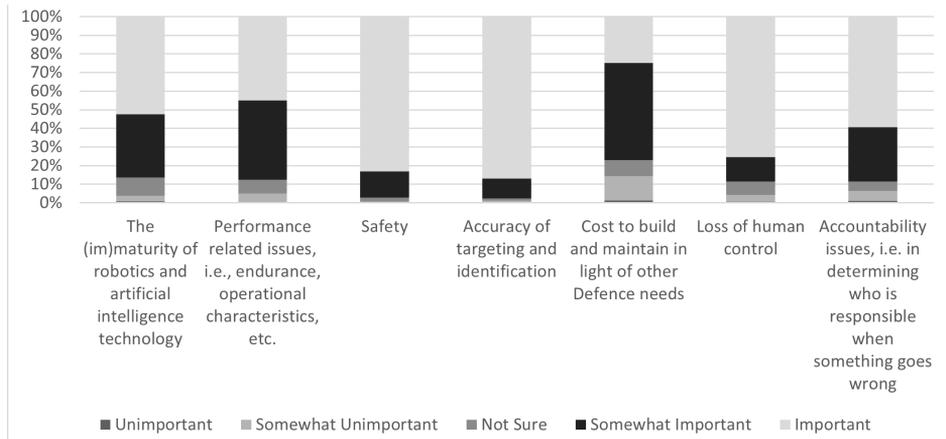


Figure 3A. Importance of perceived risks of AWS

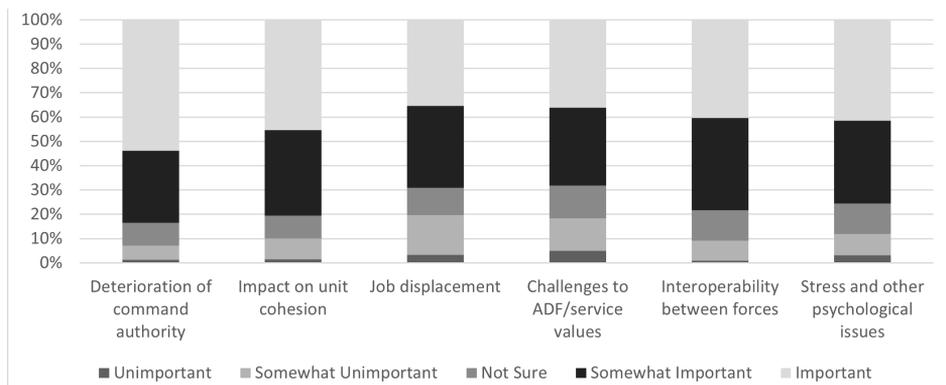


Figure 3B. Importance of perceived risks of AWS

The risk perception data supported a hypothesis that respondents would place greater importance on the potential consequences of removing a weapon system from their direct control. While all identified risks were considered important or somewhat important by most respondents, potential safety and accuracy concerns were immediate outliers. Less than 2 percent of respondents considered these two variables as unimportant or somewhat important, and the number that were unsure was also negligible. Instead, we see that 83 percent of respondents placed high importance on safety, and over 86 percent did so for the accuracy of targeting and identification. Breaking down these figures by service branch reveals that Army officer cadets were more likely to deem both factors as important than their colleagues, who rated them as “somewhat important” at a compensatory rate. The rationale for these allocations is immediately apparent when we consider that

these officer cadets would be asked to deploy alongside autonomous systems in complex land-based battlespaces, potentially in a counterinsurgency or hybrid warfare context, and that they would already be cognizant of their responsibility to ensure the safety of their soldiers while abiding by the Laws of Armed Conflict.

Building on that thought, as future officers, these respondents were preparing for their first command, for example, an infantry platoon, air defense unit, or an artillery battery in the case of Army officer cadets. It, therefore, makes sense that these respondents would also be concerned by potential accountability issues and loss of human control. However, the distinction between these risks is also worth noting, while 75.5 percent listed the latter as important and 13 percent as somewhat important, only 59.4 percent considered accountability issues as important, with 29.1 percent only considering this risk as somewhat important. Interestingly, 7.5 percent of Air Force officer cadets deemed accountability issues as somewhat unimportant, compared to 2.8 percent of Navy midshipmen and 5.2 percent of Army officer cadets. Determining why more respondents deemed accountability issues as less important as the loss of human control would be a valuable avenue for future research; however, on this data it is possible to contend that more respondents were concerned by the potential for autonomous systems to go rogue, so to speak, than by questions of military accountability (which as officers they must already consider).

Finally, on this aspect of their role as future defense leaders, it is interesting to note that the potential for autonomous systems to deteriorate command authority and impact on unit cohesion were only deemed important by 53.8 percent and 45.4 percent of respondents respectively, and just more than 9 percent were uncertain in both cases. Given the prevalence of concepts for incorporating AI into command-and-control processes across multiple militaries, this suggests that the future generation of ADF officers (who will be charged with incorporating and operating alongside such systems within operational command environments) would benefit from additional training, simulation, and war-gaming exercises to improve their understanding of the potential impacts and risks of integrating autonomous systems in the operational command cycle.

As with the benefits question, this data illustrates that these respondents placed less importance on the cost to build and maintain autonomous systems and job displacement, what is distinct about this risk evaluation is that less importance, particularly among Air Force officer cadets, was placed on potential challenges to ADF/service values and psychological impacts. There is a great deal of literature about moral and psychological injury from serving in conflict and an emerging body examining why there is such a high prevalence among drone pilots. It is, therefore, concerning that these risks were considered unimportant or somewhat

important by 18.4 percent and 11.8 percent of respondents, respectively. In fact, the impact of autonomous systems on service values was considered unimportant at the highest rate of any identified risk and second-highest as somewhat unimportant (behind job displacement). Furthermore, approximately 13 percent of respondents indicated that they were uncertain how to classify these risks in relation to autonomous systems. This is indicative of a potential lack of understanding of the ethical, moral, and psychological aspects of deploying in MUM-Ts among these future defense leaders that would need to be addressed prior to widespread integration of these technologies into the future force.

Discussion

Although prior literature has engaged directly with the importance of many of these perceived risks and benefits, these studies have generally been conceptual. At the time of writing, this is the only study to present the risks and benefits of potentially lethal robots to the officers and midshipmen who will be responsible for the safe and effective operation of MUM-Ts. Considering this list of perceived factors, both positive and negative, through the lens of the intended end user revealed three core takeaways that could inform future defense doctrinal development and procurement.

The first core takeaway from this study was that there is a clear difference between the perceptions of this cohort and ADF leadership in terms of how vital the reduced development, procurement, and maintenance costs of autonomous systems are as a potential benefit over low-mass manned platforms. Reduced operational costs are regularly touted as a core factor in favor of pursuing increasingly autonomous systems.¹ One would, therefore, expect that this would be reflected in the views of the officer cadets and midshipmen. Instead, this study found that comparatively few respondents considered either cost or the potential for autonomous systems to disrupt traditional job roles as important factors in determining whether they would be willing to deploy as part of a MUM-T. Therefore, while the resource requirements to develop, procure, and deploy increasingly autonomous unmanned systems is important for defense planners, it is unlikely to be a useful focus for internal efforts to acclimatize soldiers to battlefield robots.

Second, this cohort indicated that the most influential factors in determining willingness to deploy with autonomous systems are their perceived safety, accuracy, and reliability. While the importance of trust in autonomous systems is well-documented,² this study suggests that the ADF should integrate trust-building and autonomous system acclimatization exercises directly into the Academy Military Education and Training curriculum. Given the noted response variance based on parent service branch, an alternative could be to integrate such training

into the Single Service Training components. This would have the added benefit of also accommodating non-ADFA officer cadets and midshipmen. Beyond the impact of such training on the junior officers themselves, it is also worth considering the importance of addressing the concerns highlighted in this study for the integration of autonomous systems into the core combat units of the ADF.

Prevailing wisdom holds that small-unit combat teams only work when the soldiers, sailors, or airmen trust their comrades and leaders, understand their role intimately, and are able to react to changing battlefield conditions in a consistent manner even under intense stress.³ The results of this study reflect that effective trust building and acclimatization at the small unit-level prior to combat deployment is vital and highlights the issue of junior enlisted soldiers being influenced by the views of their leaders (principally these officers, although also noncommissioned officers) toward unmanned platforms. If, for example, the lieutenant commanding an Australian Army rifle platoon is unwilling to deploy alongside a potentially lethal unmanned system that can use force based on preprogrammed criteria,⁴ it is unlikely that their enlisted soldiers are going to be disposed to trust that platform in combat. Without that trust, the unit is, quite understandably, likely to ignore, minimize, or leave behind that piece of equipment regardless of doctrinal guidance.

Taking a step back from the tactical level, addressing the concerns raised by these officer cadets would also be a useful step toward improving the capacity of the ADF to build and maintain a capability edge in autonomous systems through a more effective, bottom-up innovation and diffusion cycle. Prior studies have demonstrated that bottom-up participation is a vital component of successful military innovation.⁵ The development of the Innovation and eXperimentation Group (IXG) is an apparent attempt to jump-start bottom-up innovation and experimentation in the Australian Army.⁶ While current officers commanding at the company and battalion levels are influential supporters of such efforts, for the IXG to be truly useful, it will require that junior officers take the initiative to experiment with the unmanned or autonomous systems under their command. The most effective way to equip junior officers for success in this endeavor would be to incorporate tailored war games and exercises into their initial training to both acclimatize emerging leaders to autonomous systems and to encourage tactical and operational experimentation once they reach their first command.

Finally, from an ethical standpoint, this study raises both positive and concerning implications for how junior military leaders perceive the impacts of autonomous systems on the battlespace. Beginning with the positive results, reduction of harm to civilians, ADF personnel and allied contingents were almost universally considered to be important factors affecting the respondent's willingness to de-

ploy alongside autonomous systems. There is also an immediately clear link here to the importance that was placed on the safety, accuracy, and reliability of autonomous systems. The argument that autonomous systems could reduce the potential of harm to friendly forces and civilians is similar to the justifications for the use of prior military technologies such as precision-guided munitions and armed remote-operated UAVs. Furthermore, these results also reflect the Australian Army's *Robotic and Autonomous Systems Strategy*, the goals of which included using increasingly autonomous systems to enhance the capabilities of the soldier and reduce their physical and cognitive load, to augment their decision making, and to replace manned platforms in specific roles.⁷ Overall, these results suggest that future defense leaders will be amenable to arguments that autonomous and AI-enabled systems will allow for far more accurate targeting; remove ADF personnel from dull, dirty, or dangerous roles; and limit their exposure to combat.

It is, however, concerning that respondents placed a lower importance on adverse outcomes, such as the potential for autonomous systems to affect unit cohesion, to inflict additional stress or psychological damage, or to conflict with the values of the ADF. Given the emerging research on the rate of psychological injury among drone operators in the United States,⁸ it would be valuable for the ADF to consider how the use of potentially lethal robots interacts with its values and how officers are taught ethical and lawful battlefield operations. While the advent of AWS may yet remove human soldiers from elements of warfare, we must be careful that the reduction in physical risk is not attendant with exposing soldiers, sailors, and airmen to additional risk of moral or psychological injury.

Recommendations for Further Research

This article raises four interesting avenues for additional research. The first is to conduct a follow-on study focused on noncommissioned officers (NCO) and long-term enlisted soldiers. This data would be a valuable analytical companion to this piece because it is these experienced soldiers who would advise junior officers in combat. Understanding how NCOs perceive the risks and benefits of autonomous systems would also be valuable from the perspective of norm generation and training because, as the senior soldiers in a given unit, they would have a significant socializing influence upon the tactical use of autonomous systems.

Similarly, the second line of future research would be to conduct a qualitative follow-up study with a representative sample of the original respondents to contextualize and further explore the implications raised in this article. Companion interviews or focus groups would inform a more detailed understanding of the link between these risk-benefit perceptions and willingness to deploy alongside autonomous systems in a manner that could inform the creation of targeted train-

ing or identify design factors that should be prioritized in first-generation autonomous systems. Finally, this would allow the researchers to undertake a more direct comparative analysis of each potential risk or benefit, which could inform far more specific recommendations for the ADF.

The third avenue for future research would be to refine its focus by both segregating the respondents on the basis of service branch and referring directly to capabilities and platforms that have been identified by their respective services as priorities for integrating autonomy. This would more clearly indicate the extent to which the equipment, culture, and battlefield function of the respondent's service branches influence their perception of the risks and benefits of autonomous systems and whether this explains the level of service branch difference that we saw in this study.

Finally, consider that this cohort will be increasingly unlikely to directly employ physical platforms on the frontlines as their careers progress and autonomous systems proliferate and diffuse. Therefore, the fourth avenue for future research would be to analyze whether these perceptions among junior military officers change when the autonomous system is integrated into their command-and-control processes, such as with an AI-enabled digital assistant for collating and prioritizing incoming signals intelligence for a battalion command post.

Conclusion

In conclusion, this article has challenged the assumption that junior leaders are inherently open to the use of autonomous systems and instead demonstrated that a significant majority would be unwilling to deploy alongside fully autonomous LAWS. This article has demonstrated that comparative willingness to deploy in MUM-Ts among this cohort is influenced by a range of concerns and incentives; however, it has also demonstrated that allowing a robot to use lethal force retains a discursive weight that influences a significant minority to claim that they would be uncomfortable deploying alongside robots that have comparable operational independence to systems that are already in use by the ADF.

This article identified that the most important factors influencing a respondent's willingness to deploy in a MUM-T are the perceived safety, accuracy, and reliability of the autonomous system and that the potential to reduce harm to civilians, allied forces, and ADF personnel are the most persuasive benefits. Contrastingly, this data suggests that the resource efficiencies of autonomous systems and their potential to disrupt the defense workforce are significantly less influential upon their position than it is for strategic planners. Finally, this study highlighted a concerning lack of emphasis on the part of these respondents toward the

potential negative emotional and psychological impacts of deploying a robotic weapon system under their responsibility, if not control.

Overall, this article makes two core recommendations based on the underlying data. The first is that autonomous system acclimatization training should be incorporated at all levels of the officer training process and that small-unit leadership tactics training should incorporate robotic units. This leads into the second recommendation, which is that units at the company level and lower would be well served by undertaking war games and exercises with the purpose of encouraging Army's soldiers, NCOs, and officers to experiment and innovate with autonomous systems. Where suitable platforms do not exist or are not readily available, units should be encouraged to run tabletop or proxied exercises for this purpose.

The ADF will only be able to secure and maintain a capability edge in the future if we encourage all elements of the military to experiment and become comfortable with autonomous and AI-enabled systems because it is this bottom-up, constant experimentation that will keep the military innovating with sufficient speed and agility to regularly reestablish its regional, comparative dominance in the deployment of autonomous systems. ★

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Notes

1. Austin Wyatt and Jai Galliot, "Closing the Capability Gap: Asean Military Modernization During the Dawn of Autonomous Weapon Systems," *Asian Security* 16, no. 1 (2020): 53–72.

2. Roff and Danks, "'Trust but Verify'."

3. Roff and Danks, "'Trust but Verify'."

4. Such a system was covered under Scenario Three, in which 21.4 percent of Army Officer Cadets were somewhat unwilling, 14 percent were unwilling, and 16.4 percent were unsure. This means that 189 of 365 (almost 52 percent) of these future Army officers expressed discomfort at the prospect of deploying as part of a MUM-T that included such a system.

5. Adam Grissom, "The Future of Military Innovation Studies," *Journal of Strategic Studies* 29, no. 5 (2006): 905–34.

6. Chief of Army, *Army in Motion: Aide for Army's Teams* (Canberra: Australian Army, 2019), <https://www.army.gov.au/>.
7. Robin Smith, *Robotic & Autonomous Systems Strategy* (Canberra: Australian Army, October 2018), <https://researchcentre.army.gov.au/>.
8. Robert Sparrow, "Drones, Courage, and Military Culture," in *Routledge Handbook of Military Ethics*, ed. George Lucas (Oxon: Routledge, 2015).

India and the Quadrilateral Forum as a Means of US Deterrence in the Indo-Pacific

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Abstract

In the Indo-Pacific, China is waging a well-orchestrated campaign to displace US hegemony and secure a favorable balance of power. Driven by ardent nationalistic goals, the Chinese Communist Party is silencing political outliers and challenging the boundaries of international sovereignty. The first half of this article outlines Chinese political ambitions and domestic civil rights violations levied in pursuit of the government's agenda. It then addresses how Chinese territorialism in the South China Sea has undermined the utility of bilateral US strategic partnerships. The second half of the article describes the threat China poses to India's national security and why the Indian Air Force is particularly unprepared to meet this challenge. The article concludes by suggesting a quadrilateral treaty alliance between the United States, India, Japan, and Australia is needed to prevent further Chinese adventurism and preserve regional stability.

China's Two Centenaries

In 2012, Pres. Xi Jinping assumed control of the People's Republic of China (PRC) and began a series of initiatives to improve his country's welfare. His "China Dream" program stresses nationalism, individual ethics, and two landmark goals known as the Two Centenaries. The First Centenary Goal is to double the 2010 per capita income figures by 2021, the 100th anniversary of the Chinese Communist Party (CCP). The Second Centenary Goal is more ambiguous. It describes a "strong, democratic, civilized, harmonious, and modern socialist country" by 2049, marking the 100-year anniversary of the PRC.¹

The national unification strategy girding this ambition has translated into attacks on ethnic minorities and oppression of political dissenters. In June 2020, the Associated Press reported on China's draconian measures to curb its Uighur population in the northwest autonomous region of Xinjiang. From 2015 to 2018, childbirths in the Muslim-dominated prefectures of Hotan and Kashgar declined 60 percent following state-mandated sterilizations and abortions backed by the threat of mass incarceration.² A 2017 CCP memo leaked to the International Consortium of Investigative Journalists contained detailed descriptions of the

harsh practices inside “reeducation camps,” where millions of Uighurs are being held without trial.³ However, despite the damning evidence of cultural genocide, the international community has remained markedly silent.⁴

Two thousand miles to the east, in Hong Kong, the CCP has summarily put an end to antigovernment demonstrations, which have plagued the party since mid-2019. The protests emerged after Beijing announced plans to enforce criminal extradition to mainland China, where the courts are widely viewed as corrupt. On 30 June 2020, Beijing passed a new national security law, effectively ending Hong Kong’s legal autonomy under the One Country, Two Systems provision of the British handover in 1997.⁵ The bill criminalizes secession, subversion of state power, terrorism and collusion with foreign entities, each carrying up to a life sentence. It also establishes a national security committee with extraterritorial authority, allowing the CCP to prosecute foreign nationals and media correspondents.⁶

Plight of Taiwan

The sweeping language and jurisdiction of the national security law heightened concerns in Taiwan, where the CCP has accused Taiwanese president Tsai Ing-Wen of leading a separatist plot and threatened military action.⁷ During the week of 9–16 June, the People’s Liberation Army Air Force violated Taiwan’s air defense identification zone (ADIZ) three separate times. The ostensible reminders of Beijing’s ability to act with impunity immediately preceded President Tsai’s video speech to the Copenhagen Democracy Summit on 19 June, less than two weeks before the law took effect.⁸

Although the immediate risk of military escalation with Taiwan remains low, Chinese general Li Zuocheng, Chief of the Joint Staff Department, considers it a viable option. In May 2020, Li told Beijing’s Great Hall of the People, “if the possibility for peaceful reunification is lost, the people’s armed forces will, with the whole nation, including the people of Taiwan, take all necessary steps to resolutely smash any separatist plots or actions.” The general’s comments were underscored by Li Zhanshu, head of China’s Parliament, who added, “we warn Taiwan’s pro-independence and separatist forces sternly, the path of Taiwan independence leads to a dead end; any challenge to this law will be severely punished.”⁹

The plight of Taiwan is problematic because its status as an independent state is ambiguous according to the international law of statehood.¹⁰ Only 15 countries, mostly from South America and the Caribbean, have formal diplomatic ties with Taipei, which consequently isolates those countries from Beijing.¹¹ Taiwan has been self-governing since Japan relinquished control in 1952, but the United Nations and even the United States, whose credibility in the Indo-Pacific is strongly connected to Taiwan’s democratic status, have not officially recognized its govern-

ment. Furthermore, it is difficult to assess how far Washington would go to protect the small island nation from annexation. Taiwan's tangible value to the United States is relatively low. In 2018, trade between the two countries amounted to 94.5 billion USD, compared to 737.1 billion USD with mainland China.¹² Taiwan is strategically significant amid other disputes with China in the South China Sea, but the cost of US military intervention would be exorbitant in both dollars and lives. Victory would depend on dubious support from US allies and the rapid consolidation of disjointed treaties.

Current US Partnerships in the Indo-Pacific

The NATO alliance kept the Soviet Union at bay during the Cold War largely because Article 5 of the North Atlantic Treaty states, "an attack on one is an attack on all."¹³ NATO's framers perceived that the only way to contain Soviet expansion was by bringing the full weight of the enterprise to bear through unambiguous mutual defense. Like Europe, Asia is mainly composed of small, vulnerable countries and a few main power brokers. However, there is no overarching pact between US partners. Instead, there exists a complex network of bilateral agreements with narrow preconditions. The applicability of these arrangements to third parties is largely open to interpretation.¹⁴

The United States has five major strategic partners and seven subsidiary partners in the Indo-Pacific. Treaties bind the United States to Australia, Japan, South Korea, the Philippines, and Thailand.¹⁵ Various other strategic partnerships exist with India, Indonesia, Malaysia, Singapore, Taiwan, Vietnam, and most recently Mongolia.¹⁶ While the details of each agreement are beyond the scope of this article, the overlapping, albeit incongruent challenges each country faces with respect to China suggest a more comprehensive security plan is needed.

Australia

Australia has sided with the United States in every major conflict since World War I. As a member of the Five Eyes intelligence network, composed of the United States, Canada, the United Kingdom, Australia, and New Zealand, Australia contributes heavily to the US intelligence network and is strategically located between the Indian and Pacific Oceans, along key maritime routes leading to the South China Sea. Most importantly, Australia's military capability continues to grow. Since Pres. Barack Obama reaffirmed America's commitment in a 2011 speech to the Australian Parliament, the Aussies have responded in kind by raising defense spending to two percent of gross domestic product.¹⁷ This includes the purchase of F-35s and plans to acquire 12 new submarines with US combat systems.¹⁸

Alternatively, the 1951 Australia, New Zealand and United States Security Treaty (ANZUS) constitutes a political trap. Aside from the obvious military danger, China has been Australia's premier trading partner for the past decade and accounts for more than 32 percent of its exports.¹⁹ Deep political and military ties with the United States make it a belligerent in almost every case, extending throughout the Indo-Pacific and thousands of miles above the earth. In the opening salvo of a Taiwan war game in 2010, simulated Chinese actors took down the Australia-US joint satellite architecture. The indirect attack incapacitated radar and communications networks, enabling China to take Taiwan virtually unopposed. The hypothetical outcome was a fait accompli sealed by a lack of commitment from other US partners. Despite the historic animosity with mainland China that has made Taiwan a classic case study, other territorial disputes with China have emerged that raise similar concerns and reinforce the vainness of a bilateral response.²⁰

Japan and South Korea

In 1947, Chinese cartographers drew a dash-line map, which self-ascribed ownership of the South China Sea and its islands based on historic fishing territory. Though the map has undergone several revisions, it remains highly contentious as a legal justification for Chinese sovereignty.²¹ Japan has administered the Senkaku Islands between Okinawa and Taiwan since 1972. However, in 2013, China extended its ADIZ over the Senkaku Islands, demanding control of the islands by virtue of inherent right.²² In August 2016, China dispatched 230 fishing vessels escorted by seven coast guard ships to the islands, where it had already deployed paramilitary forces to substantiate its propriety.²³ Chinese government ships continue to antagonize the Japanese Coast Guard. In 2020, encounters near the Senkaku Islands occurred for 67 straight days beginning in mid-April, fueling concerns that the United States may be forced to fulfill its mutual defense treaty. The 1960 agreement provides explicit protection in exchange for military basing rights.²⁴

Maritime encounters are not the only risk. Emboldened by rapid advances in aircraft and cruise missile technology, China is also increasing air patrols over the Sea of Japan, exploiting political gaps between Japan and other US allies. On 23 June 2019, two Chinese H-6 bombers, accompanied by two Russian Tu-95 bombers and a Russian A-50 surveillance aircraft, conducted a combined operation through the overlapping ADIZ between Japan and South Korea. South Korean fighters responded by firing 360 warning shots at the Russian A-50, while tactfully avoiding the Chinese bombers.²⁵

This unilateral decision highlighted the difficult relationship between the two US allies, which dates back to the seventh century and involves multiple Japanese

invasions, Korean annexation, and the use of Korean forced labor in World War II. The Korean Supreme Court's 2018 demand for reparations, combined with the A-50 incident, almost caused Japan and Korea to terminate their intelligence-sharing agreement in late 2019, abandoning the decision only after US intervention.²⁶ The problem goes deeper for the United States. Like most Asian countries, South Korea is bound to China by hundreds of billions of dollars in economic investment. Seoul also relies on Beijing to curb North Korean attacks like the sinking of the ROKS *Cheonan* and the artillery barrage on Yeonpyeong in 2010. Invariably caught between US and Chinese agendas, South Korea has been mostly ambivalent about Chinese expansionism in the South China Sea.²⁷

Philippines

The South China Sea contains an estimated 11 billion barrels of untapped oil and 190 trillion cubic feet of natural gas, along with rich fisheries. It is also a major economic thoroughfare for approximately 3.3 trillion USD in annual commerce. The South China Sea's importance as a trade conduit and its bounty of natural resources have caused international competition for centuries, but the contest has gained increasing attention since the 1970s.²⁸ One of the most frequently disputed areas is a sparse chain of small rocks and reef structure known as the Spratly Islands. The Spratlys are scattered across 158,000 square miles of open ocean and account for just two square miles of total land mass, situated equally between China, Vietnam, Brunei, Taiwan, Malaysia, and the Philippines.²⁹

China's reliance on fisheries near the Spratly Islands as an alternative to its own heavily polluted coastal waters is especially concerning for the Philippines. There are 100–150 fishing boats working every reef China controls, permanently destroying large swaths of coral and fish habitat. By comparison, the Great Barrier Reef averages less than half a boat per reef.³⁰ Chinese fishermen and warships also routinely disregard Philippine sovereignty. In 2011, a vessel self-identified as "Chinese Warship 560" fired warning shots at three Philippine fishing boats operating 60 miles inside their own exclusive economic zone, forcing one to cut its anchor to flee.³¹ Then, after a tense naval standoff spanning most of 2012, China seized de facto control of the Philippines' Scarborough Shoal, 200 miles northwest of Manila.³² As a result, the Philippines appealed to the Permanent Court of Arbitration (PCA) in 2013, arguing that China's actions had violated the United Nations Convention on the Law of the Sea.³³

The PCA tribunal ruled in the Philippines' favor in 2016. Five judges determined that because the Spratly Islands cannot independently support human communities or economic activity, they cannot have their own exclusive economic zones.³⁴ They also invalidated China's dash-line map and admonished China for

harvesting endangered sea life and destroying fragile marine ecosystems inside of Philippine maritime boundaries. China vehemently denied the court's legitimacy and used the three years preceding the injunction to expand its artificial island campaign, fortifying its military foothold.³⁵

China has dredged and deposited enough sand in the Spratly Islands for thousands of acres of manmade territory. One of their most alarming accomplishments was the Fiery Cross Reef project, where Chinese engineers constructed a 10,000-foot runway on an island previously consisting of shallow coral. The robust substructure can support mobile missile launchers and almost any type of military aircraft.³⁶ It also conveniently extends China's radio coverage and combat radius to the contested Scarborough Shoal.³⁷ Though China maintains the runway was built to support search-and-rescue operations, most military strategists are unconvinced.³⁸ The addition of naval ports to Fiery Cross will enable surface vessels and submarines to exert total control over the South China Sea.³⁹ As China's military strength grows, Beijing is also compelling other countries to rethink their relationships with the United States as a source of protection, including US treaty partners.⁴⁰

Thailand

The US treaty with Thailand dates back to 1833. During the Cold War, Thailand served as an important democratic hedge against the communist wave in Southeast Asia, prompting the United States to extensively train and equip the Thai military. This bond continued into 1982, when the United States and Thailand began cosponsoring one of the longest-running international military exercises: Cobra Gold.⁴¹ Today the exercise includes 27 other countries and focuses on military cooperation during disaster relief operations.⁴² Thailand's longstanding relationship with the United States led to its designation as a "major non-NATO ally" in 2003 and the creation of a Thai-US Defense Alliance in 2012.⁴³ Despite these seemingly impressive accolades, political turmoil and growing Chinese influence cast doubt on the alliance's ultimate dependability.

Military coups in 2006 and 2014 deposed elected officials and dissolved the Thai constitution.⁴⁴ The ensuing junta's systemic corruption drove away foreign investment, resulting in a 57-percent drop between 2010 and 2019.⁴⁵ Despite the 8.4 billion USD loss in revenue, including 4.7 million USD in suspended US assistance, the Royal Thai Military's budget surged eight percent year after year.⁴⁶ As the United States withdrew support, citing concerns over human rights, China stepped into the void.⁴⁷ A 1 billion USD contract for three Yuan-class submarines granted China access to Thailand's Sattahip Naval Yard, where US Navy ships now contend with Chinese intelligence gathering.⁴⁸ The Sino-Thai partnership

has continued to expand, and today Thailand conducts more bilateral military exercises with China than any other country.⁴⁹ Despite general elections in 2019 that officially restored civilian rule and a new Joint Vision Statement with the United States in 2020, Thailand's reliance on China is undoubtedly growing at the United States' expense.⁵⁰

India's Need for the United States

The United States' present security arrangements in the Indo-Pacific require deep US commitments that are increasingly difficult to fulfill against the rise of China. Forcing China to heed basic international boundaries, much less address internal civil rights abuses, will require a more robust military and economic alliance. Owing to this need and its standing as the world's largest democracy, India is central to any plans for restructuring US security strategy in the Indo-Pacific. With 1.2 billion people and a 67 billion USD defense budget, India must play a prominent role if unsanctioned Chinese expansion is to be stopped. New Delhi remains averse to such political entanglements, but India is in an equally difficult position with China and is unlikely to succeed on its own. One of India's problems is its lack of a modern air force to defend airspace along its contested borders with China and Pakistan. US defense contractors are uniquely suited to provide this capability but require cooperation from the Indian government, which has resisted thus far. However, as India's complex border situation evolves, it could provide impetus for a treaty partnership with the United States and other like-minded partners.

New Delhi came to the forefront of US diplomacy in 1998 following India's successful nuclear tests. By refusing to sign the Non-Proliferation and Comprehensive Nuclear Test-Ban Treaties, New Delhi solidified its position of strategic non-alignment, which had successfully kept it out of the Cold War.⁵¹ Since then, four US presidents have worked to change India's stance with overtures from Washington, beginning in earnest under President Obama.⁵² As part of his rebalancing effort to shift US strategic focus away from the Middle East and toward East Asia, Obama met with Prime Minister Narendra Modi several times, beginning in 2014. Before leaving office, Obama officially recognized India as a "major defense partner," a title the Trump administration has repeatedly upheld.⁵³ Then, in 2018, Secretary of Defense James Mattis notably changed the name of US Pacific Command to US Indo-Pacific Command amid deteriorating Sino-Indian relations.⁵⁴

Disputed Borders

The disputed India-China border made news on 15 June 2020, when 20 Indian soldiers were killed in a firefight with the People's Liberation Army (PLA) in the

Union Territory of Ladakh. A spokesman for India's foreign ministry cited China's failure to abide by government agreements, while Beijing blamed the killings on illegal incursions by Indian troops. Chinese and Indian border patrols have faced off in the past, even engaging in fistfights, but this confrontation marked the first case of fatalities since 1967, five years after the Sino-Indian War. While this seemed like an isolated tragedy, India's contested borders are part of a much larger contextual issue that involves both China and India's historic rival, Pakistan.⁵⁵

Four hundred miles southwest of Ladakh, the Indian military is still heavily engaged in Kashmir. This ethnically diverse Himalayan region has been divided along a cease-fire line called the Line of Control (LOC) since the Indo-Pakistani War of 1947-1948. Kashmir is a persistent hotbed of terrorist activity, as Islamic militants continue fighting for unification of the Muslim-dominated region, seeking to have it under Pakistani rule.⁵⁶ India says it killed 127 terrorists in the first half of 2020 alone, and despite calls for cooperation, relations between New Delhi and Islamabad are decidedly strained.⁵⁷ On the same day as the fire in Ladakh, Indian forces fought a 15-hour gun battle in Kashmir, killing two terrorists and seizing weapons and explosives stockpiles. The increased tension is partially attributable to India's recent decision to revoke Article 370 of its constitution and deploy thousands of additional troops to the LOC. The ruling Bharatiya Janata Party government, which ascribes to a pro-Hindu and nationalist agenda, issued the pronouncement in August 2019, withdrawing Kashmir's autonomous status following a deadly series of cross-border attacks earlier that year.⁵⁸

Indian Air Force Setbacks

On 14 February 2019, the Islamic militant group Jaish-e-Mohammad (JeM) car bombed an Indian police convoy, killing 40. India responded on 26 February by launching Mirage 2000s to strike what Indian media sources described as terrorist training camps. India claimed the mission killed 350 militants, but Pakistani officials stated that four bombs had landed in an empty field. When reporters arrived on scene, local villagers also denied any casualties but pointed to several empty bomb craters one mile east of a JeM-run madrassa. The presumed target, which had long since been abandoned, remained perfectly intact.⁵⁹

The IAF suffered another embarrassment the following day when Pakistani F-16s conducting retaliatory strikes shot down Wing Commander Abhinandan Varthaman's outdated MiG-21. Varthaman ejected safely but was captured and used for propaganda prior to his release 60 hours later.⁶⁰ These back-to-back tactical failures reflect the IAF's ongoing struggle to modernize and expand beyond its traditional army support role.⁶¹ The Ministry of Defense's unsuccessful bid to acquire 126 French Rafales in 2012 has hampered progress. The 30 billion USD

contract, five years in the making, fell through in mid-2015 over disputes with manufacturer Dassault about local production liability.⁶² A new deal was inked in September 2016 for 36 prebuilt Rafales, which will not finish arriving until 2022. This leaves the IAF still waiting for what amounts to a 70-percent reduction in advanced fighter capability as it contends with formidable opponents in both Pakistan and China.⁶³

China–Pakistan Ties

China and Pakistan have maintained strong diplomatic relations since Pakistan became one of the first countries to recognize the PRC in 1950.⁶⁴ Although the two never entered into a formal military alliance, they have benefited greatly from mutual assistance in acquiring military technology. China fast-tracked Pakistan's nuclear program during the 1990s, then provided ballistic missiles that directly threatened India. As Pakistan's leading defense supplier, China accounts for 39 percent of purchases, followed by the United States with 24 percent. The latter arrangement allows Pakistan to funnel US military equipment to China for reverse-engineering.⁶⁵

Diplomatically, Pakistan serves as ambassador between China and the Muslim world. This has proven especially beneficial with regard to the Uighurs in Xinjiang. Despite China's oppression of this Muslim population, none of the major terrorist organizations have retaliated. Their muted response is likely because the Pakistani Inter-Service Intelligence directorate tacitly oversees terrorist operations through proxies like the Taliban and the Haqqani Network.⁶⁶ In exchange, China offers political assistance by defending Pakistan's claim to Kashmir through its permanent seat on the UN Security Council.⁶⁷

China–Pakistan Economic Corridor

Since 2011, China's ulterior motive in Kashmir has been the China–Pakistan Economic Corridor (CPEC), a 62 billion USD energy and transportation project.⁶⁸ China's CPEC investment increased by 46 billion USD in 2015, with 12 billion USD earmarked for constructing a railroad through Kashmir between the Pakistani port of Gwadar and Xinjiang Province. Once completed, it will connect Chinese exports bound for Africa directly to the Indian Ocean and lay the groundwork for future projects such as a Gwadar–Xinjiang oil pipeline.⁶⁹

In 2017, China surpassed the United States as the world's largest oil importer. Eighty percent of this oil comes from the Middle East or East Africa via tanker ship and travels circuitously across the Indian Ocean, through the Malacca Strait, and into the South China Sea.⁷⁰ The convergence of oil, Xinjiang, and the South

China Sea is uncoincidental. China's dependence on maritime commerce is a strategic vulnerability that Beijing is diligently working to mitigate. In 2013, President Xi announced the landmark Belt and Road Initiative (BRI), which encompasses the CPEC and quietly extends China's span of control under the pretext of trade development between Asia, Europe, and Africa. The BRI will produce many positive outcomes such as greater connectivity, financial integration, and better opportunities for emerging markets.⁷¹ It will also join China with other authoritarian governments that share common interests and mutual rivals.⁷²

Lines of communication through Pakistan will connect China and Iran. The two governments are already negotiating a 25-year strategic partnership valued at 400 billion USD that gives Iran much-needed relief from US sanctions. Additionally, Tehran will receive more Chinese intelligence to support Iranian operations in Iraq and Syria.⁷³ China will in turn be able to use Iranian ports, railroads, and telecommunications systems. Beijing will also be the beneficiary of heavily discounted Iranian oil sales that will soon no longer depend on sea lanes through natural chokepoints like the Malacca Strait. The long-term value of the BRI, and the CPEC in particular, make thwarting Indian control of Kashmir an important objective for China.⁷⁴

Airpower in Tibet

To distract India from Pakistan, China is leveraging flashpoints along its own shared border. In 2017, India deployed troops to Doklam, a contested tri-border junction with China and Bhutan. Their mission was to halt Chinese construction of a road near the Doka La pass. After a tense standoff, China suspended construction, but the PLA remained in place. Although India declared victory and withdrew, the temporary return to the status quo may be short-lived.⁷⁵ In April 2020, China completed airfield improvements to militarize the Ngari Gunsar Airport in nearby Tibet and immediately deployed multirole J-11 and J-16 fighter jets.⁷⁶

The types of fighters at Ngari Gunsar are significant.⁷⁷ On the surface, these models provide parity with India's top fighter, the Su-30MKI, without appearing overly aggressive. China has far superior stealth platforms such as the J-20 stationed near Taiwan, but repositioning such assets in Tibet could signal an intent to escalate, detracting from China's careful political calculations.⁷⁸ Instead, China will rely on superior missile technology in the PL-15 air-to-air missile, which uses active radar detection and can strike targets beyond 185 miles. The aircraft themselves may be less menacing, but China maintains a tremendous edge over the R-77 medium-range, active radar homing air-to-air missile used by India.⁷⁹ As it stands, the IAF is at an extreme disadvantage with China and would likely struggle to protect Indian ground elements if a conflict were to arise. Overcoming

this issue will require more sophisticated aircraft and missile technology currently hampered by India's cumbersome defense acquisition process.

India's Need for Advanced Fighters

In 2012, the IAF overhauled its doctrine to focus on local power projection. It also developed a new defense plan that called for expanding the IAF from 28 to 40 fighter squadrons specifically to address fighting a two-front war with China and Pakistan.⁸⁰ The plan incorporated lessons learned from the 1999 Kargil War with Pakistan, which proved the IAF's effectiveness as a means of nonnuclear deterrence and highlighted its importance in achieving limited strategic objectives.⁸¹ Recognized for its role in recapturing lost territory, the IAF was rewarded in 2001 with over 30 percent of India's 15-year defense spending plan, including money for the ill-fated 30 billion USD Dassault contract.⁸² The bungled Rafale purchase and the addition of several more Su-30MKIs to the fleet is indicative of another IAF problem. Between India's two most capable fighters, the Su-30MKI is a Russian model and the Rafale is French. Each platform requires different training and has its own foreign parts provider, making them expensive and difficult to maintain. The IAF logistics tail is further complicated by British-made Jaguars and the Tejas, an indigenous light combat aircraft.⁸³

Instead of rectifying this issue, India doubled down on the IAF's unorthodox order of battle and spare parts with its most recent acquisitions. In 2019, the Ministry of Defense said it would spend 15 billion USD purchasing 114 new multirole fighters, sparking intense competition among leading defense manufacturers.⁸⁴ However, in June 2020, a 780 million USD order was finalized instead for 21 refurbished Russian MiG-29s and 12 Su-30s, which are too heavy to launch from high-altitude bases near the contested borders.⁸⁵ The Ministry of Defense said it would devote an additional 6 billion USD toward purchasing 83 more Indian-made Tejas but failed to account for the roughly 8 billion USD discrepancy.

The preponderance of the investment into Tejas is of little value to the IAF. The delta-wing body style limits maneuverability and its payload is half that of the Su-30MKI. Furthermore, the Tejas actually costs more than the Su-30MKI, because despite being touted as an indigenous platform, it uses American engines, Israeli sensors, and Russian missiles. These components must be purchased at highly inflated export prices for a total cost of 62.7 million USD per airframe.⁸⁶ As a point of reference, the highly advanced F-35 costs the United States 77.9 million USD per unit, despite its infamous budget overruns during research and development.⁸⁷

Made in India and the F-21

A difficult military procurement process, specifically Prime Minister Modi's "Made in India" policy, further frustrates the IAF's capability to address its acquisition needs. Until 2001, India was completely closed off from foreign direct investment (FDI). It initially opened the defense industry to FDI capped at 26-percent equity to encourage collaboration with Indian manufacturers on indigenous weapons platforms. Failing to attract sufficient interest, the Modi government raised the foreign equity cap to 49 percent in 2014 and all the way to 100 percent in 2016, subject to strict government oversight.⁸⁸ Due to the bureaucratic complexity of the FDI process, the only firm to submit a 100-percent offer was the Naval Group, a French contractor, whose proposal was rejected.⁸⁹ Between 2001 and 2018, India attracted a mere 5.13 million USD in FDI, with no meaningful technological advancements.⁹⁰

One of the rejected proposals from the 2019 multirole fighter competition was from Lockheed Martin, which offered the Indian company Tata Advanced Systems exclusive rights to build a highly upgraded version of the F-16.⁹¹ The new prototype, dubbed the F-21, included an advanced weapons package and was available in 138 mission configurations for maximum versatility. Lockheed agreed to work with other Indian corporations as well. It signed a memorandum of understanding with Bharat Electronics to explore future industrial opportunities and even offered to help Hindustan Aeronautics upgrade the Tejas into a more capable air-to-air platform.⁹² These joint ventures were designed to support Modi's vision and would have allowed the IAF to begin phasing out its multinational procurement system. In addition, the deal was projected to save India 30–40 percent in lifecycle and operational costs compared to other offers.⁹³

The F-21 retains another distinct benefit that New Delhi might yet reconsider as the reality of Chinese aggression unfolds. Incorporation of the F-21 would grant India access to the world's largest fighter ecosystem and increase interoperability with Lockheed's F-16s, F-22s, and F-35s. This could be an important bargaining chip as US and Indian security interests steadily align. Like Japan's FS-X, the F-21 is based on the F-16, which is widely disseminated and has an established logistics system. It is flown by NATO and key regional partners in the Indo-Pacific such as Singapore, Taiwan, Thailand, and South Korea.⁹⁴ The F-21 would also use many of the same components as the F-35, resulting in better integration with fifth-generation fighter technology flown by the United States and Australia. Synchronizing these capabilities could provide a much stronger deterrence to China and discourage escalation as part of a venerated military coalition. Increasing India's military edge and integrating the IAF with other US partners

is critical for establishing a regional security framework that can preserve peace. It is also an important next step in replacing fractured bilateral agreements and the current federated defense model with a more powerful alliance.

From Federated Defense to Quadrilateral Forum

Simply stated, federated defense brings allies and regional partners together to achieve shared security objectives.⁹⁵ As it stands, each US security partner in the Indo-Pacific determines which objectives it will support and must individually weigh the repercussions of upsetting their status quo with China. China's strong economic influence all but ensures there will be no amalgamated response to indirect Chinese aggression. This allows China to tacitly ignore international boundaries while consolidating even greater economic power and surreptitiously growing its 178 billion USD defense budget.⁹⁶ Competing with China's singularly overwhelming regional power projection cannot be achieved bilaterally. To protect individual sovereignty, the United States needs a formal alliance with collectively greater strength vis-à-vis China and the promise of mutual support. One such possibility is a Quadrilateral Security Forum (Quad) between the United States, India, Japan, and Australia.

The Quad concept began with the combined humanitarian response to the 2004 earthquake and tsunami in the Indian Ocean. Navies from all four countries came together to support rescue and recovery missions, leading to conjecture that future cooperation could be leveraged to support freedom of navigation operations. Japan in particular was eager to capitalize on this opportunity. In spring 2005, amid anti-Japanese protests in China, leaders made an unprecedented decision to include India in the East Asian Summit (EAS).⁹⁷ The EAS consists of 18 member countries and is the premier forum for strategic dialogue in the Indo-Pacific. Topics often include counterterrorism, maritime cooperation, and the South China Sea. Combined, EAS countries represent 58 percent of the world's population and 54 percent of global GDP, making India's participation a significant milestone in international affairs.⁹⁸

During his first term as Japanese prime minister, Shinzō Abe strongly advocated for the Quad, first in his book *Toward a Beautiful Country* and again during a trip to New Delhi in 2007. Speaking to the Indian Parliament, Abe described “an arc of freedom and prosperity” across the Indian and Pacific Oceans, backed by a “dynamic coupling” of Quad members. With China as the obvious point of concern, the idea almost reached fruition following the 2007 ASEAN Summit in Manila. Afterward, diplomats from the Quad countries met briefly, enraging Beijing, which levied complaints against each respective government. Concerned about further antagonizing China, Australian prime minister Kevin Rudd with-

drew from the India–US Malabar naval exercise in 2008 and discontinued future quadrilateral talks.⁹⁹

Until recently, the Quad had effectively dissolved. However, recognition that appeasement in the South China Sea has failed and concerns over the BRI have given the concept new life. Encouraged by India’s “Act East” policy, Japan became a permanent participant in Malabar in 2015, the same year it signed agreements for sharing defense technology and other classified information with India. In 2016, Prime Minister Modi visited Japan, declaring a “new era in Japan–India relations,” followed by a vision statement in 2018 reiterating Japan and India’s commitment to freedom in the Indo-Pacific.¹⁰⁰

India’s military relations with Australia have warmed as well. Since 2015, the two have conducted their own biannual exercise called AUSINDEX.¹⁰¹ More recently, in June 2020, India and Australia signed a mutual logistics support agreement allowing them to use each other’s military bases, a significant good faith gesture. The two also elevated their bilateral strategic partnership to a comprehensive strategic partnership, promising to enhance the scope of future military exercises. Most telling is that for the first time since 2007, Australia will once again participate in Malabar in 2020, despite already being threatened with sanctions by China for demanding an investigation into the COVID-19 outbreak.¹⁰²

While a Quadrilateral Alliance would inherently be built around military capabilities, its capacity for reciprocal economic sanctions should not be understated. Quad countries account for over 34 percent of the world’s GDP.¹⁰³ They also represent roughly 21 percent of China’s annual imports and exports. If the Quad were expanded to include South Korea and the Philippines, the latter figure rises to 32 percent.¹⁰⁴ As China earnestly seeks to grow its middle class, collective economic strength is a negotiating tool that could be used to influence Chinese foreign policy as well as domestic politics. While the 2020 National Security Law and China’s inhumane treatment of Uighurs may not constitute acts of war, the international community’s complicity should be rectified.

By remaining disorganized, the United States and its allies play directly into China’s long-term strategic plan. To this end, Washington’s ability to elevate India’s role while forming a determined Indo-Pacific treaty organization will likely signal Asia’s fate. With the world’s largest economy and one of the fastest growing, most sophisticated militaries, China is increasingly capable of imperialistic power projection and extortion. Through military and economic cooperation, the United States and its allies must seek to avoid the precipice of appeasement and protect the bounds of international sovereignty. Failure to impart a clear determination to uphold international laws will breed an unstoppable menace and exact an ever-higher price for peace.

Summary

The rise of China has dramatically altered the global balance of power. China's aggressive stance on domestic politics and territorial disputes leave little evidence to suggest that it will settle for being a benign hegemon. Instead, China will continue to pursue its nationalistic agenda by probing the international community's resolve to stand up to its antagonistic behavior while exploiting weaknesses in US security strategy in the Indo-Pacific. As China manifests its regional military and economic dominance, bilateral US defense partnerships are insufficient for safeguarding the sovereignty of other countries in China's path. A modern IAF and Indian participation in a quadrilateral alliance with the United States, Australia, and Japan provides a key opportunity to deter Chinese aggression and help restore peace and stability in the Indo-Pacific. 🌐

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Penetrating Artificial Intelligence–enhanced Antiaccess/Area Denial

A Challenge for Tomorrow’s Pacific Air Forces

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Abstract

To ensure a free and open Indo-Pacific, the United States Air Force (USAF) must maintain its ability to freely operate in international airspace and project force forward to deter aggression. Future improvements to antiaccess/area-denial (A2/AD) systems will certainly include artificial intelligence (AI). AI is a strategic priority of our adversaries, as it can provide significant benefits for national defense. The USAF must be prepared to tackle these technical challenges to uphold our regional commitments and protect international interests in the Indo-Pacific. Three specific applications relevant to A2/AD are (1) target recognition from multiple fused data sources, (2) improved war gaming with agent-based models, and (3) blockchain-enabled autonomous systems. This article will introduce how these technologies might be integrated into future A2/AD systems and recommend some strategies for addressing and overcoming these challenges.

Strategic Setting

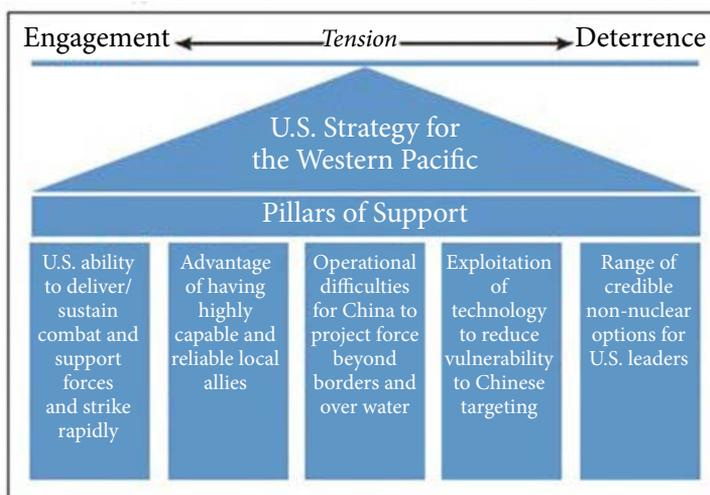
To ensure a free and open Indo-Pacific, the United States must maintain its ability to freely operate in international airspace and project force forward to deter aggression. The Department of the Air Force and Pacific Air Forces (PACAF) play a critical role in keeping the peace in this strategically important region. China, after a long period of hide-and-bide tactics has recently started taking more aggressive moves toward strategic strength, what Chinese Communist Party Chairman Xi Jinping refers to as a new long march.¹ While a force-on-force fight is unlikely, demonstrating both the will and ability to fight and win against a strong adversary is fundamental to preventing China from expanding territorial claims by force.

Bolstered by economic growth and investments in modernization, China’s current stance in the South China Sea is already strong enough to dissuade neighboring countries from objecting too loudly or forcefully rebutting illegal harassment.² However, because China vigorously defends its sovereign interests, conflicts are generally localized where China stands to make strategic gains at very low risk. This strategy appears to rely on China’s emphasis on creating a protective

bubble of antiaccess/area denial (A2/AD), which has been a paramount priority since the mid-1990s.³

The United States has a duty to support Indo-Pacific allies and partners in contesting and deterring Chinese aggression. However, as the People’s Liberation Army (PLA) strengthens its A2/AD posture through advanced weapons, improved data processing, and innovative strategies, China’s self-confidence and determination grow as well. For the US Department of Defense (DOD) to assure regional partners of its commitment and resolve to confront Chinese belligerence, the US military must continue to develop new ways to defeat China’s A2/AD systems.

A 2014 RAND report on US strategy in the Western Pacific proposed five main pillars of support ranging from deterrence to engagement (see fig. 1). This framework emphasizes the requirements for credible military options in the region. Given the PLA’s ongoing modernization efforts, the pillar addressing exploitation of technology to reduce risk to forces will play an increasingly important role in US strategy. Underpinning nearly all strategic priorities in the Indo-Pacific is the need for strong relationships with allies and partners in the region.⁴ The United States acts as a security guarantor for smaller nations who would not, independently, be able to stand firmly against aggressive coercion. Thus, as Michèle Flournoy, former Under Secretary of Defense for Policy, pointed out, “the United States must also prioritize the development, acquisition, and demonstration of those military capabilities essential to credibly deter Beijing’s aggression, deny its ability to rapidly seize territory or create new facts on the ground, and be able to impose significant costs for any act of aggression.”⁵



(Image from Terrence Kelly, et al., *Developing a U.S. Strategy for Dealing with China — Now and into the Future* [Santa Monica, CA: RAND Corporation, 2014], https://www.rand.org/pubs/research_briefs/RB9802.html.)

Figure 1. US strategy for the Western Pacific (RAND)

Chinese Artificial Intelligence Research and Development

Artificial intelligence (AI) has the potential to significantly accelerate the development cycle for new smart, autonomous and networked systems. China's recent emphasis on AI and modernization has attracted attention throughout the DOD and with policy makers and analysts at various levels. The 2017 *New Generation Artificial Intelligence Development Plan* established China's national goal of becoming the world leader in AI by 2030.⁶ China not only sees AI as a key enabler for their future economy but also views it as a core national security technology. AI will play a role in future conflicts. Three specific applications relevant to A2/AD are target recognition from multiple fused data sources, improved war gaming with agent-based models, and autonomous systems.

Numerous state-guided research projects have been established to pursue AI and intelligent robotics (autonomy). Notably, the National Natural Science Foundation of China's (NSF-C) list of AI-related projects in 2017 includes topics such as "cross-domain collaborative multi-modal efficient sensing and enhanced intelligence, perception and behavior for machine understanding . . . in an open environment, . . . and man-machine cooperative hybrid intelligence."⁷ A small sample of NSF-C funded projects undertaken the PLA Air Force researchers is shown in table 1. Overarching themes visible in the projects are improved signal processing, optimization, applied probability, and machine learning. Many of these applications are basic or applied research that could enable future A2/AD networks.

Additionally, in 2018, China's State Administration of Science, Technology and Industry for National Defence published guidance on cutting-edge technology projects. The first major theme was "intelligent detection and identification and autonomous control technology."⁸ More broadly, detection and control technologies should be viewed as enabling technologies for a robust, integrated, networked, and increasingly automated A2/AD system.

Table 1. Selected papers from *Journal of Harbin Institute of Technology* 2018–2019. Affiliation includes "Air Force."

Result	Issue	Title	Affiliations	NSF-C Grant No.
1	2019 (05)	Precession feature extraction of ballistic target based on hybrid-scheme radar network	Air Force Engineering University, Unit 32147 of PLA, Unit 93786 of PLA	61372166, 61501495
2	2019 (05)	Tent chaos and simulated annealing improved moth-flame optimization algorithm	Air Force Engineering University, Northwestern Polytechnical University, Unit 95810 of PLA	61503409

Table 1 (continued)

Result	Issue	Title	Affiliations	NSF-C Grant No.
3	2019 (05)	Latent virus network spreading SEIQRS model and stability analysis	Air Force Engineering University, Unit 95507 of PLA	61573017, 61703420
4	2019 (05)	Modeling and characteristic analysis of clutter for airborne bistatic radar in fixed coordinate system	Air Force Early Warning Academy	51309232
5	2019 (04)	Characteristic functions and effectiveness-of-fit test for uncertain distributions	Air Force Engineering University	71601183, 71571190
6	2019 (04)	Situation assessment for unmanned aerial vehicle air combat based on anti-reasoning rules decision tree	Air Force Engineering University	61601505
7	2019 (04)	A target tracking algorithm for zigzag maneuver target tracking with non-gaussian noises and randomly delayed measurements	Air Force Engineering University, Unit 95910 of PLA	61472441
8	2018 (05)	Ant lion optimization algorithm based on self-adaptive Tent chaos search	Air Force Engineering University	71501184
9	2018 (05)	A low complexity SCL decoding algorithm for polar codes	Air Force Engineering University	61472442
10	2018 (04)	A novel softplus linear unit for deep CNN	Air Force Engineering University	61601499

Threat #1: Target Recognition from Multiple Fused Data Sources

A recent war game simulated an AI-enhanced ground fight where troops were outnumbered three to one by enemy forces. Adding autonomous air and ground sensors allowed troops to smartly detect, target, and engage adversaries (find, fix, finish), realizing an approximate “10–fold increase in combat power.”⁹ This exercise described a small area and simulated command-and-control (C2) AI that is not currently available to the field. However, it does demonstrate the potential benefits of a fully integrated smart sensor and C2 network.

Research emphasis in terms like “cross-domain collaborative multi-modal efficient sensing” and “intelligent detection and identification” imply that China continues efforts to build a connected network of persistent sensors for domain awareness and early warning. Advanced sensors connected to air defense systems supported by advanced fighter aircraft would make penetrating Chinese-controlled airspace a seriously difficult problem.

In addition to improved sensor fusion and detection algorithms, China has also been investing in hardware such as meter-wave radar technology to counter US low-observable aircraft.¹⁰ Traditional stealth technology is less useful against a combination of sensors spanning both acoustic and electromagnetic (visible, in-

frared, microwave, etc.) spectra. These sensors may be found onshore and offshore, may be mobile or fixed, and will be networked together through an integrated communications network. The anticipated intent of these advanced sensors must be to connect them to air defense systems, “which will extend across coastal SAM [surface-to-air] sites on the Chinese mainland, missile batteries on artificial islands in the South China Sea, and better anti-aircraft weapons on Chinese warships.”¹¹ Advanced routing algorithms to minimize risk of detection and engagement will be needed to plan strategic strikes.

Threat #2: Advanced War Games

Advances in game theory, agent-based modeling, and machine learning have led military leaders to imagine a future where computers might devise tactics, plans, and strategy. Spurred on by the success of AI systems in strategy-based games like *Starcraft*,¹² the PLA appears to be committed to investing research time and effort into building increasingly complex war games and models: “The PLA’s objective is to use AI algorithms, machine learning, human-machine teaming, and autonomous systems collaboratively to paralyze its adversaries.”¹³

Research teams at the PLA Army Command College in Nanjing appear to be leading efforts to incorporate advanced modeling techniques into training commanders and building plans. One author published at least eight papers related to combat modeling during 2010–2019 (see table 2). Many examples of recent research focus on multiple agent-based modeling and accelerating the OODA loop (Observe, Orient, Decide, Act) for combat decision making, while others focus on psychological and personality variables for training combat commanders.¹⁴ Computational models can evaluate a wider range of possible combinations of conditions than human planners generally would have time to consider. What machines lack in imagination, they more than make up for with raw processing power. Through expanded models, Chinese strategists look to understand exactly which conditions lead to victory—then on the battlefield, take actions designed specifically to create those same conditions.

If combat models are trained on simulated sensor data to update conditions for agents, these same algorithms could be employed in live combat to suggest tactics and support command decisions in real time: “AI systems could enable military forces to operate faster, more cohesively, and with greater precision and coordination than humans alone can. The result could be to accelerate the pace of battle beyond human decision-making.”¹⁵ If one side is willing to hand over decision control to a machine and the other is not, the machines will gain the advantage of speed. Increased velocity comes at the expense of control. With humans out of the loop, small mistakes can quickly snowball—with catastrophic consequences.

When both sides, seeking only the advantage of speed, trust machines to make combat decisions, the loss of human control is referred to in Chinese circles as a “battlefield singularity.”¹⁶ Ethical principles will need to be followed at every stage in AI development to mitigate the risk posed by losing control of weapon systems.

Table 2. Research publications by Zhu Jiang at the PLA Army Command College in Nanjing

Result	Bibliographic Information
1	Jiang Zhu, Chuanhua Wen, Jun Chen, and Xiangyuan Huang, “A Personality-Based Combat Behavior Modeling Architecture and Methods,” <i>Artificial Intelligence and Robotics Research</i> 8, no. 4 (2019), 248–54.
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Threat #3: Blockchain-enabled Autonomous Swarms

Unmanned autonomous systems (UAS) have increasingly entered discussions about security and asymmetric tactics. Employment of networked small systems can give the user benefits of mass and agility compared to traditional large military equipment. As witnessed in coordinated attacks on Saudi Arabia’s Abqaiq Energy Facility on 14 September 2019,¹⁷ these systems are capable of inflicting outsized damage with extremely low overhead. If integrated into an A2/AD package, UAS could serve as mobile platforms capable of carrying sensors, antennas, cameras, and even weapons.

While traditional UAS are generally quite fragile, easy to disable, confuse, destroy, or hack, integrating blockchain authentication protocols within the network

can address many of these concerns. According to Feng Zebing and Lu Yue from the Security Research Center of China's Academy of Information and Communications Technology, blockchain for UAS swarms provides three key benefits (note: individual members of a swarm network are referred to as *nodes*):

1. Strong anonymity for identity management. Nodes that are not on the blockchain have no way to be certified by swarms, which effectively prevents network intrusion by malicious nodes.
2. Node consensus protects against false information. If the information cannot be verified by most nodes, it is considered illegal and will not be added to the chain.
3. Chained storage protects critical information. Tamper-proof features of blockchain effectively protect mission-critical data. Additionally, because each member records a backup of the blockchain's information, it is possible to recover all exploration data from the swarm as long as one system can successfully return to base.¹⁸

Thus, blockchain-enabled swarms pose a challenge to adversaries. The group is resilient against hacking, deception, and destruction of individual nodes, requiring actions to affect most or all components to be wholly effective.

The benefits of swarming and blockchain are not reserved for only small UAS. Larger aircraft can carry greater payloads and could easily be configured with similar command, control, and communication systems. Although more advanced unmanned combat aircraft will probably be remotely piloted for several years due to their increased speed, cost, and lethality, this may change as autonomy matures. Currently, China has several large, stealthy, unmanned aircraft in the works. Platforms called *Sharp Sword* and *Dark Sword* may be designed as AI-enabled next-generation air superiority fighters.¹⁹

PACAF Options for Countering Threats

International Team Building

First and foremost, the United States must maintain a strong network of allies and partners to counter Chinese belligerence. A coalition of like-minded nations committed to upholding international norms and maintaining a free and open Indo-Pacific is the best deterrent to Chinese expansionism. Additionally, multinational groups like the Association of Southeast Asian Nations (ASEAN) will play an increasingly important role.²⁰ July 2020 witnessed strong rhetoric in support of the rules-based order and opposing Chinese aggression. One example is Secretary of State Mike Pompeo's statement that "Beijing has a pattern of insti-

gating territorial disputes. The world shouldn't allow this bullying to take place, nor should it permit it to continue."²¹

Current international research efforts on human-machine teaming like the Loyal Wingman program²² showcase not only the strength of United States military technology but also the strength and resolve of American allies like Australia. Additionally, research partnerships sponsored through organizations like the Air Force Office of Scientific Research, Office of Naval Research, Army Research Office, and their associated international research arms are critical to ensuring a strong and technologically proficient network of allies and partners.

A strong deterrent effect relies on imposing unacceptable costs to aggression. As China seeks to build legitimacy and gain recognition as a regional leader, costs may be imposed across the wide range of political, economic, and information domains. Nevertheless, tough talk is just that, if not backed up with a trained, ready, and lethal military. As Gen David Goldfein, former Chief of Staff of the Air Force, poignantly pointed out, all A2/AD systems are imperfect, and the United States joint force will be ready to back up national policies:

If [China or Russia] ever do see an F-35 . . . it will never be alone. It will be part of a penetrating joint team. And in the "we're here" message, the message is we're here in space, we've been here for a while, we've been watching you, we know what's going on, and we have already penetrated whatever defenses you think you have. You cannot put a block of wood over your country, you can put a block of Swiss cheese over your country, but like Swiss cheese there are holes there and we know where they are and we can exploit them and we can get in, we can hold targets at risk.²³

To find those holes, planners and technicians will need to work together to learn as much as possible about adversarial capabilities and vulnerabilities.

Train against Machines

To better understand algorithmic warfare, it is useful to turn to an often-quoted phrase from Sun Tsu's *Art of War*, 知己知彼，百战不殆—Know yourself, know your enemy, and you will never be defeated. Because AI models depend on training data and programmers, decisions made by computers are predictable. Defeating algorithms is possible if you have access to the code. Understandably, however, military applications for AI are an issue of national security, and access is appropriately restricted. In the absence of a full model to analyze, the next best option is for the United States to build similar models using data that would be available to adversarial coders. This AI red team would be used to point out

weaknesses in historical tactics and help planners devise new strategies to capitalize on machine inefficiencies.

Gen James Holmes, commander, Air Combat Command, further emphasized this point, stating that using autonomous systems as Red Air to train US pilots would be a near-term priority.²⁴ Training against AI-driven adversaries will teach pilots about relative strengths and weaknesses of unmanned systems. At the same time, these controlled tests will provide developers with valuable training data that adversarial programmers will not have, thus providing US coders and planners with an information advantage in the space of air-to-air combat between manned and unmanned systems. Furthermore, training in this manner provides valuable test data for proving battle readiness of US autonomous systems.

Fight Fire with Fire, Swarms with Swarms

The threats posed by advanced technologies are serious and will require serious preparation and training to address. Fortunately, the United States still has the most advanced technologies in the world. A recent study by RAND applied machine learning to mission planning and demonstrated some advantages and limitations of the technique. This experiment simulated a “group of [unmanned aerial vehicles (UAV)] with different sensor, weapon, decoy, and EW [electronic warfare] payloads . . . against an isolated air-defense system.”²⁵ The underlying assumption that a variety of UAVs will be available to carry out combat tasks falls in line with current programs and research efforts. However, to present a real-world deterrent, the USAF needs to demonstrate its capability to avoid, strike, or decisively neutralize a much more complex air defense system.

One method to gain the offensive advantage against a strong A2/AD network is to mass large numbers of semiautonomous weapons to poke holes in the adversarial air defenses. The USAF is currently researching this topic through programs such as Golden Horde,²⁶ Gray Wolf,²⁷ and delivery platforms like Arsenal Planes.²⁸

The fluidity of swarm warfare is akin to traditional tactics for maneuver and mass. Marine Corps Doctrinal Publication 1, *Warfare*, describes the following ebb and flow of combat operations:

Military forces will mass to concentrate combat power against the enemy. However, this massing will also make them vulnerable to the effects of enemy fires, and they will find it necessary to disperse. Another competitive rhythm will develop—disperse, concentrate, disperse again—as each belligerent tries to concentrate combat power temporarily while limiting the vulnerability to enemy combat power.²⁹

The repeating cycle of concentration and dispersion is likely to be automated in future systems. Human response time and speed would make manually control-

ling such coordinated effects nearly impossible. However, as planners and engineers work to build systems to carry out these battlefield effects, ethical considerations need to be integrated into every step of the design. Autonomy may be critical to maintaining the competitive edge, but machines are capable of spectacular miscalculations and unintentional escalations. Thus, extreme care must be taken to prevent autonomous routines from accelerating or amplifying misunderstandings in the Indo-Pacific.

Modernizing Joint Warfighting

Joint All-Domain Command and Control (JADC2) and Mosaic Warfare concepts promise to capitalize on the flexibility and advantages provided by emerging technology to “link any sensor to any shooter.”³⁰ According to David Deptula and Heather Penny, “Mosaic is a force design that combines the attributes of highly capable systems with the volume and agility afforded by smaller force elements that can be rearranged into many different configurations or presentations.”³¹ Thus, Mosaic Warfare focuses more on the enabling systems hardware. On the other hand, JADC2 refers to the coordination of effects that the systems can bring to bear across all domains to create an overwhelming advantage for friendly forces. In concert, JADC2 and Mosaic will provide combat forces with the flexibility and adaptability to counter a wide range of future threats.

Looking to the Future

Many tasks futurists imagine assigning to autonomous systems can be performed by remote human operators. Human-controlled systems do not benefit from the same communication and coordination speeds that networked systems have and are prone to different types of mistakes. However, for the purpose of expanded sensing and patrolling capabilities for A2/AD, the net gain is similar. As militaries plan for possible future engagements, the time horizon is important. Near-term conflicts will likely rely more on manpower and be prone to mistakes based on human limitations. Far-term conflicts may integrate more automation and AI-driven decision making. Plans designed for one scenario will not work well against the other, as they will expect vulnerabilities where they are not present.

The United States leads the world in military technology, strategy, and capacity. However, the gap is narrowing, as competitors invest heavily in modernization and explore asymmetric tactics to level the playing field. As modern technologies make it possible to envision new ways to penetrate traditional defenses, they also enable weaker systems to defeat dominant military machines. The USAF must prepare for future fights where adversaries will attempt to strike directly at C2

networks or other perceived system vulnerabilities. Integrating JADC2 doctrine and exercising with compromised communications today will ensure air superiority amid the fog of future warfare. 🌟

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Indonesia

Lessons for the US–China Geo-economic Competition

KYLE RICHARDSON

Indonesia is the world's fourth most populous nation (273 million people) and abuts the globe's busiest trade route (the Straits of Malacca); as such, Indonesia is on track to become the world's fourth-largest economy by 2050.¹ Indonesia will be a major venue for US–China geo-economic competition in the Indo-Pacific. It was no accident that Pres. Xi Jinping chose Jakarta to unveil China's proposal for a Maritime Silk Road in October 2013, a plan that evolved into China's global Belt and Road Initiative (BRI). Pres. Joko "Jokowi" Widodo embraced the BRI to help solve Indonesia's infrastructure needs, signing deals worth billions of dollars in Chinese investment. At the same time, Jokowi established Indonesia as a model for how a developing nation can protect itself from undue Chinese influence by setting key conditions on BRI projects and pursuing alternate foreign investment partners. Despite providing development finance to Indonesia for decades, Washington was slow to incorporate its efforts into the US regional vision of a "free and open Indo-Pacific" (FOIP). The delay gave Beijing an opening to present itself as the partner of choice for infrastructure development and allowed the BRI to dominate public discourse.

The United States reasserted itself as a viable BRI alternative with the creation of the US Development Finance Corporation (DFC) in October 2018 and announcement to double the US government's Indonesian investment portfolio by 2024. To offset the BRI's financial advantages, the US launched initiatives to coordinate its infrastructure financing decisions with Japan and Australia and to create the Blue Dot Network to promote adherence to international norms in infrastructure development. However, to compete with the BRI most effectively, Washington will need to continue rebranding FOIP to emphasize its responsiveness in helping Indonesia meet its economic goals. Over the long term, the United States will also need to accelerate industrial policies that close the technology gap with China in 5G, a key infrastructure area where Jakarta remains uncommitted.

Asia's Newest Tiger?

In the two decades since the 1997 Asian financial crisis, when Indonesia's gross domestic product (GDP) contracted by 13 percent, its economy has grown at a robust five-percent annual rate.² As a result, Indonesia climbed the world's largest

economy rankings from 36th to 16th with a nominal GDP of 1.1 trillion USD in 2019.³ Per capita GDP grew from 857 USD to 3,800 USD, decreasing the national poverty rate by 50 percent over that span.⁴ In 2011, Goldman Sachs economist Jim O’Neil—known for coining the term BRIC (Brazil, Russia, India, and China) as an investment class—included Indonesia in a new emerging market grouping he called MIST, alongside Mexico, South Korea, and Turkey.⁵ O’Neil saw the MIST as the “best large emerging economies” worthy of investment.⁶ Given current trends, PricewaterhouseCoopers projects Indonesia to be the world’s fourth-largest economy by 2050.⁷

Although not a regional commercial hub like Singapore, Indonesia relies on foreign trade as an engine for growth. Indonesia maintains trade surpluses—35.1 billion USD in 2018—while engaging in foreign trade equivalent to 43 percent of GDP, a higher figure than countries with similar populations like Brazil (30 percent) and the United States (27.5 percent).⁸ In 2016, China overtook Japan to become Indonesia’s largest trading partner, even though Jakarta and Beijing only established full diplomatic relations in 1990.⁹ The rapid growth in Indonesia–China bilateral trade is partly attributable to the creation of the ASEAN–China Free Trade Area (ACTFA) in 2010, the first agreement ASEAN made with a nonmember state.¹⁰ In 2019, Indonesia exchanged 77.6 billion USD in goods with China, more than double its trade relationship with Japan (37 billion USD), Singapore (34 billion USD), and the United States (28.6 billion USD). Indonesia’s export markets were more balanced. China purchased 27 billion USD (15.1 percent of total exports), Japan 19.5 billion USD (10.8 percent), and the United States 18.5 billion USD (10.2 percent), although the goods were primarily commodities (e.g., coal, minerals, paper pulp, palm oil).¹¹ Indonesia had a 11 billion USD trade surplus with the United States in 2018, a fact that put it on the radar of the US Trade Representative (USTR).¹² However, USTR has not acted to restrict Indonesian trade to date.

The lack of adequate transportation and energy infrastructure constrains Indonesia’s industrial sector, lowering overall growth and forcing the economy to spend a staggering 24 percent of GDP on logistics.¹³ First elected in 2014, President Jokowi outlined his vision to transform Indonesia into a Global Maritime Fulcrum (GMF) at that year’s East Asia Summit. His administration issued a five-year National Mid-Term Development Plan for 2015–2019 that called for 460 billion USD in investment to improve maritime connectivity, electrification, and transportation.¹⁴ In 2018, the World Bank ranked Indonesia 46th in terms of global infrastructure—up from 53rd in 2014—but identified it as a “top performer” among middle-income countries, ahead of Mexico, Turkey, and Brazil.¹⁵ The rapid

improvement resulted from Jokowi's singular focus on infrastructure and the pursuit of foreign investment to make up shortfalls in domestic financing.¹⁶

Indonesia Embraces the BRI

Following Xi's proposal of a Maritime Silk Road in Jakarta in 2013, China grew from Indonesia's 13th- to its 2nd-largest foreign investor (5.5 billion USD), trailing only Singapore (8.4 billion USD) and just edging out Japan (5 billion USD).¹⁷ In 2016, Indonesia awarded its first high-speed rail construction project—the Jakarta–Bandung High-Speed Railway (HSR)—to a Chinese firm. A Chinese press release referred to the 50-year Engineer–Procure–Construct (EPC) contract to connect Indonesia's two largest cities as the BRI's “flagship” project in country.¹⁸ Although land acquisition issues delayed completion from 2019 to 2021, the Jokowi administration continues to pursue Chinese investment because of its low cost. Chinese state-owned enterprises (SOE) constructing BRI projects can acquire cheap financing from entities like the Chinese Development Bank, which in turn receives large capital infusions from the central government.¹⁹ In essence, Beijing subsidizes its companies to underbid the competition. In March 2019, Indonesia presented Chinese investors with a menu of 28 projects valued at 91.1 billion USD, with the two sides agreeing on 14.2 billion USD in power plant and industrial park investments.²⁰

Indonesia as a Model BRI Country: Impose Conditions and Hedge Bets

Even as Jokowi embraced Chinese investment, he took steps to limit Beijing's potential influence on Indonesia's economy. Indonesia's BRI agreements “do not encompass strategic assets like ports,” nor do they involve the types of sovereign guarantees that led to the Chinese takeover of a Sri Lankan port facility in 2017.²¹ In addition, Jokowi placed four requirements on the projects that will maximize their economic benefit to Indonesia. BRI investment financing generally employs a preferential buyer's credit (PBC) requiring 70 percent of project materials originate from China and that Chinese workers be employed on the projects. However, Indonesia stipulates that BRI projects: (1) use environmentally friendly technologies; (2) employ local labor with limited Chinese workers; (3) transfer technological knowledge to local partners through training programs; and (4) create added value for Indonesian upstream and downstream industries to reduce dependence on extractive industries.²²

Jokowi's BRI conditions represent not only smart economics but good politics as well. As journalist Nithin Coca notes, “When it comes to public perception in

Indonesia, Chinese money is simply judged differently, engendering emotional reactions in a country where a common barb is that Chinese workers are stealing Indonesian jobs.”²³ Indeed, as Chinese investment has grown in Indonesia, so too have the number of official Chinese workers, which doubled to 30,000 since 2013, an indication of the difficulty of enforcing limits.²⁴ While the figure pales in comparison to Indonesia’s workforce of 124 million, the question of foreign investment and workers is a political one. According to Pew Research, the number of Indonesians holding favorable views of China declined from 66 percent in 2014 to 53 percent in 2018, due to concerns of growing economic dependence on Beijing.²⁵ In the 2019 presidential campaign, opposition candidate Prabowo Subianto criticized Chinese investment as a “one-way street” and blamed Jokowi for not doing enough to protect Indonesian workers.²⁶ Even after Jokowi won reelection, the deputy chairman of Indonesia’s Corruption Eradication Commission, Muhammad Syarif, cautioned the government “to be more careful with investment from China” as Beijing was “trying to expand their economic influence.”²⁷

To avoid dependence on China, the Jokowi administration courted a diverse array of foreign investment partners. In 2017, Indonesia awarded a medium-speed rail project to connect Jakarta and Surabaya as well as a contract to build the Patimban Port in West Java to Japanese firms.²⁸ Jokowi targeted Indian investment to build a port in Sabang (Indonesia’s northernmost island) with Coordinating Minister for Economic Affairs Luhut Panjaitan stating that cooperation with New Delhi was critical to prevent a single “superpower” from creating regional instability.²⁹ As the world’s largest Muslim country, Indonesia has also pursued investment from the Middle East to hedge against economic downturns in East Asia. During a visit of Crown Prince Mohammed bin Zayed al-Nahyan in April 2019, the United Arab Emirates (UAE) signed deals worth 9.7 billion USD.³⁰ The World Bank and Asian Infrastructure Investment Bank (AIIB) are also present in Indonesia with 7.8 billion USD and 939 million USD in respective loans since 2016.³¹

US Response: Building on a Long History of Assistance and Investment

The United States has a long-standing, three-pronged economic presence in Indonesia that predates the BRI and includes both direct assistance and infrastructure investment. First, USAID provided Indonesia an average of 177 million USD in development assistance over the past 20 years for projects in the areas of biodiversity, health, and anticorruption.³² Second, the Millennium Challenge Corporation (MCC), an independent US foreign assistance agency that provides select

countries with aid for up to five years, granted 474 million USD to Indonesia from 2013–2018, with a focus on renewable energy and nutrition. The MCC subsequently designated Indonesia as eligible to develop a second compact.³³ Third, the Overseas Private Investment Corporation (OPIC) promoted American private investment in support of Indonesian development goals through an array of financial guarantees. Since 1974, OPIC “committed \$2.35 billion in finance and insurance across 116 projects in Indonesia, covering a range of sectors, from energy to healthcare.”³⁴ In July 2018, Jokowi inaugurated Indonesia’s first wind plant in Sulawesi, a project OPIC supported with 120 million USD in financing.³⁵

To better compete with the BRI, Congress passed the BUILD Act in 2018 to strengthen OPIC, which it renamed as the DFC. The legislation expanded the DFC’s investment “tools,” doubled its exposure cap to 60 billion USD, and substituted a “requirement” for US involvement in a project to a “preference.”³⁶ This last provision gives the DFC the financial flexibility to invest in local companies for infrastructure development—one of Indonesia’s primary requests—thus, giving DFC an advantage over the BRI. At present, the DFC maintains a 125-million USD portfolio in Indonesia focused on energy, manufacturing, and healthcare projects but announced plans in 2019 to double those investments.³⁷ As an indication of the DFC’s growing political clout, its chief executive officer, Adam Boehler, met Jokowi on 10 January 2020 and announced that the DFC “will play a critical role in supporting Indonesia, particularly by developing quality infrastructure that establishes a strong foundation for the country’s next stage of growth.”³⁸ The DFC also initiated strategic trilateral investment cooperation with its Japanese and Australian counterparts in Indonesia, a pooling of resources that will help offset the BRI’s capitalization advantage.³⁹

A final US concern is the lack of an American 5G alternative to compete with China’s Huawei. To date, the Jokowi administration has not committed Indonesia to any particular company, although the usual players (e.g., Huawei, Sony-Ericsson) are in the mix.⁴⁰ However, the United States can only exert limited influence on Indonesia’s decision process by highlighting the potential national security risks to Indonesia of a Chinese-built 5G infrastructure, as the United States currently has nothing of its own to offer. But while Jokowi has demonstrated reticence to rely too heavily on Chinese investment, Indonesia may not have a choice on 5G unless a cost-competitive Western alternative is forthcoming.

Competing Visions of the Indo-Pacific

America’s 5G dilemma is reflective of its slow response to the BRI. President Trump first offered the US alternative of a FOIP at the November 2017 APEC Summit in Hanoi, four years after Xi first proposed the BRI.⁴¹ Eighteen months

later, the Department of Defense codified the president’s vision into four principles, all presented through a security lens. Three of them—respect of sovereignty, peaceful resolution of disputes, and freedom of navigation—were clear references to disputes in the South China Sea. The third principle—“free, fair, and reciprocal trade based on open investment, transparent agreements, and connectivity”—was economically focused, but connectivity was defined as “access to international waters” rather than infrastructure.⁴² The Department of State finally released a version of FOIP in November 2019 that incorporated US economic development and infrastructure investment efforts in the region.⁴³ Unfortunately, the United States only began to link its security-focused FOIP to Jokowi’s economic-themed GMF vision starting in 2017.⁴⁴ As such, the BRI had a six-year window from its launch in which it appeared more responsive to Indonesia’s goals. This placed Washington at a disadvantage in advancing the US regional narrative.

Toward A More Comprehensive US Alternative to the BRI

Indonesia offers valuable lessons for how the United States can retool its efforts to compete with the BRI in Asia and elsewhere. First, Washington can point to Indonesia itself as a model for how to acquire infrastructure financing from China without subversive economic influence. Jakarta’s conditions-based approach to BRI agreements combined with its foreign diversification strategy prevents China from dictating the terms. This example could be particularly effective in Southeast Asia, where countries are connected to Indonesia through ASEAN, or in Latin America where large democracies like Brazil and Argentina are also considering BRI projects. The United States should encourage Indonesia to share its BRI best practices with these countries to help them set similar conditions.

Second, Washington must use its economic tools to compete with the BRI. The United States will likely not be able to match the vast financial resources that China is dedicating to the BRI. However, the United States does not need to. Countries like Indonesia have little desire to be beholden to Beijing. They simply need the United States (and other investors) to be present and contributing to their economic needs to drive a harder bargain with China. To that end, the DFC’s effort to double its Indonesian investments makes the United States a visible BRI alternative. The signing of the US–Indonesia “Cooperation Framework to Strengthen Infrastructure Finance and Market Building” in September 2020 to facilitate additional private sector investment will build on that effort.⁴⁵ US initiatives to coordinate infrastructure investment decisions with Japan and Australia, two countries with large stakes in Indonesia, are also a smart way to offset China’s larger financial resources. Washington should seek to coordinate similarly with other allied investors in Europe and the Middle East. With fewer resources, the

United States must also commit to high quality investments. BRI projects often result in shoddy construction, delayed completions, and a high use of foreign workers. US projects should be well-built, on time, and use domestic labor to create a positive contrast for American investment. The US–Japan–Australia Blue Dot Network initiative—launched in November 2019 to promote transparency in infrastructure through an evaluation and certification process involving governments, the private sector and civil society—will help to distinguish these projects from their BRI counterparts.⁴⁶

Third, the United States needs to market the economic scope of its revised November 2019 regional vision. Part of what makes the BRI successful is its branding and focus on meeting the infrastructure needs of developing economies. Viewed from Jakarta, it made little sense for the United States to offer a security-focused narrative as the initial alternative in 2017. The revised version of FOIP must now emphasize how American development assistance and infrastructure investment, which are long-standing, will increase and adapt to help countries like Indonesia achieve their economic goals. This is important because the BRI operated with little opposition for six years, developing a name recognition that far exceeds the FOIP.

Fourth, the United States needs to address critical areas of the ongoing geo-economic competition where it does not possess the tools to win and where a better narrative will not mask its deficiencies. The development of 5G infrastructure is one of those areas. To compete with Huawei, the United States cannot only ban the company from its market and convince its allies and partners to do likewise. The United States will need to accelerate efforts to engage its domestic telecommunications and technology companies to craft an industrial policy that facilitates the necessary investment and infrastructure development to make 5G viable and exportable. In January 2020, a bipartisan group of senators introduced legislation—S.3189, the Utilizing Strategic Allied (USA) Telecommunications Act—which would provide 750 million USD in grants to accelerate the deployment of domestic 5G networks and another 500 million USD to promote adoption of non-Chinese alternatives abroad.⁴⁷ In August, the Trump administration announced the release of additional spectrum for commercial 5G development.⁴⁸ As domestic 5G development will take time to scale, the United States should work with allies to promote the best non-Chinese alternatives (i.e., Sony-Ericsson or Nokia) available today in Indonesia and elsewhere.

Finally, the United States should leverage the BRI to undermine China's stranglehold on global manufacturing. China's rapid economic growth was fueled through a combination of cheap labor, foreign technology, and infrastructure that facilitated its development into a manufacturing juggernaut.⁴⁹ However, other

countries possess cheap labor as well, and multinational firms are now looking to diversify supply chains after the disruptions of the US–China trade war and the COVID-19 pandemic. China’s robust infrastructure provides it with a comparative advantage. If the BRI, DFC, and other foreign investment help Indonesia close the infrastructure gap, then it will become an attractive option for businesses looking to build new factories. To that end, the United States should promote Indonesia as an investment opportunity for US firms looking for non-Chinese production locations. Indonesia’s enormous internal markets make it an attractive location to produce both for domestic consumption and for export to the world.

Conclusion

Jakarta’s embrace of the BRI and China’s newfound status as Indonesia’s largest trading partner and second-largest investor should not be of undue concern to Washington. Jakarta is traditionally nonaligned and wary of becoming too dependent on Beijing (or any nation) for strategic as well as domestic political reasons. For this reason, Jokowi has set the conditions for Indonesia’s engagement with the BRI and hedged his investment bets. He will no doubt continue to triangulate between Beijing and Washington (as well as Tokyo and New Delhi) to reap the rewards of the geo-economic competition for Indonesia’s own gain. This is a model for other countries to follow. It is also the reason the United States and its allies need only compete to keep Indonesia from falling under Beijing’s sway. Fortunately, the United States is already doing so through the wide array of foreign assistance tools (DFC, USAID, MCC) at its disposal, but there is room for improvement. The American alternative to the BRI will require creating a US industrial policy that closes the 5G gap and communicating a vision that responds to regional desires for better infrastructure. In Indonesia, the United States has a good story to tell. 🌐

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Mr. Richardson is a Foreign Service Officer with the Department of State and wrote the first version of this essay earlier this year as a student at the National War College. The piece received second prize in the national Secretary of Defense Essay Competition for 2020.

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Sticks and Stones

Nuclear Deterrence and Conventional Conflict

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On the night of 15 June 2020, Sino-Indian tensions flared into fighting along the disputed border in the region known as the Galwan Valley. The fighting led to the first casualties along the border in 45 years. However, no one on either side fired a single shot.¹ Instead, soldiers threw rocks and used wooden clubs wrapped in barbed wire to attack one another. Two of the most powerful armies in the world, both of which possess nuclear weapons, clashed with one another using sticks and stones.

Nuclear weapons prevent nuclear states from engaging in large-scale conventional war with one another, or at least, the existence of such advanced weapons has correlated with a significant decrease in conventional war between nuclear-armed adversaries over the past 80 years. Nuclear weapons tend to make nuclear adversaries wearier of engaging in conventional warfare with one another because they fear inadvertent escalation: that a war will spiral out of control and end in a nuclear exchange even if the war's aims were originally fairly limited. However, this fear has not fully prevented the Chinese and Indian militaries from engaging in skirmishes, like the one that occurred in June 2020. Where does escalation toward nuclear war start, and what does this conflict teach both us and major world players about the dangers and opportunities associated with low levels of conflict between nuclear powers?

Escalation to nuclear use may occur as a deliberate and premeditated choice or inadvertently as the result of a security dilemma, the offensive nature of militaries, and/or due to the fog of war.² This article argues that the Sino-Indian border dispute demonstrates that the drivers of inadvertent escalation may be present even at exceptionally low levels of conflict. Thus, even though nuclear weapons induce caution, there are good reasons to worry about the dangers of inadvertent escalation to nuclear use despite the longstanding global tradition of nonuse.

This article examines the background of the disputed border, then explores the connection between conventional and nuclear conflict in the context of this case. It considers why the conventional-nuclear escalation ladder is becoming more—not less—critical as we move farther away from the Cold War. Finally, the article considers the implications for other nuclear-armed states.

Acute Contestation over Actual Control

Over the past year, tensions between China and India have risen steadily over a disputed border in the Ladakh region, which is high in the Himalayan Mountains.³ Both states see the other as trying to change the status quo along the border. Policy changes have become a rising issue between the two states. In fall 2019, India brought its portion of the Ladakh region under national rule.⁴ Meanwhile, China has increased ties with Pakistan in recent months as part of its Belt and Road Initiative, including infrastructure projects that extend through Indo-Pakistani disputed territory.⁵ Beijing and New Delhi have also begun infrastructure projects in the contested area: India recently completed a road along the border, which would allow it to move troops and materiel more quickly in the region, while China moved a large amount of heavy equipment and military sustainment supplies into the territory.⁶ Rising tensions initially flared in early May, causing both states to send additional troops to the area. While India and China did enter into negotiations, progress was slow and prone to stalls, as each side questioned the motives of the other.⁷ Meanwhile, tensions along the border continued to rise, crescendoing in the June 2020 skirmish.

Friction along the border is not just a contemporary problem. The 2,200-km border has been a source of tension between the two regional powers since the British colonial government in India signed a treaty with Tibet that established the McMahon Line, which functions as the official legal border between India and China. China contests the 1914 treaty, claiming that Tibet, as a non-independent entity, was not legally capable of signing such an agreement.

Today, the *de facto* border is known as the Line of Actual Control (LAC). The LAC is not demarcated and is the product of wars in 1962 and 1967.⁸ The resulting line is flanked on both sides by contested territory. The Aksai Chin plateau, the location of the Galwan Valley where the fighting occurred, is claimed by India but occupied by China.⁹ Both sides see the territory as economically and militarily important.¹⁰ For China, this territory not only borders the Tibetan region of China, a region that has long sought autonomy, but also contains Highway 219, which connects Tibet with Xinjiang Province, home of the Uighurs.¹¹ Maintaining control over this territory and Highway 219 is strategically important to China, which has recently worked to strengthen its hold on non-Han populated areas within its borders. For India, this region is home to Daulat Beg Oldi, India's northernmost military base and the highest altitude airstrip in the world. Over the past 20 years, India has built an all-weather road, the Darbuk–Shyok–Daulat Beg Oldi (DSDBO), which connects the remote base to the regional capital of Leh. With its completion, India can now supply men and materiel much faster

and more efficiently.¹² The logistical improvement allows India a better foothold in an area full of disputed borders.¹³

While neither side experienced casualties between 1967 and 2020, the two militaries did not steer completely clear of one another. In 1987, India and China narrowly avoided a crisis when Indian troops engaging in a military exercise spooked Chinese commanders who began advancing toward the LAC. As both China and India are nuclear-capable states, they have an incentive to avoid situations that might lead to a nuclear exchange, including conventional conflict. India and China were so alarmed by the 1987 crisis that they spent the next 25 years signing resolutions to try to avoid warfare.

In 1993, India and China signed an agreement to mitigate such crisis potential in the future by increasing transparency.¹⁴ An agreement signed in 1996 enhanced the 1993 pact, and added the stipulation that neither side would use guns or other explosives within two kilometers of the border.¹⁵ A final agreement was signed in 2013 to create clearer understanding of appropriate defensive measures, after both sides established fortified bases within 1,000 feet of one another.¹⁶ While these agreements were largely successful in preventing conventional conflict, small incursions and provocations did occur, as the June 2020 skirmish demonstrates.

What makes the most recent clash interesting is that this is the first time the two states have suffered casualties while both were nuclear armed.¹⁷ Any time two nuclear-armed states engage militarily, the risk of escalation to nuclear use lurks in the shadows.

From Sticks and Stones to Armageddon?

Some might argue that the existence of nuclear weapons would preclude the risk and danger of large-scale conventional conflict along the Sino-Indian border.¹⁸ Typically, states prefer to solve their differences using conventional threats and actions, operating at the very lowest levels of Herman Kahn's escalation ladder, a "useful metaphor" for how conventional and nuclear warfare operate within a continuum.¹⁹ It is rare for states to issue nuclear threats,²⁰ and a longstanding tradition of nuclear nonuse has existed for the past 80 years. If this tradition of nonuse holds, we should expect China and India to double down on the transparency agreements they began in the 1990s. And yet, regardless of the weapons available, the pressures associated with maintaining the status quo overcame the effect of nuclear deterrence on conventional warfare.²¹ Despite not having guns or explosives, a clash emerged, and military personnel were killed.

Thus, while it is certainly true that nuclear weapons can induce a level of caution among nuclear-armed states in their dealings with one another, nuclear weapons in and of themselves are not a fool proof solution. The risk of inadvertent

escalation, or a conventional conflict that unintentionally becomes nuclear is ever present, even from relatively low levels of conflict like the June skirmish. In his influential work *Inadvertent Escalation*, Barry Posen presents three potential mechanisms that could lead to inadvertent escalation: the security dilemma, the inherently offensive nature of military organizations, and the fog of war. All three mechanisms can be found operating in the Sino-Indian border dispute.

First, the security dilemma may cause inadvertent escalation due to the lack of information about adversary capabilities and intentions. States that perceive an adversary has increased its offensive potential are likely to assume the worst and attempt to compensate, but a lack of information can drive spirals of military hostility and build up. The inadvertent nature of the security dilemma may cause states to unintentionally threaten one another at the nuclear level. It bears mention that both India and China have declared “no-first-use” policies that, in theory, should prevent a security dilemma from spiraling toward the nuclear level because they promise that neither state will resort to nuclear use unless they are attacked first.²² However, as nuclear forces are considered assets of the upmost value, conventional action that accidentally targets or threatens another states’ nuclear forces would be seen as malign and in need of a more violent response.²³ In short, states may inadvertently escalate to nuclear use when facing another nuclear state because they see doing so as a defensive action against a perceived nuclear threat.

On the Sino-Indian border, there is already evidence of a security dilemma at work, despite Chinese and Indian recognition of the risk.²⁴ India’s completion of the DSDBO gave India the ability to quickly mass troops in the disputed area. In response, China dug trenches, pitched tents, and moved heavy equipment closer to the LAC and into the area that New Delhi regards as Indian territory. In response, India’s Ministry of Defense authorized a fighter jet purchase to “strengthen the armed forces in defense of [its] borders.”²⁵ These large moves have been complemented by a supposed series of smaller moves,²⁶ including Indian troops allegedly crossing the border and carrying out provocative attacks, and China purportedly moving to occupy multiple areas that it had not previously controlled.²⁷ If interactions between Chinese and Indian troops increase, and if both states increase the scale of their response, more opportunities for inadvertent escalation emerge.²⁸ As Posen notes, even conventional actions taken in defense may produce an offensive threat against an adversary’s nuclear forces.²⁹

The second mechanism driving inadvertent escalation is the inherently offensive nature of militaries, which biases the organization toward offensive actions and/or plans that cause or require confrontation between conventional and nuclear forces.³⁰ In conventional terms, wars are most easily won (or deterred) by a successful (or probability of a successful) *fait accompli*: overwhelming and/or con-

centrated force at a particular point that allows a military to quickly gain and hold a strategic advantage (usually territory).³¹ The swiftness of the seizure and establishment of a new status quo makes it extremely difficult to reverse such gains, particularly when the capturing state is able to hide behind a nuclear shield. Such action can lead to inadvertent escalation in two ways. First, if the attacked state wants to return to the status quo ante, it must first risk a more intense conflict as a result of its counterattack, and larger conventional conflicts are more prone to the dangers of inadvertent escalation. Second, when conventional and nuclear forces are colocated, conventional offensive actions can cause militaries to threaten the nuclear forces of the adversary—sparking nuclear war.³²

In this case, China's movement of heavy equipment in early May is being hailed as a *fait accompli* that India will be hard pressed to reverse.³³ If India wants to reestablish the status quo ante, New Delhi may consider going on the offensive, increasing the probability of larger scale conventional conflict and, thus, the risk of inadvertent escalation to nuclear use. Should China choose to meet India's offense and push back across the LAC, Beijing, too, risks inadvertent nuclear escalation. In sum, if China's offensive *fait accompli* strategy unleashes a larger conventional conflict, the associated offensive military actions may cause contact between conventional and nuclear forces, resulting in an inadvertent escalation.

The fog of war is the third mechanism that may lead to inadvertent escalation. The uncertainty and inertia of ongoing military operations can create intense escalatory pressures, as fears surrounding an adversary's potential for successful surprise attacks and the status of their nuclear capabilities enter planners' calculus.³⁴ In addition, the more uncertain decision makers are about the status of the adversaries' nuclear forces, the more pressure they will feel to escalate the conflict.

Indian prime minister Narendra Modi has vacillated between promising that the military will defend the Indian border and claiming that there was no incursion. Meanwhile, Beijing has remained relatively tight-lipped about the incident, refusing to even comment on Chinese casualties.³⁵ Reports from the border emphasize the harsh conditions that soldiers face, including adverse health effects that can negatively impact soldiers' perceptions of what is occurring.³⁶ If the two sides cannot increase transparency through diplomatic talks, which at the time of this writing have not been fruitful, then tensions are likely to continue rising both along the border and in Beijing and New Delhi.³⁷ As a result, escalatory pressure may increase and with it the risk of inadvertent escalation to nuclear use.

In short, the Sino-Indian case is already plagued by the latent causes of inadvertent escalation. Such problems at the subconventional level demonstrate a clear potential to shift into an inadvertent escalation toward a nuclear exchange should the two states increase the intensity of their conventional conflict.

Lessons Learned

While the nuclear shadow looms large over the Sino-Indian border, the June 2020 skirmish offers lessons about how nuclear powers engage conventionally. In particular, the conflict offers lessons for China's playbook, India's playbook, and the utility of different nuclear postures.

China's Playbook and Implications for Other Irredentist Powers

The June 2020 skirmish and resulting aftermath affirm China's fait accompli strategy. In recent years, China has begun to test the feasibility of small-scale fait accompli tactics in disputed regions like the South China Sea. This latest dustup verified China's ability to chip away at disputed territory conventionally without the fear of a larger confrontation, even when the dispute was against a nuclear-armed state. As analysts note, India is unlikely to push to a return to the status quo ante.³⁸ The confirmation of the strategy's success makes China more likely to pursue it again and against other adversaries—a dangerous proposition.

China's nuclear modernization, increased military spending, and work toward improving relations with states like Pakistan antagonize other regional powers like India. Combined with China's predilection for holding its cards close to its chest³⁹ and small-scale, offensively oriented fait accompli strategies, the risk of a security dilemma spiraling toward nuclear war intensifies. Specifically, if the security dilemma grows and either India or China considered a true attack against the other, they would need to mass and move a far greater number of troops due to their relative parity. Conflict at that scale when combined with the fog-of-war issues discussed above, would create a situation ripe for inadvertent escalation. In other words, by affirming China's strategy, this skirmish has at least the potential of kicking off a conflict farther up the escalation ladder than we have seen previously.

Irredentist and revanchist states will watch the continued dispute between China and India with interest.⁴⁰ If China's strategy continues to bear fruit, other revisionist offenses, like Russia's annexation of Crimea, will gain a further strategic endorsement. In other words, revisionist states will see that small-scale conventional faits accomplis work, including against nuclear rivals, and such states may be more inclined to use that strategy themselves.

India's Playbook and Implications for Others Facing a Revisionist State

In previous border skirmishes with China, India has pursued "quiet diplomacy" or downplayed public rhetoric, coupled with a strong military stance.⁴¹ In this instance, India faces a few problems with this tack. First, while India and China did begin diplomatic talks to attempt to ease the tension, it has not quickly

led to decreased tensions. Rather, New Delhi and Beijing are now accusing the other of firing warning shots and breaking the long-standing agreement to forego the use of firearms along the border.⁴² Second, the success of China's fait accompli strategy means that India must either accept the new status quo or seriously consider directly or indirectly expelling China through military force or economic coercion, respectively.⁴³ India has begun to take steps toward creating indirect leverage, by banning some Chinese technology;⁴⁴ however, the efficacy of this move remains to be seen.

States that face similar challenges from revisionist states will see that India's quiet diplomatic strategy has thus far not prevented China from altering the status quo nor has it meaningfully lowered tensions. Thus, states facing similar threats may be more likely to immediately attempt direct or indirect methods of preventing or reversing faits accomplis. India's secondary attempt to create indirect leverage by banning Chinese technology will likewise be closely observed. If economic coercion fails to produce the necessary leverage to revert to the status quo ante, or at minimum, reverse the tensions, other states may be tempted to pursue the more aggressive military option of directly confronting nuclear-armed revisionist states and, thus, open themselves up for inadvertent escalation.

Varied Nuclear Postures

Finally, the June 2020 skirmish offers important lessons for the deterrent effect of various nuclear postures. According to Vipin Narang, there are three types of regional nuclear postures: catalytic, asymmetric escalation, and assured retaliation.⁴⁵ He argues that each posture leads to distinct likelihoods of conflict initiation and escalation due to the discrete sunk costs associated with each posture.⁴⁶

China and India have an assured retaliation posture, which is characterized by a secure second strike and is designed to directly deter a nuclear attack. While this might suggest that states with an assured retaliation posture could engage conventionally without fear of nuclear escalation, that is not necessarily the case. Narang argues that states with assured retaliation postures will face an increase in low-intensity conventional attacks from nuclear opponents and, at best, be able to deter large-scale or high-intensity conventional attacks.⁴⁷ The question is whether the instability caused by the security dilemma and exacerbated by the fog of war will be held in check by the deterrence against high-intensity conventional attacks that China's and India's assured retaliation postures promise.

What does this teach other nuclear powers? From a deterrence perspective, assured retaliation might seem like a good choice, allowing the state to engage conventionally while deterring a nuclear adversary from engaging in large-scale

conventional attacks.⁴⁸ However, this misses an important point about the interplay between conventional and nuclear deterrence.

The issue with conventional deterrence is that it is contestable: the inability to accurately predict the outcome of a conventional threat lessens its credibility, whereas nuclear deterrence is far more credible, because it is uncontestable.⁴⁹ If a state wants to enhance its conventional deterrence capability, it must be willing to use force, for, as Robert Haffa argues, deterrence decreases when states become unwilling to use force—because their threats then become less credible.⁵⁰ Given the ability to use nuclear weapons as a shield behind which to consolidate small conventional gains, it follows that conventional deterrence when backed by nuclear deterrence becomes more credible and less contestable.

States considering how to defend themselves against small-scale conventional *faits accomplis* will need to pursue a different posture. A first-strike advantage gives a state the impunity to engage conventionally elsewhere without risking a territorial incursion.⁵¹ This advantage means the state has the ability to consider taking conventional action against a nuclear power, which would enhance its conventional deterrence credibility. The inherent linkage or codependency between nuclear deterrence and credible conventional deterrence means that latter should not be considered in the absence of the former.

Conclusion

The June 2020 border conflict between China and India can give us insight into how conventional conflicts are likely to play out between nuclear adversaries in the future. There are two key takeaways from this event. First, the danger of assuming that this recent skirmish—which has not escalated at the time of this writing—will be typical of conventional conflict between nuclear-armed states is that it allows the risk of inadvertent escalation to be assumed away. While it is true that no state has used nuclear weapons in warfare since 1945, and that both China and India ascribe to a secure second-strike nuclear posture, that does not remove the inherent risk of nuclear weapons. Nuclear weapons exist; militaries train to use them in combat. Therefore, there exists a nonzero probability that nuclear use can occur. If policy makers begin to authorize larger-scale conventional conflicts with nuclear adversaries—to act as if the upper parts of the escalation ladder do not exist—the risk of inadvertent escalation intensifies. The more intense and widespread a conventional conflict, the more opportunities exist for an unintentional damage or threaten the adversary's nuclear forces, which could spark a nuclear response.

Second, nuclear-armed states that conduct *fait accompli* attacks are destabilizing and dangerous for two reasons. On the one hand, *fait accompli* attacks are

difficult to reverse, especially when the strategic gains are protected by a nuclear shield. As a result, states become incentivized to pursue postures that include a first-strike capability. First-strike capabilities allow states to deter even small-scale conventional incursions, because the posture threatens a nuclear response. On the other hand, a first-strike capability makes achieving a conventional fait accompli attack even easier, because it allows the revisionist state to stage the attack without fear of territorial incursion in response.

While the June 2020 skirmish on the Sino-Indian border resembled a school-yard brawl, its impact on both the future of foreign policy in South Asia and great-power/nuclear-weapons states competition may extend farther than its scale would imply. 🌟

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Notes

1. "India Now Says 20 Troops Killed in China Clash," *BBC News*, 16 June 2020, sec. Asia, <https://www.bbc.com/>.

2. Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks*. Reprint edition (Ithaca, NY: Cornell University Press, 2014).

3. Alyssa Ayres, "The China-India Border Dispute: What to Know," *Council on Foreign Relations*, 18 June 2020, <https://www.cfr.org/>.

4. The Ladakh region encompasses the area bordering the LAC and also Jammu & Kashmir, territory India disputes with long-time rival Pakistan. Previously, this territory was semi-autonomous from the federal government. Jin Wu and Steven Lee Myers, "Battle in the Himalayas," *New York Times*, 18 July 2020, sec. World, <https://www.nytimes.com/>; and Jeffrey Gettleman, Suhasini Raj, Kai Schultz, and Hari Kumar, "India Revokes Kashmir's Special Status, Raising Fears of Unrest," *New York Times*, 5 August 2019, sec. World, <https://www.nytimes.com/>.

5. Keegan Elmer, "China, Pakistan Push Ahead with US\$6.8 Billion Rail Project in Disputed Region," *South China Morning Post*, 9 August 2020, <https://www.scmp.com/>.

6. Anbarasan Ethirajan and Vikas Pandey, "China and India Face off on the Roof of the World," *BBC News*, 30 May 2020, sec. Asia, <https://www.bbc.com/>.

7. Kunal Purohit, "Speculation Swirls over Troop Stand-Offs at India-China Border," *South China Morning Post*, 26 May 2020, <https://www.scmp.com/>.

8. These conflicts were the last time that either side experienced casualties. Russell Goldman, "India-China Border Dispute: A Conflict Explained," *New York Times*, 17 June 2020, sec. World, <https://www.nytimes.com/>.

9. Marcelo Duhalde, Dennis Wong and Kaliz Lee “Why Did an India-China Border Clash Turn into a Deadly Scuffle?,” *South China Morning Post*, 2 July 2020, <https://multimedia.scmp.com/>.

10. However, the territory along the LAC in this region is inhospitable. It exists 14,000 feet above sea level, and the cold desert is characterized by steep terrain and subzero temperatures and features a fast-flowing fifty-mile-long river. Such adverse conditions and the resulting negative health effects for soldiers make it unsurprising that tensions among troops run high in the area. Health effects resulting from the altitude, low oxygen, and high ultraviolet radiation can include altitude sickness, pulmonary edema, and cerebral edema. “India-China Dispute: The Border Row Explained in 400 Words,” *BBC News*, 16 June 2020, sec. Asia, <https://www.bbc.com/>; “A Freezing, Inhospitable Battlefield on a Mountain,” *BBC News*, 17 June 2020, sec. India, <https://www.bbc.com/>; and Duhalde, Wong, and Lee, “Why Did an India-China Border Clash Turn into a Deadly Scuffle?”

11. While Tibet has struggled in this respect for years, China’s efforts have more recently been highlighted in its Xinjiang region against the Uighurs. Jayshree Bajoria, “The Question of Tibet,” *Council on Foreign Relations*, 5 December 2008, <https://www.cfr.org/>; Lindsay Maizland, “China’s Repression of Uighurs in Xinjiang,” *Council on Foreign Relations*, 30 June 2020, <https://www.cfr.org/>; and Wu and Myers, “Battle in the Himalayas.”

12. Pratik Jakhar, “India and China Race to Build along a Tense Frontier,” *BBC News*, July 30, 2020, sec. Asia, <https://www.bbc.com/>.

13. India also has border disputes with Pakistan in this region. Duhalde, Wong, and Lee, “Why Did an India-China Border Clash Turn into a Deadly Scuffle?”

14. “Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas,” 7 September 1993, <https://peacemaker.un.org/>.

15. “Agreement Between the Government of the Republic of India and the Government of the People’s Republic of China on Confidence-Building Measures in the Military Field Along the Line of Actual Control in the India-China Border Areas,” 29 November 1996, <https://peacemaker.un.org/>.

16. “Agreement between the Government of the Republic of India and the Government of the People’s Republic of China on Border Defence Cooperation,” 23 October 2013, <https://www.mea.gov.in/>; and Goldman, “India-China Border Dispute.”

17. China became a nuclear power in 1964; India in 1974.

18. See for example, the argument made by Christopher Clary and Vipin Narang, who when discussing the possibility of India pursuing a direct expulsion of Chinese forces do not raise the issue of a possible nuclear confrontation, focusing instead on timing and the mountainous terrain as the main impediments. “India’s Pangong Pickle: New Delhi’s Options after Its Clash with China,” *War on the Rocks*, 2 July 2020, <https://warontherocks.com/>.

19. In fact, a spectrum of conflict from subconventional to nuclear is how US adversaries during the Cold War thought about nuclear weapons. Robert Peters, Justin Anderson, and Harrison Menke, “Deterrence in the 21st Century: Integrating Nuclear and Conventional Force,” *Strategic Studies Quarterly* 12, no. 4 (2018): 15–43. Kahn separates the ladder into seven units (crisis maneuvering; traditional crises; intense crises; bizarre crises; exemplary military attacks; military central wars; and civilian central wars) that are separated by six “firebreaks” or moments within conflict escalation when, “very sharp changes in the character of escalation take place” (don’t rock the boat; nuclear war is unthinkable; no nuclear use; central sanctuary; central war; and city targeting). Herman Kahn, *On Escalation: Metaphors and Scenarios*, 1 edition (New Brunswick, NJ: Routledge, 2009).

20. Such threats do occur. For example, Russia threatened Denmark in 2015. “Russia Threatens to Aim Nuclear Missiles at Denmark Ships If It Joins NATO Shield,” *Reuters*, 22 March 2015, <https://www.reuters.com/>.

21. The phrase *nuclear deterrence* is generally used to refer to a state's reticence to use nuclear weapons against a nuclear-armed adversary out of fear of being hit with a return nuclear strike. However, nuclear weapons have a deterrent effect on conventional conflict as well. Since the advent of nuclear weapons, nuclear-weapons states have been averse to engaging in large-scale conventional conflict with one another. This reticence comes out of a fear that any large-scale conventional conflict has the potential of escalating to nuclear usage, what I refer to in this paper as *inadvertent escalation*.

22. India further qualifies this by stating that chemical and biological attacks against Indian forces or Indian territory would also be considered provocation worthy of a nuclear response. Ankit Panda, "No First Use' and Nuclear Weapons," *Council on Foreign Relations*, 17 July 2018, <https://www.cfr.org/>.

23. Posen, *Inadvertent Escalation*, 13–14.

24. In the past, China and India worked to decrease the threat of the security dilemma via a series of transparency improvement agreements. The most impactful was the 1996 agreement, as it bound the two states to forego the use of military force in the area and to increase transparency regarding military forces engaged in local exercises and intended to give policy makers more room for diplomatic maneuvering to avoid worsening the security dilemma.

25. Ajai Shukla, "Eye on China: India to Get Rs 38,900-Cr Defence Upgrade amid Border Dispute," *Business Standard India*, 2 July 2020, <https://www.business-standard.com/>.

26. Both sides accuse the other of violations and deny their own culpability.

27. Soutik Biswas, "An Extraordinary Escalation 'Using Rocks and Clubs'," *BBC News*, 16 June 2020, sec. India, <https://www.bbc.com/>.

28. It is possible to engage in protracted conflict on a rung of the ladder, since the escalation ladder refers to scale of violence, not number or length of skirmishes. However, the more skirmishes occur, the more opportunities there are for the scale of violence to intensify.

29. Posen, *Inadvertent Escalation*, 15.

30. Posen, *Inadvertent Escalation*, 16.

31. John Mearsheimer, *Conventional Deterrence* (Ithaca, NY: Cornell University Press, 1983); and John J. Mearsheimer, "Nuclear Weapons and Deterrence in Europe," *International Security* 9, no. 3 (Winter 1984): 19–46.

32. This is more likely to occur when nuclear forces are colocated with conventional forces or are used for conventional or nuclear purposes. Take bombers, for example, which may be used for either conventional or nuclear missions. Posen, *Inadvertent Escalation*. It should also be noted that some states, like Russia, have hinted at policies that suggest they would be more likely to turn to the offensive use of nuclear weapons early in a conflict if a loss appeared inevitable (known as the "escalate-to-descalete" policy). Amy F. Woolf, *Russia's Nuclear Weapons: Doctrine, Forces, and Modernization* (Washington, DC: Congressional Research Service, 20 July 2020), <https://crsreports.congress.gov/>. However, this falls outside the bounds of *inadvertent escalation*, as this kind of policy is a deliberate and premeditated escalation, rather than a reactionary one.

33. Clary and Narang, "India's Pangong Pickle."

34. Posen, *Inadvertent Escalation*, 22.

35. "India Now Says 20 Troops Killed in China Clash," *BBC News*, 16 June 2020, sec. Asia, <https://www.bbc.com/>.

36. Duhalde, Wong, and Lee, "Why Did an India-China Border Clash Turn into a Deadly Scuffle?"

37. "India Now Says 20 Troops Killed in China Clash," *BBC News*; "India's Modi Vows to Protect Borders after Clashes," *BBC News*, 19 June 19, 2020, sec. Asia, <https://www.bbc.com/>; and "Galwan Valley: China to Use Martial Art Trainers after India Border Clash," *BBC News*, 27 June 2020, sec. China, <https://www.bbc.com/>.

38. Clary and Narang, "India's Pangong Pickle."

39. Beijing's handling of the early stages of the COVID-19 pandemic demonstrates China's reticence in transparency with the rest of the international community. It is not unreasonable to think that such reticence would operate at a higher level within strictly military realms. "China Delayed Releasing Coronavirus Info, Frustrating WHO," *AP News*, 2 June 2020, <https://apnews.com/>.

40. In turn, India has begun to counter these moves by strengthening ties with the West, in particular the United States. As a fellow democracy, India has an incentive to balance with the United States against a rising China. Anik Joshi, "China Is Pushing India Closer to the United States," *Foreign Policy* (blog), 9 June 2020, <https://foreignpolicy.com/>.

41. Clary and Narang, "India's Pangong Pickle"; and Ananth Krishnan, "A Case for Quiet Diplomacy," *The Hindu*, 12 June 2020, sec. Lead, <https://www.thehindu.com/>.

42. Jeffrey Gettleman, "Shots Fired Along India-China Border for First Time in Years," *New York Times*, 8 September 2020, sec. World, <https://www.nytimes.com/>.

43. Though as Clary and Narang note, neither is an appealing option given that both the military and economic balances favor China. Clary and Narang, "India's Pangong Pickle." India did make an economic coercion play in July, banning the use of some Chinese technology, "India Bans TikTok and Dozens More Chinese Apps," *BBC News*, 29 June 2020, sec. Technology, <https://www.bbc.com/>.

44. "India Bans TikTok and Dozens More Chinese Apps," *BBC News*.

45. A *catalytic posture* "consists of only a handful of nuclear weapons [and] threatens the explicit breakout of nuclear weapons in the event the state's survival is threatened in order to compel—or catalyze—third-party intervention on the state's behalf;" an *assured retaliation posture* consists of "secure second strike nuclear capabilities that enable a state to threaten certain nuclear retaliation should it suffer primarily a nuclear attack;" and an *asymmetric escalation posture* consists of "capabilities and procedures that credibly enable the rapid and first use of nuclear weapons in the event of a conventional attack." Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton, NJ: Princeton University Press, 2014), 8.

46. The sunk costs of developing tactical nuclear weapons that can be used early in a conventional conflict is both great and distinct. Narang, *Nuclear Strategy in the Modern Era*, 231.

47. Different postures allow for consideration of "the nuclear option" at different levels of conflict due to the differences in the types of forces, command-and-control procedures, and deployment patterns. Narang, *Nuclear Strategy in the Modern Era*, 232.

48. Narang does note that posture choice is determined based on optimization and considers factors such as the security environment, civil-military relations, and resource constraints. Narang, *Nuclear Strategy in the Modern Era*, 32.

49. James J. Wirtz, "How Does Nuclear Deterrence Differ from Conventional Deterrence?," *Strategic Studies Quarterly* 12, no. 4 (2018): 58–75.

50. Robert P. Haffa, "The Future of Conventional Deterrence: Strategies for Great Power Competition," *Strategic Studies Quarterly* 12, no. 4 (2018): 94–115.

51. Robert Peters and company note that North Korea, Russia, and China are all unlikely to attack the US homeland "for fear that this would automatically provoke a significant US response." Peters, Anderson, and Menke, "Deterrence in the 21st Century," 15–43, 23.

A War by Words

Language and Cultural Understanding in the Age of Information Warfare

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COL HOWARD WARD, USAF, RETIRED

“General, we’ve lost access to China’s strategic surface-to-air missile network,” reports an Air Force Cyber colonel.

“How bad is it?” she asks.

“Game changing,” he responds sullenly. “They switched to a new Chinese-based programming language. We don’t have enough experts in the language, much less the code. Machine translation only takes us so far.”

“Well . . . that’s not the antiaccess problem I thought I’d be facing.”

The fictional account above illustrates where the Department of the Air Force (DAF) could find itself in this new decade. It is possible that the DAF will develop the technical ability to exploit enemy systems but not possess the language expertise to make use of the information. More than a theoretical possibility, the People’s Liberation Army (PLA) started developing a Chinese-based operating system in 2019.¹ The PLA’s knowledge of US systems, language, and culture gives it asymmetric leverage against the United States. The USAF has responded to the situation by establishing the 16th Air Force to lead operations in the information environment. In the future, the DAF must also increase its linguistic and cultural competency to ensure the service is eliminating vulnerabilities.

This article will analyze the historical role of language in China’s interactions with the outside world and the role language plays in modern US–China competition. We will also explain how the Air Force can use the Language Enabled Airman Program (LEAP) to bolster the ability of the 16th Air Force and Pacific Air Forces to dominate in the information domain, thereby playing an important role in countering China’s whole-of-society approach to great-power competition.

Language Is the Source Code

Language comprehension is essential to understanding how societies function, and Chinese society is no exception to this rule. Chinese language competency is

the *sin qua non* for developing an intimate grasp of the Chinese people's extensive history, culture, and way of life. The policies various emperors have held toward foreigners learning Chinese demonstrates this fact. An incident from the reign of the Qianlong Emperor provides an excellent example.

Following the arrival of Western merchants in China, Qing dynasty officials sought to prevent Europeans and Americans from expanding their trading missions in China by keeping foreign trade relegated to Canton (Hong Kong). In 1759, the British merchant James Flint challenged this policy by traveling to Tianjin to argue for the enforcement of customs laws in Canton and to petition for a new trade port in Zhejiang Province. Although Flint had learned Chinese during his many years in China and earned a living from interpreting for the British East India Company, he solicited assistance in drafting a formal written petition to the Qing court. A Sichuanese businessman named Liu Yabian helped Flint write the petition, and a Fujianese merchant named Lin Huan provided editing services. Although the Qianlong Emperor found Flint's complaints valid, what he found most abhorrent was that two of his subjects had aided a foreigner in writing a petition in Chinese. The emperor sentenced Flint to three years in prison in Macau and had both Liu and Lin executed. Following the "Flint Incident," the Qing court implemented the "Precautionary Regulations against Foreign Barbarians" (防范外夷规条) to further control trade with the outside world.²

The prohibition against teaching Chinese to foreigners would last until 1844, when the United States compelled the Daoguang Emperor to sign the Treaty of Wangxia (one of the "Unequal Treaties"), following the First Opium War.³ Article 18 of the treaty states, "It shall be lawful for officers or citizens of the United States to employ scholars and people of any part of China . . . to teach any of the languages of the Empire, and to assist in literary labors . . . and it shall in like manner be lawful for citizens of the United States to purchase all manner of books in China." Americans could now access the Chinese language, the source code to the Celestial Empire. However, in the 176 years since the Treaty of Wangxia was signed, the United States has failed to institutionalize the instruction of Chinese in our education system. This has left us at a strategic disadvantage.

This is ironic, because unlike the harsh protocols of the Qianlong Emperor, Chinese president Xi Jinping has adopted policies to make it easier than ever for foreigners to learn Chinese. Today, Beijing funds Confucius Institutes to teach the Chinese language abroad and spends millions of dollars for foreigners to study in the People's Republic of China (PRC). In 2018 alone, the Chinese government spent 469 million USD providing scholarships for foreigners to study in China.⁴ Although the US government has made many efforts to incentivize Americans to learn this strategic language, little progress has been made.⁵

An Educational Imbalance

Because the Chinese education system places great importance on learning English, the PRC is at a distinct advantage when it comes to information warfare with the United States. In 2015, it was estimated that only 200,000 Americans (of a population of 328 million) were studying Chinese, while between 300 and 400 million Chinese (of a population of 1.4 billion) were studying English.⁶ Of all Chinese citizens who learn a second language, over 90 percent studied English.⁷ Moreover, each year, more than 300,000 Chinese students study at American universities, some learning from our top digital experts.⁸ In comparison, the number of Americans studying abroad in China has remained relatively flat over the last decade, only rising from 11,064 in 2007 to 11,910 in 2017.⁹ When it comes to developing linguistic talent, it is clear that the PRC is developing more talent in English than the United States is in Chinese.

The Chinese Communist Party exploits this imbalance to compete in the information space, supporting hard-, soft-, and sharp-power strategies that are enabled by a large pool of individuals with English language proficiency.¹⁰ This is especially prevalent in economic competition and enables the exploitation of sensitive business information of American companies. Overtly, foreign firms are often required to partner with a local Chinese company for market access.¹¹ Technology transfers are frequently required as well, which has expedited China's industrial development in many sectors. Covertly, China has used its espionage apparatus to target American firms, stealing billions of dollars in intellectual property to benefit Chinese companies. The 2017 Intellectual Property Commission Report states that trade secret theft costs the US economy between 180 billion and 540 billion USD (1–3 percent of GDP) annually and labels China as the principal violator.¹² This state-backed theft of sensitive data led to US Department of Justice (DOJ) indictments against Chinese hackers in 2014, 2018, and 2020.¹³ It is important to note that in many of these cases, some degree of English language proficiency is required to exploit the acquired trade secrets. What is being stolen is not a physical item—it is information that must be interpreted, contextualized, and utilized for gain. While economic competition might not necessarily be an area in which Western militaries frequently operate, Beijing employs a whole-of-society approach to competition, utilizing PLA hackers to steal American trade secrets and intellectual property.¹⁴

This competition also extends to the American healthcare sector, where Chinese researchers frequently collaborate with American counterparts on sensitive projects. In August 2018, the National Institute of Health (NIH) started a broad investigation into fraudulent grant applications. According to the *The Economist*,

as of January 2020, “The National Institute of Health says that it has identified 180 researchers to whom it has provided grants who may not have disclosed payments from, or other affiliations with, Chinese institutions—including some who appear to have established ‘shadow labs’ in China mirroring their NIH-funded ones in America.”¹⁵ As of June 2020, the American Association for the Advancement of Science says that 54 scientists have been fired or have resigned as a result of an investigation by the NIH into grantees failing to disclose financial ties to foreign governments.¹⁶ Of this group, 93 percent received hidden funding from Chinese institutions. The investigation has targeted 189 scientists at 87 institution, with another 399 individuals being listed as “persons of concern.” One of the most notable figures to fall was Dr. Charles Lieber, the chairman of Harvard’s Department of Chemistry and Chemical Biology. In January, Lieber was arrested on a criminal complaint for not disclosing payments made to him as part of China’s “Thousand Talents” program. According to the DOJ, the Wuhan University of Technology (WUT) “paid Lieber \$50,000 USD per month, living expenses of up to \$158,000 USD at a time, and awarded him more than \$1.5 million USD to establish a research lab at WUT.”¹⁷

The NIH probe indicates systemic Chinese exploitation of the American healthcare research sector at a time when COVID-19 has placed medical research at the center of US–China geopolitical competition. However, Chinese competition with the United States permeates many other aspects of the bilateral relationship as well. In 2018, FBI Director Christopher Wray stated that China poses a “whole-of-society threat,” and that counteracting such efforts would require a respective whole-of-society response from the United States.¹⁸ To be successful, the United States will need a larger pool of Chinese speakers to compete effectively. Below, we will explain how the DAF can contribute to this effort.

The Air Force Responds

The 2018 US *National Defense Strategy (NDS)* argues that the US Department of Defense (DOD) must develop a competitive mind-set that allows us to “counter coercion and subversion” and “out-partner” our competition.¹⁹ The document clearly defines China, Russia, North Korea, Iran, and nonstate actors as Washington’s primary competitors. In terms of economic weight, population, and technical capabilities, the PRC is the United States’ most capable challenger. Although military hardware—such as aircraft carriers, satellites, and infantry fighting vehicles—still have their place in great-power competition, we currently remain below the threshold of armed conflict. We find ourselves in what appears to be a nascent cold war, with nonkinetic skirmishes already being fought through the medium of information warfare.

Information warfare is a broad field, encompassing the generation, use, manipulation, and elimination of data at the tactical, operational, and strategic levels of competition and conflict. Off the battlefield, information warfare includes efforts such as research, the protection of national security information, countering disinformation, and building an educated population less susceptible to adversary information operations. Governments will also utilize radio, newspaper, the Internet, and other mediums of communication to disseminate disinformation, thereby distracting competitors. On the battlefield, information warfare includes secure communications, jamming, military deception, intelligence collection, and cyberoperations. Success in information warfare depends heavily on language competency and cultural understanding.

To be effective in this rapidly changing information environment requires a coordinated effort and a range of skills. In 2019, the USAF established the 16th Air Force to adapt to this reality, conscientiously constructing a force for information warfare competition.²⁰ The 16th Air Force unites numerous career fields that operate in the information environment under a single operational commander. These specialties include intelligence, electronic warfare, information operations, cyberoperations, information technology, and meteorology. This structure allows a broad array of capabilities to converge on a given problem set. For example, linguists are now working alongside cyberoperators and information operations specialists to solve difficult problems.

No matter how well-structured, the DAF requires linguistic and cultural expertise to succeed in information warfare. A first step in the right direction came in 2005, when the DOD directed the USAF to establish the Air Force Culture and Language Center (AFCLC) to meet the demand for linguistic and cultural competency in the Middle East.²¹ The USAF recognized that the ability to understand, show respect to, and operate with our partners in the Middle East and Europe is key to successful operations in those theaters. The same principle applies to the US Indo-Pacific Command's (USINDOPACOM) area of responsibility. As Chief of Staff of the Air Force General C.Q. Brown stated in the DAF's *Journal of Indo-Pacific Affairs*, "Strengthening alliances and partnerships is the first line of effort in PACAF [Pacific Air Forces] for two reasons. Relationships provide the United States with a distinct asymmetric advantage over our adversaries and directly contributes to the collective ability to deter aggressive actions."²² Language skills are more important than ever in today's great-power competition with China. The AFCLC is a key player in equipping the Air Force for great-power competition by improving the service's linguistic and cultural competencies, which will allow us to survive and thrive in the Pacific century.

The AFCLC's flagship training initiative, known as the Language Enabled Airman Program, or LEAP, is a career-long program open to those who apply with a rudimentary understanding of a foreign language. LEAP includes college-level language courses and language immersions that typically range from 24 to 28 days. If Airmen complete the required courses and achieve high enough scores on the standard language tests, they can receive up to 500 USD per month for a single language, and up to 1,000 USD per month if the individual is proficient in more than one language.²³ Currently, 3,235 DAF service members (approximately 1 percent of the active duty force) are members of the LEAP.²⁴

The LEAP has been very successful, but it must grow to adapt to new challenges. It is open to enlisted members and officers alike, providing a meaningful learning opportunity. DAF leaders of all ranks should seek ways to get more "information warriors" involved in the program. As the home of information warfare Airmen, the 16th Air Force should be a key recruitment priority for the LEAP. DAF service members serving in USINDOPACOM should be a priority as well. Additionally, the AFCLC should take steps to increase participation more broadly. One key initiative should be to develop a college credit system that provides a path to an associate's or bachelor's degree in a foreign language. Degree programs offer prestige, recognition outside the DOD, and durable benefits to the member. As a program designed around personal initiative, the LEAP competes with required professional military training and degree programs for resources and members' time. Providing a route to college credit will further incentivize participation.

Language Skills Enable More Effective Competition

In this new era of great-power competition, we must learn from past lessons by developing a language-enabled information warfare force for the future. The DAF should increase its use of the LEAP to ensure we succeed in this objective today and in the coming decades. If the DAF thinks strategically and provides greater resources for developing language-enabled service members, the opening scene in this article will remain fiction and not an operational reality. ✪

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Japan Cancels Aegis Ashore

Reasons, Consequences, and International Implications

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In June 2020, the Japanese government canceled the planned construction of two Aegis Ashore ballistic missile defense sites. This decision was unexpected for many in the security establishment. However, considering the circumstances and warning signs in previous months, the decision should not have been a surprise. In fact, Japan's reversal on the Aegis Ashore sites may indicate a larger shift in defense priorities for the country and potentially signal a transitional trend with implications beyond Japan and the Indo-Pacific region.

While this platform does not typically concern itself with demography or economy, it is worth establishing Japan's predisposition of being a trailblazer in critically important macro trends. Most famously, this has happened in key areas of economic and demographic policy. And it is conceivable that in the near term this will also happen in the field of defense.

Any traveler to Japan will describe the country as an endearing mixture of extreme futurism and strong adherence to tradition. Frequently, the attractions and experiences there are almost indescribable. The country is distinct in countless ways and very difficult to describe in terms of general trends or models. However, it is becoming apparent that Japan is often the first developed country to experience certain phenomena that later impact its peers. This habit can be seen starkly and most noticeably in the fields of economy and demography. However, the current experiences and projected responses of Japan in the field of defense (especially missile defense) over the next few years could also serve as a harbinger for its peers. It is not to say that all Japanese experiences are inevitable for others or that Tokyo's policy prescriptions should be replicated, only that Japan's experience should be considered a probabilistic outcome and its proposals as highly relevant for serious discussions.

Overview of Japan's Postwar Experience

Following its military defeat in World War II, Japan was demilitarized and constitutionally required to maintain a position of pacifism. This condition was hardly voluntary. Under the wartime treaty, the United States military guaranteed Japan's defense, forging a close alliance. Following the establishment of this alli-

ance, Japan embarked on a meteoric economic growth trajectory. Japan was so successful in achieving its economic development goals that by the 1980s the American public and business community largely believed Japan would assume the position of having the largest global economy. Throughout this period, business schools, management consultants, and popular authors publicly discussed Japanese superiority in capitalist pursuits, and many Americans strove to replicate Japanese processes and culture.

Just as the fear of Japanese supremacy reached a fever pitch in the United States, Japan's miraculous ascent quickly unraveled in the early 1990s. While Japan maintained impressive rankings in areas of human development and its contribution to global culture has been impressively disproportionate, the Japanese economy has since been largely viewed as dysfunctional, almost inexplicably so.

Within the period, from postwar growth to current semi-stagnation, Japan has experienced fascinating phenomena and has applied innovative and distinct measures toward addressing them. It is not always clear whether the measures are effective or ineffective, but Japan's global counterparts almost always view these measures with serious interest.

After achieving impressive birth rates in the immediate postwar era, Japan's fertility rates decreased significantly in the 1970s, and the population actually began to shrink. Modern history has been marked by the consistent *growth* of the human population. Most international demographers focused only on the degree of this growth, from alarmingly catastrophic Malthusians to the more moderate, but rarely talked about the likelihood of population decreases.

Japan's aging population was a new experience for the world to consider, particularly because this same phenomenon would eventually confront several other developed countries as well. Increased life expectancy combined with low birth rates are straining Japan's economy. Interestingly, while many Western countries have addressed population shortages with foreign labor, Japan has been largely hesitant to do so and instead has pursued a strategy of production automation and robotic development (a field in which Japan is the undisputed leader).

Following the miraculous growth of Japan's economy during the post-WWII era into the early 1990s, Japan experienced a gigantic economic implosion. Thirty years later, the Japanese stock market has yet to attain the value it had pre-collapse. While Japan continued to excel in certain industries throughout this dramatic period (automobiles, certain electronics, and cultural exports among others), the economic health of the economy was considered moribund. A particularly bad case of deflation plagued the country.

While no other comparable developed country has experienced the condition of prolonged deflation in the same way, some of the policy responses that the

Japanese have used to remedy their economic malaise have been used as effective weapons by others, or at the very least, considered by others. One of the most dramatic tools Tokyo has used is the intervention of its central bank, the Bank of Japan (BOJ), into the private sector in various ways. Not long ago, the vast majority of mainstream Western economists would have considered the intervention of the central bank in private markets to be extreme, politically inconceivable, and a betrayal of core capitalist principles. This activity by the BOJ was consistently viewed by Western economists as a strange Japanese economic quirk.

However, true to Japan's trend-setting nature, the BOJ has shown that such intervention is an available tool when more conventional measures such as interest rate cuts have been exhausted. The year 2020 has seen Western central banks enthusiastically embrace measures resembling those taken by the BOJ. For example, the US Federal Reserve Board established a program to purchase a broad index of corporate bonds as part of the COVID-19 rescue package known as the CARES Act.

Another area of economic policy that Japan has been ahead of the curve on is in the normalization of immense debt issuance. Japan has the largest debt-to-GDP levels among all developed economies. Many prognosticators believed that Japan's debt levels were unsustainable and that the country would soon face a dramatic reckoning for its fiscal imprudence. Many professional traders were lured into betting against Japanese government bonds because, in accordance with all economic fundamentals, a country with such a high debt level was going to have to pay higher yields, which would force the price of existing bonds to plummet. However, no such reckoning has occurred (for various reasons) up to present, and many traders surely regretted having read their economics textbooks too closely. (This trade became known as the "widow-maker," reflecting its tragic and common consequence.) Again, in line with Japan's trend-setting stature, it appears that the theory around sustainable debt levels must now be reconsidered. The United States is still far behind Japanese levels, but the growth of US debt has been staggering, and 2020 will see America's debt-to-GDP ratios at levels that would have until very recently been considered existentially alarming.

Japan's Self-Defense Forces

Since WWII, Japan has relied almost completely on the United States for its defense requirements and has not rebuilt its military proportionate to what its population and economy would suggest is appropriate. Of course, this was not completely a voluntary decision, but a mandate after WWII. This mandate has remained in place and is broadly popular, as the Japanese citizenry values its pacifist stance. Previous efforts to reform the constitutional mandate have been de-

feated. Former Prime Minister Shinzō Abe periodically floated the idea of reforms, but he too was mostly unsuccessful. However, the geopolitical realities within the region over the past decade have shifted considerably, are evolving quickly, and are causing heightened military consideration. Potential regional instability could expose the shortcomings of the pacifist constitution and relative underdevelopment of Japan's military offensive capabilities.

Japan is becoming less timid in openly discussing basic questions of military posture and questioning the rationality of relying completely on the United States for its defense. This trend has actually been ongoing for quite some time, long before the Trump administration or the Aegis Ashore suspension. However, the cancellation of Aegis Ashore certainly represents the catalyst for an examination of Japanese military capabilities.

The Japan Self-Defense Forces' close cooperation with the United States, especially in missile defense matters, must also be interpreted as an attempt to combine US and Japanese military interests and defensive capabilities to ensure American involvement in the defense of Japan. In 1999, the Japanese Defense Agency signed a memorandum of understanding with the United States concerning cooperative ballistic missile defense research with the backdrop of continuous advancement of the North Korean missile program.¹ This cooperation would culminate eventually in American missile defense assets in Japan for US homeland defense and the planned construction of the two Japanese Aegis Ashore sites that would be included in a network beneficial for Japan as well as the defense of the United States from ballistic missile attacks.

Chinese Threats in Asia

The rise of China is of obvious importance to Japan. It is remarkable how quickly China became a military power, in some fields even a peer to Japan's protector, the United States. This poses an existential concern for Tokyo, as China bore the very harsh brunt of Japan's territorial aspirations during WWII. This memory is vivid in China's collective psyche. Aside from historical animosity, there are other contemporary reasons a conflict between the two powers could become likely under certain circumstances. Principal among these is China's increasingly assertive naval actions in redefining territorial boundaries. Vietnam and the Philippines have recently experienced the increasing aggression of Chinese naval activity in the context of contested waters. Japan may find itself in a similar situation in the near future, and when it does, it will be difficult to prevent global escalation.

In this context, it is important to understand that the planned Japanese Aegis Ashore systems would not be a sufficient defense against the complexity and high

volumes of Chinese (or Russian) missile capabilities. Contrary to North Korea, which may be repelled and severely weakened by the ability to intercept its fewer and less complex medium-range ballistic missiles, the case of China is different. To be able to demonstrate a credible defense, Japan needs offensive capabilities that could attack Chinese launch facilities to prevent continuous missile launches. This explains Japan's purchase of almost 150 F-35 fighter jets and the development of its own Future Fighter (F-3), its own hypersonic missile program and proposals from Japanese government officials to develop a first-strike capability consisting of ballistic and cruise missiles.

In regard of the cancellation of Aegis Ashore, the Japanese government may have assessed that the political costs may not justify a system that has less potential to defend against Japan's perceived main threat: China.² At the same time, the installation of Aegis Ashore would antagonize Beijing, especially with its enhanced SPY-7 sensors. Moscow too would view Aegis Ashore as a provocation, for the same reasons as Russia has voiced opposition against the American Aegis Ashore sites in Europe, claiming that Aegis Ashore is not a purely defensive system and that its MK 41 launchers could also be used for offensive Tomahawk cruise missiles. One must also consider that China has reacted harshly to the deployment of extended radar capabilities in the region in the past and asserted, therefore, political and economic pressure on South Korea for example.

Despite actually being a purely defensive system, China is vehemently opposed to the US Terminal High Altitude Area Defense (THAAD) missile defense system in South Korea because of the associated radar. Beijing claims that THAAD interferes with China's national interests because the powerful AN/TPY-2 radar that is part of the THAAD system supposedly "spies" on China and detects Chinese missile launches. China's leaders assert that while the THAAD interceptors will not provide any real protection for South Korea, the system's powerful X-band radar can effectively look deep into Chinese territory. Thus, Beijing concluded that the United States must be pressuring South Korea to deploy THAAD as part of a broader US security strategy to contain China. However, these Chinese claims are inaccurate.

The AN/TPY-2 radar has two modes in which it is deployed: either with a THAAD battery in terminal mode, or by itself in forward-based mode. The hardware for these radars is the same, but the software is completely different. The terminal mode radar has a much shorter range and is generally oriented upward, optimized to track incoming ballistic missiles in their terminal phase, or final downward descent. In this mode, the radar also needs to track the outgoing interceptor as it exits the launcher. In terminal mode, the radar's range could just barely reach beyond China's border. The forward-based mode, on the other hand, has a

significantly farther range and is generally oriented outward to detect missiles shortly after launch in their ascent to provide early warning to other sensors and missile defense weapon systems. In this mode, the radar could certainly detect Chinese missile launches, if oriented in the proper direction with search fences designed for threats from there. However, this is currently not the mode in which the radar is deployed in South Korea.

A common misconception is that the AN/TPY-2 radar can be quickly switched from terminal mode to forward-based mode, and vice versa. It would actually take months to make this change. Entirely new radar search plans, or multiple search fences, would need to be built into the software and tested—not to mention the possible need to reorient the radar face. If the radar is moved even only one degree, the entire search plan needs to be recreated, a long and arduous process, which is why the radars are only used for one purpose. Therefore, it is extremely unlikely that the United States deployed an AN/TPY-2 FBM radar with its THAAD equipment in South Korea or intend to change its mode. It would render the THAAD launchers useless if the radar was not in terminal mode and would be an extremely costly diversion. Instead, China should understand that the radar is in terminal mode, and in its current position and orientation (facing north toward North Korea), it is simply supporting the defense of southern South Korea and is not spying into Chinese territory.

It is conceivable that China may be absolutely aware of this circumstance and is exploiting the radar exclusively for propaganda reasons to influence the South Korean political landscape. In South Korea it is commonly believed that many protesters that continue to plant themselves outside the gate to the THAAD site in Seongju are organized and financed by China. They are present every day and limit any US ground movement into and out of the site, requiring regular resupplies and military personnel movements to be conducted by helicopter. These protesters (regardless if organized and financed by China or not) are used as a Chinese propaganda tool and for disinformation purposes to promulgate the notion that there is greater opposition to THAAD than there really is.

Admittedly, the circumstances of the US THAAD deployment and site selection were certainly far from optimal. When the THAAD deployment to Seongju was first announced, the locals were understandably upset. It is true that local farmers were originally concerned about the effect the powerful radar's radiation would have on their health and melon crops. Additionally, the city of Seongju was not notified before the official announcement, causing the populace to feel that their voices were unimportant to the national government. Local groups protested various issues from noise pollution to the site's vicinity to historic spiritual sites. After the system was deployed, however, the local protests slowly diminished, as

health issues and the melon crops were seemingly unaffected. However, Beijing's opposition remained and so did organized protests of mainly nonlocal groups. In addition, China placed hefty economic sanctions on South Korea after the THAAD deployment.

Japan hosts two American AN-TPY-2 radars in forward-based mode without any THAAD batteries. Although Japan has not seen the same amount of protests as South Korea, nevertheless there were considerable protests at both radar locations in Japan in the past, with the main opposition in Kyogamisaki (the southern radar location), organized by the Communist Party of Japan.

The Aegis Ashore sites that were to be built in Akita Prefecture, in northern Japan, and Yamaguchi, to the southwest, almost immediately saw negative reactions from local communities.³ It is unknown, but highly possible, whether China had already attempted to influence public sentiment by assisting or facilitating the Aegis Ashore protests in these areas. If Japan went ahead with the construction, it would certainly also attract further protests and opposition from China and Russia. Tokyo views the cost-effectiveness and rationale of devoting billions of dollars to a system that does not offer optimal protection against the biggest perceived threat while simultaneously provoking this threat as problematic.

Japanese Cancellation of Aegis Ashore

Officially, Japanese Minister of Defense Tarō Kōno claimed that Tokyo's initial decision to suspend the Aegis Ashore project had two primary concerns: cost and technical issues. Japan was not confident that the system could prevent the rocket boosters from the SM-3 interceptor missiles from hitting local population centers after separation from the interceptor.⁴ Japan's Ministry of Defense declared that it had worked to see if software improvements could help solve the issue. However, the conclusion was that software alone would not be enough; the missile itself would need modifying. The Japanese government then calculated the overhauls would cost an extra 1.8 billion USD and take more than a decade to implement. Thus, the ministry decided this was prohibitively long and expensive. Considering the cost and time involved, Kōno said, there was no choice but to suspend the plan—a decision the National Security Council eventually approved, effectively canceling the system.⁵

Nevertheless, this explanation, at closer examination, is not completely convincing to be the main cause for abandoning Tokyo's original intent from December 2017 to acquire two Aegis Ashore sites, which were then considered essential for Japan's defense and supported by 66 percent of the Japanese population.⁶ Back then, the Abe administration was arguing that the extra layer provided by Aegis Ashore was critical for Japan because of North Korea's ballistic missile threat,

which would severely stress the defense capabilities of Japan's existing Aegis destroyer ships. In addition, the Aegis ships were limited in their readiness and missile defense functions by refueling and routine maintenance operations as well as rough seas and, therefore, could not guarantee continuous ballistic missile defense. Aegis Ashore would address these shortfalls and be the solution.⁷

Considering the importance that the Japanese defense establishment had placed on Aegis Ashore for the defense of the entire country in the past, Japan's current assessment of the dangers posed by falling rocket boosters seems disingenuous. With its decision, Japan would be reacting disproportionately to a small possibility of debris falling on inhabited territory. The planned Aegis Ashore sites are within military training areas, and its interceptors would most likely be fired at an azimuth toward the Sea of Japan, with booster separation taking place over the ocean (if the threat originates in North Korea). Therefore, the official Japanese justification is contrary to the previous position that Aegis Ashore is essential for defense. This reversal potentially jeopardizes the lives of thousands of citizens, who could be targeted by ballistic missiles, to avoid the slim chance that a missile fragment could impact infrastructure or an extremely small number of people.

Although this calculation of damage, including the loss of human life, may seem cynical and unethical, it is performed all the time by all militaries. In fact, the field of air and missile defense (AMD) is characterized by limited resources and the need for prioritizing protection of assets under various scenarios. Despite their importance, it is impossible to protect all assets all the time, and military planners must make difficult decisions to prioritize assets. This standard practice is well known within the Japanese Self-Defense Forces operating Patriot and Aegis missile defense systems. Therefore, the Japanese decision to promote the concern of potential relatively small damage from an interceptor fragment over the much higher probability of loss of critical infrastructure and significant numbers of lives in a ballistic missile attack goes against all basic principles of ballistic missile defense planning.

It is also unclear if the Japanese assessment that software improvements could not help avoiding rocket boosters falling on inhabited territory is completely honest or was simply a stated excuse, as such software improvements for the performance of other US missile defense weapon systems addressing such issues currently exists. It is therefore conceivable that similar software solutions could be applied for SM-3 launches and its rocket booster debris, even if the software may not be optimized for this particular interceptor type.

Objections that this type of software may be classified and not be shareable with Japan could also be countered: the Japanese Aegis Ashore sites were never intended to be operated exclusively by the Japanese military. The intent was for

the system's main contingent to be Japanese operators, with US operators present as well. To include classified US software programs or applications into systems that are shared with allied nations is not unusual. For example, the British early warning radar station in Fylingdales plays a vital role in the national missile defense of the United States and is operated by the Royal Air Force. Nevertheless, there are certain functions, data, and applications that are only accessible and carried out by the minimal US military contingent present at the Fylingdales radar station. Similar arrangements could certainly be possible for the Japanese Aegis Ashore systems and the US presence that was planned for the sites.

Also, of note in this conversation is the public position of former Japanese Minister of Defense Itsunori Onodera. Although he originally authorized the purchase of Aegis Ashore, he is now accusing his old department of deceit in this matter. According to Onodera, the previous public position of the Ministry of Defense was that the boosters of the interceptor missiles could be controlled. Now, the ministry has abruptly changed its position, which implies, according to him, that he was either lied to or that the ministry is lying now.⁸

Air and Missile Defense Planning and Procurement

One reason for the Japanese cancellation, which certainly appears coherent and initially understandable, is the associated costs for the systems that the Japanese government had calculated and expected to be much lower. It is true that the expense of the Japanese Aegis Ashore program had grown beyond what Japan had originally signed on to. Japan had initially estimated that the costs to purchase, operate, and maintain the systems over a 30-year period would amount to 2.15 billion USD. However, according to more current estimates, the costs were now to be at least 4.1 billion USD.⁹ This illustrates a very crucial point in the procurement of missile defense equipment that does not only apply to Japan: many governments do not fully recognize the real costs and complexities of missile defense systems. Countries frequently purchase missile defense weapons systems without fully appreciating the other equipment elements required to make the systems effective and adequately accounting for the full life-cycle costs of operation.¹⁰

In the case of Japan, this is even more surprising since it has a relatively long tradition in the development and operation of AMD equipment. Nevertheless, even the more recent Japanese 4.1 billion USD cost estimate for purchasing, operating, and maintaining two Aegis Ashore sites over a 30-year period is highly unrealistic and still appears much too low.

The Japanese military's insufficient plan for the complexity and associated costs of the systems is consistent with the entire planning process, which appears to have been suspect from the start. This is startling because the Japanese military

certainly has a pool of highly capable and competent defense planners. Whatever the reasons for the botched planning of the Aegis Ashore sites, the effect is tantamount to blunder and not fully comprehensible. To great embarrassment, it was even revealed that the Ministry of Defense selected the sites by using Google Earth, based on error-ridden calculations, and that no planners had actually visited the locations.¹¹

As alarming as this conduct may seem regarding the quality of efficient planning for a defense project of this magnitude, Japan is certainly not the only country where AMD procurement and planning are misunderstood or carried out neglectfully. Various other international examples confirm RAND Corporation's research (mainly focused on the Indian procurement of the Russian S-400 system), which came to the overall conclusion that the complexity of high-performance, high-altitude missile aerospace defense systems and the associated planning process is often not fully acknowledged by many governments.¹²

In May 2019, for example, the Hungarian defense minister announced that Hungary was seeking a medium-range missile defense system and presented a group of systems from which Hungary would select for its national missile defense. Among the contenders were the Israeli Arrow system, an upper-tier missile defense system mainly designed to intercept short- and medium-range ballistic missiles, the French/Italian SAMP-T medium-range AMD system, the American/German Medium Extended Air Defense System (MEADS), and the Norwegian Advanced Surface to Air Missile System (NASAMS) air defense.¹³ Hungary eventually chose NASAMS. However, the list of contenders demonstrates confusion and a lack of basic research on behalf of the Hungarian Ministry of Defense. Arrow and NASAMS represent two systems at opposite ends of a large spectrum with completely different missions. It is clear from the list of contenders for the Hungarian procurement that the government had not even conducted a general assessment to determine what type of threat the system should be effective against.

The Hungarian AMD system contender list is comparable to someone looking to buy a mode of transportation and choosing between a car, a motorcycle, a bicycle, or a skateboard. Hungary's goal was to build a national medium-range missile defense capability. The NASAMS air defense it ultimately chose is highly capable against aircraft, unmanned aerial vehicles (UAV), and cruise missiles. However, the system cannot engage ballistic missiles, which, judging from the other contenders, should have been a central focus for Hungary's defense needs.

Another glaring example is Switzerland's recent AMD procurement process. The Swiss Federal Department of Defence, Civil Protection and Sport (DDPS) planned for the military to attain ground-based, medium-to-high-range air defense capability by 2030 as part of the largest defense procurement in the country's

history. However, contrary to almost all defense analysts, the DDPS failed to acknowledge the ongoing proliferation of ballistic missiles.¹⁴ This is an outlier viewpoint, particularly in Europe, following the recent termination of the Intermediate-Range Nuclear Forces (INF) Treaty. Additional surprising contradictions, from the view of renowned specialists,¹⁵ are the DDPS's insistence that ballistic missile technology is not precise enough to be an effective weapon and its conclusion that conventional air forces pose the biggest potential threat.¹⁶ In alignment with this extreme outlier opinion, the official criteria for the new air defense system is focused on engagement of aircraft and explicitly does not include the capability to intercept ballistic missiles.¹⁷ Nevertheless, the contenders for the Swiss procurement are two systems that are mainly optimized for ballistic missile defense. This obvious contradiction is even amplified by the Swiss insistence that the Patriot AMD system will only be considered in its PAC-3 configuration, which was specifically developed to engage ballistic missiles more effectively. This confusion at the highest strategic levels confirms RAND's findings once more.

Just as in Japan, the planning process in Switzerland appears to have been carried out haphazardly. In addition to the discrepancy in the capabilities of the systems, almost a year after the evaluations started, it was discovered that the truck platforms for both mobile AMD systems were too big for standard Swiss roads and would not be able to fit through the many tunnels in the country.¹⁸ A glance at the financial planning in Switzerland also reveals unrealistically low projected costs. Life-cycle costs of AMD systems typically exceed the original purchase costs in about seven years.¹⁹ This does not even include associated infrastructure costs such as the construction of adequate maintenance and storage facilities, which are not accounted for in Switzerland (Japan too did not budget for additional construction costs).²⁰ Furthermore, largely overlooked is the question of testing and training. Switzerland does not have adequate space to test-fire missile interceptors within its borders and will have to utilize foreign missile ranges. This use of another nation's test facilities will accumulate significant extra costs.

In September 2019, it became known that missile testing added at least 500 million USD to Japan's price tag for its two Aegis Ashore sites, for which Tokyo had not accounted. Out of fear that conducting those tests in Japan could increase tensions in East Asia, Tokyo decided it would rather hold them at a US test site in Hawaii, where they would cost about 100 million USD per launch.²¹ A single SM-3 Block IIA interceptor missile, which would be used for the test, costs about 30 million USD. In addition, Japan would be paying for targets, temporary use of the US Aegis Ashore test site in Kauai, its personnel, and an exclusion zone to keep commercial shipping and aircraft away from the tests. Tokyo accounted for none of these expenses in Japan's budget. When the Japanese government agreed to pur-

chase the Aegis Ashore systems, the defense minister at the time did not know that Japan would also have to pay for missile launches to test the system. The Japanese government erroneously thought computer-simulated tests would be sufficient.²²

The experiences of Japan, Switzerland, and Hungary demonstrate that many governments and national defense establishments are overwhelmed with the broad scope and intense technical specifications required for successful AMD planning. Strategic planners entrusted with their nation's analysis in this arena are broadly ill-equipped to perform their mission, usually lacking in relevant experience or guidance. In the instance of Japan, with its exposure to SM-3 development with the United States, this is somewhat surprising.

The field of missile defense is very different from traditional military strategies and experiences. Often, with the exception of the United States and Israel (and to an extent Saudi Arabia and United Arab Emirates), there is little substantive operational knowledge in this field. Many US allies and friendly nations have no practical experience at all in AMD other than short-range air defense against aircraft. Countries that have been exposed to more sophisticated high and medium AMD are mainly theoretical or based exclusively on field training.

North Korean Missile Capabilities and Tactics

Recently, a notion that Aegis Ashore cannot effectively engage North Korean ballistic missiles that are fired in a lofted trajectory was published. Voices in Japan suggested that Japan's theory of missile defense had already collapsed around 2016 and 2017. During this period, North Korea simulated a "saturation attack," where numerous ballistic missiles were fired, and a highly lofted-trajectory missile was launched.²³ A lofted-trajectory missile is known to be harder to intercept. However, these suggestions are not entirely correct and should be discussed.

In political debate, the Japanese government has been accused of brushing off doubts and insufficiencies of Aegis Ashore to continue to pursue the system, which Tokyo had promised Washington it would buy. Defense Minister Kōno's (who in Japan is viewed as a maverick) decision to discontinue Aegis Ashore has been hailed as wise, courageous, and honest. His decision is supposedly a signal of government efforts to explore options that actually work and shows that civilian control is functioning.²⁴ As ideal as pursuing effective solutions and functioning civilian governance may be, this view is based on the incorrect premise that Aegis Ashore cannot sufficiently counter North Korean ballistic missiles. There is a widespread misunderstanding and misconception in Japan that North Korea has effectively made all traditional missile defense options obsolete with the introduction of saturation attacks and its highly lofted missile trajectories. These ideas, perpetrated by the media, are misinformed, inaccurate, and reminiscent of Chi-

nese claims that THAAD in South Korea is ineffective or Russian claims that US missile defense does not work.

North Korean tactics of trying to overwhelm missile defenses with salvos of numerous missiles have been understood and accounted for since the very beginnings of North Korea's missile program. Cardinal in this respect has always been the development, growth, and upgrade of sensors for effective missile defense. It is frequently overlooked that sensor architecture and quality of radars are often more critical than "shooter" capabilities. It has always been accepted that North Korea would start off a missile attack with large barrages of cheaper and less sophisticated missiles to overwhelm radars and tempt the defenders to waste their intercept resources. These first waves would then be followed by missile barrages in which the attackers would "sneak" in occasionally more sophisticated and more deadly missiles (of which North Korea has limited numbers) in the hope that defense radars may be saturated or interceptor resources have run out. This is not a new concept, as falsely implied by media reports. Accordingly, ballistic missile defense (BMD) has developed capable radars that can determine the missile type and impact point of the incoming missile and have the ability to track large numbers of enemy missiles. To save resources, missiles that will impact in the sea, on uninhabited land, or on lower priority defended assets will not be engaged. Software can establish which particular shooter has the best chances of engaging, so that resources are not wasted or prevent different shooters from engaging the same target to maximize interceptor efficiency.

The main assertion, however, is that Aegis Ashore, or BMD in general, is incapable of defending against the North Korean ability to fire ballistic missiles in a so-called highly lofted trajectory. By using a lofted flight trajectory, North Korea could use medium- and intermediate-range missiles to strike regional targets over shorter distances by firing them at higher angles. For example, on 22 June 2016, North Korea was able to limit the distance of the intermediate-range Musudan missile to around 400 km (from a normal distance of more than 3,000 km) by using this lofting method. In this scenario, the warhead is traveling at an extremely high velocity by the end of its trajectory, thereby undermining the effectiveness of missile defense systems.²⁵ The Patriot missile defense system, for example, is incapable of engaging certain warheads at that speed. This is exactly the reason why THAAD was deployed to South Korea, to complement the existing South Korean and US Patriot systems with the ability to engage longer-range missiles in a lofted trajectory. It is generally understood that Aegis Ashore has greater coverage and capability than THAAD. The plan to bolster defense capabilities by adding a US Aegis Ashore system in Guam, which already hosts a THAAD battery, confirms this.²⁶ It should also be noted that the number of ballistic missiles that

North Korea could fire in a lofted trajectory is limited. North Korea would have to use its best and most sophisticated missiles that were constructed for long ranges in a manner that could only cover relative short distances.

Nevertheless, it is true that none of the current BMD systems are optimized for highly lofted trajectories, posing a significant challenge for all missile defense systems. How much of a challenge may be debatable, as system upgrades routinely occur to counter new threats, but claims that lofted trajectories have made BMD obsolete are certainly an exaggeration.

In addition to the speed of the incoming warhead being far greater while on its way down than on a normal or depressed trajectory, the angle and cross section is also critically important. BMDs typically do not intercept missiles completely head on (nose to nose), although they technically could do so (but it is much harder). They usually hit the incoming warhead on its side from below, where it is longer and has a greater cross section that the radar can detect and can direct the interceptor toward for a greater probability of intercept. When a missile is highly lofted, there is also a great likelihood that ordinary radars will not track the missile all the way because they will lose coverage at the missile's apex as it temporarily leaves the radar's field of view. When the missile is on its descent and the radar redetects the threat, it is often too late for the defense system to react, because it must play catch-up to adjust the interceptor. The more highly lofted the missile's trajectory and the more straight downward the descent is, the harder it would be for a defense system to readjust, catch-up, and engage at the right angle. The missile interceptors, although extremely fast, are still limited by speed and are going against gravity, unlike the enemy missile threat accelerating as it descends.

With its extremely effective SPY-7 sensor, which can also perform space surveillance, and its new SM-3 Block IIA interceptor (believed to be capable of engaging intercontinental ballistic missiles [ICBM]), Japan would have gotten with Aegis Ashore the best available option to counter missiles with lofted trajectories.

Missile Defense Alternatives

What is the missile defense alternative for Japan after the cancellation of Aegis Ashore? The concerns of North Korean missiles and current operational limitations are still relevant considerations that had been cited as reasons why the system was necessary in the first place.²⁷ According to the official 2019 White Paper for the Defense of Japan, "Military trends in North Korea continue to pose a serious and imminent threat to the security of Japan."²⁸ In addition to a tighter military budget due to COVID-19, Japan's Maritime Self-Defense Force is also battling with low overall recruitment and is therefore struggling to find and retain crews for their seven (soon eight) Aegis ships.²⁹ But even if, for some reason, re-

cruitment numbers would increase to provide new sailors for additional Aegis ships, at roughly 2 billion USD per ship (and still with the same coverage gap issues), it would not be an alternative either. The head of the Maritime Self-Defense Forces, Admiral Hiroshi Yamamura, declared openly that if the solution is not Aegis Ashore, it is still necessary to introduce some new BMD capability that is not influenced by weather.³⁰ A potential solution recently discussed in Japanese and US media is the installation of the system aboard a “megafloat,” a huge floating structure that can be used as an offshore base.³¹ This proposal, however, does not make much sense, because its operational readiness would still be limited by rough seas. In addition, these very large pontoon-type floating structures would be vulnerable to sabotage by combat divers and torpedo attacks.³² Adequate force protection for such structures would require additional infrastructure and substantial financial spending and effort.

Another idea being discussed is to upgrade the Japanese fleet of Aegis ships with SPY-6 radars instead of their current SPY-1 radars.³³ The US Navy is also upgrading its Aegis ships with the more capable SPY-6 radar. Aegis ships equipped with SPY-6 radars would certainly enhance Japan’s missile defense capabilities, because it would improve detection ranges considerably and provide more and refined engagement options. However, the operational constraints of the Aegis ships would still not be resolved.

It has also been repeatedly stated that Japan has a layered defense consisting of two tiers with its Aegis ships and Patriot. However, the term *layered defense* is clearly misunderstood by many, who believe that it means if one system misses an incoming threat, the next layer of missile defense systems could engage. In reality though, every BMD system is optimized for a specific type of threat. In the aforementioned case of lofted trajectories for example, the Patriot system cannot engage the incoming missile and, therefore, does not offer a second intercept option. Without a land-based Aegis Ashore, Japan’s missile defense options against a constantly evolving North Korea will remain limited.

Strategic Reorientation

Regardless of stated technical, financial, and planning related issues, many signs for Japan’s suspension of Aegis Ashore point in actuality to a strategic reorientation and threat reevaluation as the primary reason. Over the decades, there has been a gradual change in Japan’s international outlook, moving from a period of single-minded pursuit of economic power to a more orthodox international role in which Tokyo will be deeply engaged in political-military affairs. This major shift has been ongoing since at least the early 2000s, before the Abe administration and long before the Trump administration. North Korea’s military posture

was and is still a threat to Japan, but it certainly also provided a welcomed justification for Japan's process of change. Important examples of change include (1) the growing public and political acceptance of the revision of the Constitution's Article 9, which expresses Japan's renunciation of war; (2) a nascent debate on Japanese nuclear weapons after the first North Korean nuclear test in October 2006; (3) the introduction of BMD and the discussion of whether the Air Self-Defense Force may need to obtain the capability to execute preemptive air strikes; (4) the dispatch of troops to the Indian Ocean (from 2001) and Iraq (between 2003 and 2008) outside the scope of United Nations peacekeeping operations for the first time after World War II; and (5) the transformation of Japan's Defense Agency into a full ministry in 2007, signaling that security issues have now been elevated to the same level as in many other countries.³⁴

North Korea's erratic behavior certainly served as a reminder that Japan needs credible defense and as an excuse to build up military capabilities that more closely align with the political and economic importance of Japan. In public statements, former Japanese prime minister Junichiro Koizumi even went so far to justify the decision to contribute troops to the postwar reconstruction effort in Iraq from 2003 with reference to an immediate North Korean threat (and the need to maintain a credible alliance with the United States).³⁵ For the first time however, Japan now has actually officially admitted that it is not North Korea, but China, that poses the biggest military threat to Japan.³⁶ And it is also becoming more obvious that Japan is trying to build armed forces that could sustain credible military capability without the direct involvement of the United States.

The reality of the matter is that there are many complex reasons why Japan may have decided not to go forward with Aegis Ashore. But the truth is also that it is generally recognized that the official Japanese position is not sincere. The Japanese decision may be interpreted differently among allies and adversaries, but it is by and large understood that Japan is using this opportunity to further build up offensive capability.

This acquisition of strike capability could represent a dramatic shift in the region's military balance and competition. Regardless of what Japan will officially call its new capabilities, it will be viewed as a shift toward an offensive posture, particularly if the discussion in Japan focuses on preemptive use. Even if Japan argues that its offensive capability is only aimed at North Korea, China will not view it that way, especially since it was identified as the main threat in Japan's most recent defense white paper.³⁷ If Tokyo was considering a negative Chinese reaction to Aegis Ashore, it would certainly see a much more unfavorable Chinese response to a first-strike capability. China will see itself bound to react adversely, as will North Korea, and maybe even South Korea, with whom Japan has a strained

historical relationship. Further, the official reasoning of Japan to cancel Aegis Ashore because of considerations for the local populace and public pressure could signal and encourage China, as well as Russia, to launch broad misinformation campaigns to influence the political situation in their favor.

The Aegis Ashore cancellation could also potentially have a negative effect on the US–Japan alliance. Tokyo has already paid the US government around 120 million USD for the Aegis Ashore system. At the moment, it is not clear whether the United States will return this money, if Japan is liable for any of the remainder, or whether there is a penalty for breaking the contract.³⁸

It also must be understood what significance the Japanese Aegis Ashore holds for the United States. In addition to improving Japan's capability and capacity to protect US forces stationed in Japan, Aegis Ashore would have enhanced US homeland defense capabilities. Importantly, the US military looked at the Japanese Aegis Ashore systems as a way to free up American Aegis destroyers in Japan to shift to other areas where China is active, such as the South China Sea, Indian Ocean, and Philippine Sea. Therefore, Aegis Ashore would have complemented US regional strategy. Its cancellation thus complicates America's approach to the region.³⁹ US Admiral Harry Harris, then-commander of US Pacific Command, told Congress in 2018 that without Japan's Aegis Ashore deployment, the US Navy would have limited flexibility to take its Aegis-equipped destroyers that are defending Japan and position them elsewhere because of US treaty obligations to defend Japan.⁴⁰ Nevertheless, the United States has also shown a willingness to support a more forward-leaning Japan.⁴¹ But a Japanese shift toward strike capability will most likely change the nature of the alliance, since it has always been a relationship with Japan focused upon defense with only the United States possessing an offensive capability.

The Japanese government is arguing that it needs to consider a capability to strike an enemy base with missiles before the enemy can launch as a means to strengthen Japan's deterrent capabilities. Tokyo is already currently procuring cruise missiles designed for fighter jets with 500- to 900-km ranges that government officials believe can be used in a capacity to strike enemy forces far away from Japan. Its fleet of aerial refuelers and the extensive number of F-35s (Japan is the second-largest user of F-35s after the United States) help extend the ranges of these missiles even further. Additionally, Japan is developing ground-launched hypersonic weapons that, depending on their range and location, would be able to reach North Korea and even parts of China.⁴² What exactly the Japanese government is planning for remains to be seen. The plan could be the extension of ranges of already existing or procured capabilities. However, it will more likely include new cruise and ballistic missiles, as previously insinuated. The cancellation of Ae-

gis Ashore could also be an opening and chance for hosting offensive American ground-based intermediate-range missiles for which Washington is searching for basing options in Asia.

In 2019, the Trump administration withdrew from the 33-year-old INF Treaty that barred the United States and Russia (but not China) from developing and stationing land-based intermediate-range missiles. Due to this treaty's provisions, the United States was prohibited for over three decades from stationing such missiles in Asia, while China's missile arsenal of intermediate-range missiles grew massively. Senior American officials now say that putting hundreds of American missiles with nonnuclear warheads in Asia would quickly and cheaply shift the balance of power in the western Pacific back in the United States' favor amid growing Pentagon concerns that China's expanding arsenal of missiles and other military capabilities threaten US bases in the region and have emboldened Beijing to imperil US allies in Asia.⁴³ However, there are only limited territorial options in the region where such US missiles could be stationed. Australia and the Philippines have already publicly ruled out hosting US missiles. In Japan, an official decision has not been made yet, and with the Japanese government now favoring offensive capabilities and the risk of antagonizing the United States with the Aegis Ashore cancellation looming, offering Washington to attain missile bases would seem like an ideal solution. Specifically, the Japanese government would likely offer the island of Okinawa for such US missiles—thus avoiding popular opposition on the mainland.

There is, of course, also the option for Japan to either procure or develop its own ground-based intermediate-range missiles. An indigenous Japanese missile program seems to win more and more traction in Japanese defense circles, and the discussion is now focusing on targeting abilities for a potential Japanese strike. According to Yasuhiro Takeda, a professor at the Japanese National Defense Academy, Japan would be able to dramatically reduce the cost of developing the capability to strike enemy missile bases before an imminent attack if it uses US military satellites for intelligence.⁴⁴

Indeed, it would take years and considerable financial resources for Japan to attain such capabilities. In the context of the Japanese objections to Aegis Ashore, which were officially based on costs and on the extensive time it would take to develop a solution for the supposed issue of falling rocket boosters, it seems paradoxical that these factors apparently do not weigh as much in the discussion about strike capability.

In this respect, it is important to understand Japan's military planning to consider how Japan views and calculates US commitment. While the American military apparatus has been engaged in active, large-scale regional conflicts in the

Middle East over the past decades, it has also endeavored to maintain its global role with varying levels of involvement in dozens of other countries and sea lanes. This level of global involvement has generally been viewed as sustainable due to the depth of America's logistical talents, overall military superiority, and seemingly infinite financial resources. However, recent events in the American homeland are calling into question the sustainability of these actions. The most dramatic appearance of American fragility has been the outbreak of internal social unrest in countless major cities throughout the country and the stark divide between its two main political parties. Japan, with its starkly different social culture, may likely view these recent US events as alarming and negative. While the current unrest is far from the worst in America's history, when these internal issues are combined with the increasing cooperation among America's near-peer adversaries, the perception of a decreasing degree of US military superiority, and increasing opposition of American citizens to "endless wars," it is hard to argue with the viewpoint that the United States is becoming overextended and its commitment to its allies questionable. In this context, the idea of a military power overtaking the United States is not really the point. Nor is the threat of an economic competitor. The point is that many US allies throughout the world view Washington as overextended and distracted. America cannot possibly support all its allies equally, particularly under a scenario in which America's adversaries continue to act in some degree of coordination.

Japan has surely undergone this analysis and recognizes the fact that under any type of future global conflict that includes China, America will need to prioritize its forces. Such a prioritization may well provide Japan with an adequate defense, but that is highly unlikely. Under such considerations, Tokyo recognizes that Japan must build its own military to a stature of defensive self-sufficiency as well as its offensive capability to address China. Therefore, it would be inaccurate to solely blame the current resentment of the Japanese government to Aegis Ashore on a poorly executed planning process or faulty budgeting. The issue is more complex and may, in addition to a Japanese strategic military reorientation, also indirectly involve previous US strategic decisions. Certain American decisions may have been interpreted in Tokyo as contrary to Japanese AMD priorities or even as a hidden attempt for Japan to finance US assets for the defense of North America.

When the United States planned its defense against ballistic missiles, it was done mainly with the upcoming missile capabilities of North Korea in mind. Ground-based Midcourse Defense (GMD) became operational against long-range ballistic missiles in 2004 with a relatively limited sensor architecture. Today, US strategic missile defense encompasses a robust sensor architecture throughout the Pacific region to search for and track ballistic missiles. This architecture con-

sists of space-based infrared sensors, US Aegis ships in Japan, upgraded early warning radars in Alaska and California, and a mobile sea-based X-band radar mounted on a self-propelled former oil platform. Additionally, the United States operates two of its AN/TPY-2 Forward-Based Mode (FBM) X-band radars on the Japanese mainland in Shariki and Kyogamisaki to defend the US homeland.

In theory, US Aegis ships deployed in the Sea of Japan could also support US homeland defense with their SPY-1 radars, if they are in an optimal location. Their SM-3 interceptors are believed to have the capability to engage North Korean ICBMs from the Sea of Japan in their boost phase.⁴⁵ Although a SM-3 engagement of an ICBM has not yet been tested.

However, the same constraints as identified for the Japanese Aegis ships (limitations in readiness and missile defense functions through refueling, routine maintenance operations, and rough seas) also apply to the American Aegis ships. Therefore, the Japanese Aegis Ashore sites could have played an important role for US homeland defense by providing a constant option of engagement capability against North Korean missiles in the early stages of their flight and/or providing additional sensor capability. Japan even planned to enhance this sensor capability by equipping its sites with the new and much more powerful SPY-7 radar.

Over the last several years, after sensor analysis, the United States announced that it was building or planning a number of new additional missile defense radars focused on coverage over eastern Asia and the Pacific Ocean. These radars were the Long-Range Discrimination Radar (LRDR) in Clear, Alaska, the Homeland Defense Radar–Hawaii (HDR–H), and the Homeland Defense Radar–Pacific (HDR–P).⁴⁶

On 7 December 2018, the US Missile Defense Agency (MDA) awarded 250,000 USD contracts to analyze HDR–P performance requirements.⁴⁷ According to the MDA: “The HDR–P provides persistent midcourse discrimination, precision tracking and hit assessment to support the defense of the homeland against long-range missile threats.”⁴⁸ Possible locations for the HDR–P had already been selected but were classified. However, in December 2018, it was reported in Japanese media that the United States was considering building and operating the HDR–P in Japan by 2023.⁴⁹ A January 2019 Japanese newspaper article indicated that the US government had not yet requested Japanese permission to deploy the radar in Japan but intended to do so soon and added that the United States would share information from the radar with the Japanese military.⁵⁰ According to other Japanese news sources, the Pentagon was engaged in talks with the Japanese government to sort out details, and the US radar in Japan would work in tandem with the planned US radar in Hawaii (HDR–H) to establish a seamless US homeland missile defense posture in the Pacific region.⁵¹

The estimated US costs of HDR-P would be more than 1.3 billion USD, with 1 billion USD for the radar and 321 million USD in military construction costs.⁵² Regardless whether the Japanese media reports of HDR-P in Japan were accurate or not, the perception in Japan was that a US radar to enhance US homeland defense (which would also share information with Japan) was being built in Japan. In addition, the US Army activated a new AMD brigade (only consisting of a headquarters and headquarters battery) near Tokyo in October 2018.⁵³

However, the construction of HDR-P in Japan never went forward and was also never officially announced by Washington. Neither the HDR-H nor the HDR-P appeared in supporting fiscal year 2021 budget request documents released in February 2020.⁵⁴ Although the US government has now ultimately reversed the decision on the Hawaii radar and it will be built, the plans for HDR-P in Japan have been abandoned.

The significance of the potential Japanese interpretation and judgment on this development have been largely overlooked in the analysis of Japan's cancellation of Aegis Ashore. In July 2018, Tokyo had made the decision to upgrade the radars of its Aegis Ashore systems and announced that it had selected the highly capable SPY-7 radar.⁵⁵ This SPY-7 uses the same S-Band technology that the HDR-P would have used and is essentially a smaller version of the HDR-P. It is likely that, with the cancellation of the American S-Band HDR-P, Tokyo assumed that the United States could use the data of the two S-Band SPY-7 radars of the Japanese Aegis Ashore sites in a similar manner it would have used the HDR-P if it had been built. The Aegis Ashore data sharing would certainly not be a point of contention, as it was agreed from the beginning between the two nations. However, since Japan has voiced a lack of appreciation for the costs of missile tests carried out in conjunction with the SPY-7 (and indeed to validate the SPY-7 radar) in Hawaii, there may be a view within the Japanese defense ministry that these costs should not be solely carried by Japan, since the United States would benefit from the Japanese Aegis Ashore sites considerably and especially from the S-Band SPY-7 data, while at the same time saving more than 1.3 billion USD by abandoning its own S-Band HDR-P. Furthermore, the Aegis Ashore sites would have freed up US Aegis ships, otherwise tied to the defense of Japan, so that they could carry out other tasks or be utilized in other parts of the region.

Japan Could Be Setting an Offensive Trend

It is evident that Tokyo recognizes that Japan must restructure and build its military to a stature that includes offensive capability to address a threat by China, North Korea, or any other actor that threatens its interests. Japan's moves in this

direction are important because it is believed that this pivot is another example of Japan acting ahead of the curve.

Shortly after Japan announced its cancellation of Aegis Ashore and a possible acquisition of offensive missile capabilities, Australia, another US ally, announced a new strategy for its national defense. Australia declared that it would include offensive long-range missiles that can be launched from aircraft into its defense concept to deter potential enemies and have strike capabilities. It will also investigate the future possibility of acquiring new long-range missiles that can be launched from land, including hypersonic missiles. In a speech at the Australian Defence Force Academy in Canberra, Australian prime minister Scott Morrison stated that Australia must face the reality that it has moved into a new and less benign strategic era. He continued, saying that Japan, India, the Republic of Korea, the countries of Southeast Asia, and the Pacific all have agency—choices to make and parts to play—and so too does Australia.⁵⁶

In the midst of the Japanese discussion about offensive missile capabilities, South Korean president Moon Jae-in just called for a push to secure the “complete missile sovereignty” of South Korea.⁵⁷ Although Seoul remained obliged for now not to build ballistic missiles with a range of more than 800 km, South Korea is determined to improve its capabilities and hinted that it will discuss altering ballistic missile range restrictions with the United States when needed for South Korean national security.⁵⁸ South Korea further announced that it had won US consent to use solid fuel for space launch vehicles, which is expected to enable Seoul to launch its first surveillance satellites and at the same time better the technology to build more powerful and capable missiles. Solid fuel offers South Korea greater mobility for its missiles and reduces launch preparation time. In the past Washington had imposed strict restrictions on South Korea’s use of solid propellant for space launches out of the concern that this may lead to the production of missiles with longer ranges and cause a regional arms race. However, related bilateral missile guidelines between Washington and Seoul are now being revised to lift such restrictions.⁵⁹ Asia, the Indo-Pacific region, and the world as a whole may soon witness a conscious military shift to more individual deterrence and first strike capabilities, with Japan being the forerunner.

In Germany, we may see another key US ally cancel a long-planned, multibillion-dollar missile defense program. Although at first glance, parallels between the German Taktisches Luftverteidigungssystem (TLVS), internationally better known as Medium Extended Air Defense System (MEADS), and the Japanese Aegis Ashore procurement seem to be nonexistent, a closer examination reveals some similarities.

Like Tokyo, Berlin had completely underestimated and miscalculated the costs of the defense system. In 2005, when the German parliament voted for the development of MEADS, the expected cost was roughly 900 million USD.⁶⁰ At the time, it was a joint project between the United States, Germany, and Italy. In 2011, the United States government discontinued its participation because of the exploding costs and questions about the defense value of MEADS. However, US defense firms remained the primary commercial developer. Berlin then had to make the decision if Germany would also discontinue MEADS and instead continue its Patriot AMD systems and invest accordingly into its upgrades. After spending millions of dollars for external consultants the German defense minister at the time, Ursula von der Leyen, concluded in 2015 (based on the recommendation of her external consultants) to continue with MEADS. Estimated costs in 2015 were 4 billion USD. Today's cost estimate is at least 8 billion USD (only the system, interceptors not included).⁶¹ It is now conceivable that the German government could cancel the entire project, which is integral to future NATO capabilities and part of US planning for European missile defense abilities.

In addition to cost, there also seems to be a general misunderstanding about the system's capabilities by the German government. German officials have so stretched the scope of desired capabilities that the effort amounts to a new development, including the additional requirement for integrating defenses against hypersonic missiles.⁶² Next year is an election year in Germany, which means that there will be little appetite for pushing billion-dollar acquisitions, especially if closer examination will reveal major shortcomings in the planning process. The parallels to Japan are clear and do not only include a failure in estimating a realistic budget. Germany, just as Japan, has capable AMD experts within the ranks of its military, but fundamental defense decisions seem to have been made in political isolation. The German defense ministry was consulted on a large scale by a business firm that specializes in management consulting services and provides advice on acquisition and new business strategies. The majority of the firm's staff are graduates with theoretical knowledge but without any operational military experience—all this, despite the fact that Germany was one of the first countries after the United States to purchase Patriot and has been heavily involved in AMD. The German military has been operating the Patriot AMD system since 1989.

Two retired German generals have come forward and publicly spoken out against MEADS. One of them is the president of the Society of Air and Missile Defense Soldiers. Their verdict, according to their subject matter expertise, is that the German military would be pushed into a financial disaster with the acquisition of MEADS and that MEADS would be an unnecessary burial ground for billions of dollars.⁶³ The MEADS procurement will become a highly political

discussion in Germany in the next months, and a cancellation may be more likely now that Japan has demonstrated that such a drastic defense decision can still be made at any time in the acquisition process. German politicians may point to Japan and feel encouraged by Japan's decision to cancel Aegis Ashore.

In Germany, and in Europe as a whole, there have been increasing calls for the European defense sector to build greater autonomy from the United States. Some Europeans justify this move with their negative interpretation of US policy. From their perspective, European association with such, by default, could make European countries more of a target for American adversaries. Others, meanwhile, are concerned that the United States will not come to the defense of Europe in a potential conflict with Russia.⁶⁴ French president Emmanuel Macron has been one of the most outspoken proponents for greater European autonomy. For example, France has abandoned attempts to develop a competing fifth-generation aircraft to the American F-35. Instead, in 2017, German chancellor Angela Merkel and Macron announced that their two countries would be developing a new sixth-generation French–German fighter jet as part of a European combat system.⁶⁵ Japan also has its own sixth-generation fighter program. The Japanese F-3 air-superiority stealth fighter is planned to supplement the enormous Japanese F-35 fleet. Germany has also started its own national hypersonic missile project, and there may be plans for a broader future European hypersonic missile program.⁶⁶ Further, Germany is witnessing a reduction of almost 12,000 US troops currently stationed there, with most being pulled out of Europe altogether.⁶⁷

European nations may follow a comparable pivot as in Japan under similar circumstances. Europe is largely protected under the auspices of NATO, namely America's military, and akin to Japan it has not built its capabilities adequately to address relevant threats—and certainly not sufficiently considering the assumption that America may be overstretched and unable to meet its basic defense commitments. This view is hardly controversial, as the United States has often criticized its European allies for neglecting to spend on building their militaries per agreed upon ratios. While many countries may prefer to outsource their defense obligations to the United States, strategic realities necessitate a long, hard look at whether the adequacy of this approach can still be responsibly pretended.

When examining future plans for European military capabilities, there are various factors to consider. Undoubtedly, in Europe, there is less trust in American capability or its will to defend Europe. All across Europe, defense budgets have been reduced due to the COVID-19 pandemic. Planned and ongoing defense projects are thoroughly inspected and assessed for their effectiveness and actual defense value. Many European governments are not familiar with complex missile defense issues (also because regional missile defense in Europe is overwhelmingly

conducted exclusively by the United States). Missile defense is financially costly, compounded, and complicated, and often unproven. In comparison, offensive capabilities are more economical, less complex, and faster and easier to implement into national militaries. New developments in offensive capabilities, like extensively improved precision missiles with greater ranges, make them an attractive option for many militaries. These missiles provide the capability of precision strikes at far distances in much shorter time and at much lower cost than traditional air forces, do not require the long training pipeline for pilots, nor do they place any pilots or expensive fighter jets at risk. Turkey and Ukraine have already begun establishing indigenous and capable missile industries. Belarus has announced building its own missile program because it sees the need to acquire offensive missile capabilities for its defense.⁶⁸ It is highly foreseeable that there will be a trend across Europe to a greater emphasis on offensive capabilities rather than focusing on defensive measures.

Offensive Capabilities as Substitute for Air and Missile Defense

A focus exclusively on more economical offensive capabilities at the expense of costly and complex defensive measures will surely not improve global stability. The emerging realities of warfare should undeniably give a defensive posture an increasing role in military thinking instead of a purely, exclusive offensive role. As the former commander of Israel's national air defense, General (ret.) Zvika Haimovich, identified, "New War" will be characterized by ballistic missile threats (rockets and long-range missiles), precise ballistic missiles (within 10 meters of impact precision), drones, UAVs, and cruise missiles. According to Haimovich, defense capabilities have more important roles in the new fighting era than in the past, which goes fundamentally against the idea of scrapping defenses and replacing them with offensive means. Air and missile defenses minimize the harm to civilians and strategic infrastructure and help maintain governmental and civilian functional continuity. Most of all, AMD allows leaders to make judicious decisions in response to an attack, instead of forced decisions as a result of harmed civilians or damaged infrastructure.⁶⁹

The idea that all missile threats could be eliminated by a preemptive strike or offensive capabilities is unrealistic. Hunting and destroying enemy transporter erector launchers (mobile launchers used for transporting and launching missiles) is an extremely difficult task, particularly with adversaries that could use mountainous terrain and other geographical features or locations to hide their launchers.⁷⁰ In 1991, the United States had complete air superiority over western Iraq, had special operations forces on the ground, and the Iraqis were operating in comparatively open terrain, yet, despite all these advantages, there is no evidence

that the coalition successfully destroyed a single Iraqi launcher.⁷¹ North Korea especially, according to US Army brigadier general John Rafferty, has demonstrated that a wheeled missile launcher under a mountain is even harder to find than a submarine under the ocean.⁷²

Interestingly, the proponents of a pivot to offensive capabilities will (and actually already do) use the arguments that were originally introduced by many military skeptics and advocates for more arms control in their opposition to BMD. These arguments will be used to justify new first-strike capability and the abandonment of defensive options. As seen in Japan, some of the justification for the cancellation of Aegis Ashore is based upon the notion that missile defense does not work altogether. In the past, many who were rather distrustful of the military in general and were advocating for arms reduction propagated this position. Paradoxically, these ideas are now becoming the foundation and justification for the acquisition of offensive weapons. Much of the previous skepticism and critical discussion about BMD was well intended and justified. However, very often, blanket BMD criticism was rooted in solely theoretical concepts and assumptions, with some analysis being factually incorrect and not based upon operational reality. Many scholars and scientists who openly attacked the basic idea of BMD in the past did so based upon presumptions—without having access to actual classified data. In addition, it should be understood that Russia and China actively propagated some positions on missile defense being unable to function, and then often shared by unsuspecting individuals. While Russia and China openly oppose American missile defense attempts, publicly question its effectiveness, and state that missile defense is a destabilizing factor in the world, Moscow and Beijing are actively investing in their own missile defense development and capabilities. In addition, Russia and China were able to build up their highly effective antiaccess/area denial (A2/AD) capacity (while the United States was preoccupied with fighting wars against insurgents in the Middle East), mainly based on AMD systems. The outspoken opponents of missile defense concepts may soon witness the alternative to defensive options (which they criticized) in a display of military reality. Critics of missile defense and proponents of arms control could see their wish granted with less money and effort being invested by US allies into BMD (Washington will continue to invest in BMD capabilities), but they will very likely at the same time be faced with more offensively oriented militaries around the world with first-strike capabilities. Japan could be starting this trend.

Conclusion

Japan, for decades, has gradually advocated for an increase in the country's global political and military role. With China officially emerging as its primary

threat, the Japanese are now reconsidering key aspects of their military defense posture. In addition, Japan's confidence in America's security commitment has weakened due to perceived military overextension and increasing internal division of the United States. The cancellation of the planned Aegis Ashore systems is the catalyst for an examination of Japanese military capabilities. Japan, like many other nations, experienced complications in their AMD procurement and planning process, and was essentially not confident in pursuing rather complex and cost-intensive defensive missile operations. Ultimately, the American abandonment of its plan to construct a powerful missile defense radar in Japan has certainly not helped either and may have actually caused tension in the alliance between both countries. It should be clear that the official Japanese statement about the main reason for the cancellation of Aegis Ashore out of concern that parts of the interceptor missile could fall down in vicinity of the Aegis Ashore sites is most likely insincere.

As Japan is now contemplating defense alternatives and new military options, paradoxically, popular advocacy for the reduction in BMD as a mechanism to improve global stability could have the unanticipated impact of increasing offensive weaponry. Japan has expressed interest in obtaining first-strike capability and the overall growth of its offensive means as a deterrent, while at the same time not providing any viable defensive alternatives for Aegis Ashore. However, growing focus on offensive capabilities exclusively with a simultaneous abandonment of missile defense options represents an unbalanced defense approach and may lead to less global stability and regional arms races.

The United States is generally not opposed to its allies taking a more self-reliant military role. However, this should not be interpreted that Washington is therefore consequently responsible for a purely offensive approach of its allies at the cost of defensive measures. As a matter of fact, the United States has been the pioneer in development of missile defense and its proliferation, oftentimes receiving heavy criticism for this position. Every US administration from both American political parties since the Clinton administration in the 1990s has propagated and advocated the importance of missile defense principles to US allies. But, just as in the case of Japan, it is perceivable, that more and more countries will now shift their focus away from expensive BMD procurements, regardless of US promotion of such systems, and invest instead in cheaper offensive means with which they are more familiar.

To be clear, we are in no way advocating, suggesting, or predicting the collapse of American hegemony; we are stating that the Japanese military's pivot to address offensive capability is prescient and likely a harbinger for many, if not all, American allies. The extreme load of American foreign policy goals, its perceived

internal fragility, and the minimized national defense budgets frequently attributed to unanticipated COVID-19 costs are encouraging US allies to do so. Subsequently, they will likely increase their own offensive military capabilities at the cost of defensive measures in alignment with Japan's stated objectives. 🌟

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Lassoing the Haboob

Countering Jama'at Nasr al-Islam wal Muslimin in Mali, Part I

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Abstract

Since 2013, Mali has been the epicenter of violence in the Sahel region. However, over the last three years, Mali and neighboring Sahel states have seen a dramatic rise in violence and conflict. A significant percentage of this surge has been perpetrated by the group Jama'at Nasr al-Islam wal Muslimin (JNIM) or one of its subsidiary organizations. Another large percentage of Mali's violent attacks is the result of intercommunal conflict, which JNIM and other Islamist organizations often manipulate and enflame.

To develop solutions to Mali's crisis, it is first vital to understand its history and explain how a country that was once held up as an exemplar of democratic success in Africa could collapse with such rapidity. Additionally, the same factors that led to Mali's current disaster precipitated the creation of the extremist group JNIM. Therefore, it is similarly important to characterize and understand the group's history, organization, methods, and narrative. Only once armed with that understanding can one begin to develop possible strategies for countering JNIM and ameliorating Mali's troubled situation.

Introduction

The situation in Mali and the surrounding Sahel countries is dire and worsens by the month. Since 2015, violent activity involving extremist groups has doubled yearly. No other region in the world has seen a more rapid increase in jihadist attacks.¹ In Mali, a combination of ramifications from the Tuareg uprising in 2012, persistent ethnic and tribal conflict, and humanitarian considerations such as hunger and poverty have all led the country to a state of near-collapse. Foremost among the groups carrying out the violence and exacerbating the issues is JNIM, which, since its formation in March 2017, has been responsible for a 300-percent spike in violent attacks and a dramatic increase in civilian targeting. As of late 2018, JNIM had just under 2,000 fighters spread throughout the northern and central parts of Mali, but its attacks continue to increase and evolve in complexity and ferocity.² Understanding the history of the current crisis as well as characterizing its most dangerous extremist group, JNIM, is critical to any proposed method for ameliorating conditions in Mali.

The dangers that Mali's current problems present are potentially easy to understate. Mali may be geographically far from US interests, but despite its apparent isolation, JNIM is a threat to global security. In 2015, the US Department of State called a JNIM subgroup "one of the greatest near-term threats to U.S. and international interests in the Sahel."³ The director of the Africa Program at the Center for Strategic and International Studies described JNIM as "Sub-Saharan Africa's most formidable extremist group."⁴ On the level of humanitarianism, the Mali crisis—of which JNIM is both cause and effect—has left 440,000 displaced, 1.8 million facing food insecurity, and 5.1 million in need of humanitarian assistance.⁵ Moreover, the effects of JNIM's growth are not constrained to Mali, having spread to the neighboring countries of Burkina Faso and Niger, which witnessed a 7,000-percent and 500-percent increase in violent attacks respectively.⁶ As the primary al-Qaeda affiliate in Africa, JNIM has the connections, motives, and resources to, if unchecked, create an arc of instability extending west into Mauritania and east across the Sahel into the Horn of Africa, characterized by ungoverned land controlled by transnational criminals.⁷

Analysis of Mali's numerous issues, including the ever-growing threat of attacks by groups like JNIM, makes clear that finding solutions is impossible without first understanding their genesis. It can be tempting to only go back as far as the 2012 Tuareg rebellion, which created advantageous conditions for JNIM; however, doing so fails to address the underlying issues predating 2012. Furthermore, one must ask why a country that was, for a time, considered a model of stability and democracy could so quickly devolve into nation-wide ethnic, religious, and political violence. What are the primary causal factors for the violence and instability in Mali that subsequently gave rise to JNIM? Historically, the principal causes can be attributed to the repercussions of colonization, ethnic tensions, and the conflicts that have torn apart other Sahel countries—all of which served to create ideal conditions for the 2012 Tuareg uprising and subsequent near-destruction of the Malian state.

Colonization

As in so many African countries, the history of its current conflict has its roots in colonization. The colonization of what is today Mali began in the 1850s and was solidified in 1887 with the final annexation and creation of the Colonial State of French Sudan. The French remained in control of Mali until its independence in 1960.⁸ During that time, France saw to it that political and administrative power remained centralized in French hands. As a result, the local leaders' ability to govern atrophied, resulting in weakened governmental institutions leading up to and following independence. "Like other newly independent countries in Af-

rica, Mali faced enormous political, geographic and economic challenges at independence. . . . Unsurprisingly, state level institutions for governance and politics were underdeveloped or absent.”⁹ Like other African states, Mali’s colonial rule institutionalized ineffective governance, resulting in limited control over large parts of the territory, particularly the Sahelian North.¹⁰

Weak governance was not the only negative effect of French colonial rule that would haunt Mali after independence. Though the French sought to weaken Malian self-governance, they simultaneously ensured a political elite controlled what little power the French were willing to grant. The existence of this elite not only guaranteed that those outside the political class were ostracized from participation in the political process but also that those fissures became entrenched in Malian society. A unified national identity was impossible due to “repressive colonial policies, which until 1944-45, denied a political right to Africa except a small minority.”¹¹ These policies of repression and division were effective for maintaining power from the colonial perspective, but once the colonial powers departed in 1960s, they left Mali and other African countries with a debilitated government and divided state.

For Mali, colonial policies were still more divisive, as the elites were often chosen from a single tribe or ethnic group and usually from the cities where the elites congregated. This further disenfranchised “outgroups” like the Tuareg and people in remote areas. Interactions between north and south had been difficult preceding French arrival. However, “The French occupation even exacerbated these resentments. This is due to the attitude of the French during the colonial period, when they decided to educate a ruling class almost exclusively composed of majority black southerners.”¹² Ethnic divisions, particularly those that existed between the Malian people and the Tuareg, were useful for French control but damaging to postcolonial Mali.

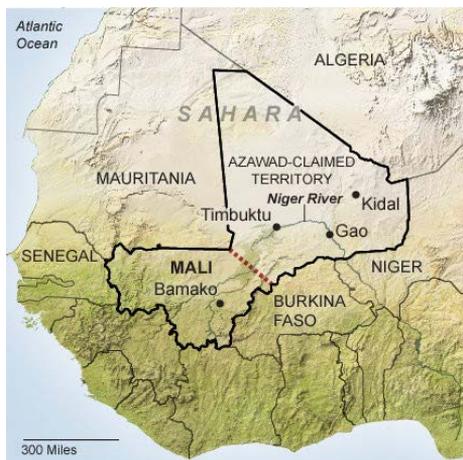
Ethnic Tensions

Ethnic tensions in Mali are the second root cause of today’s problems. Yet, it would be disingenuous to claim that those divisions started with colonization. Instead, the history of ethnic and tribal divisions stretches far into the past with the origins of groups like the Fulani—extending back many centuries—and evidence of complex “caste” systems originating in the eleventh century.¹³ As a consequence of these divisions and societal systems, various ethnicities and tribes have played important roles in Mali’s history even before the arrival of Europeans. However, as this work has already demonstrated, colonization served to exacerbate these divisions.

The most notable of the ethnic conflicts in Mali is the one between the Tuareg and the rest of Malian society. “Although the Sahara-Sahel region contains numerous ethnic groups, the historical migratory range of one particular group, the Tuareg, seems to define its core.”¹⁴ For decades the Tuareg, mostly of North African and Berber descent, have found themselves at odds with sub-Saharan ethnic groups. Historically, the “White” Tuaregs and Arabs have considered themselves superior to other, “Black” Malians—even so far as participating in the trans-Saharan slave trade, enslaving “blacks” and working with European powers when possible. Many also harken back to a (mostly fictional) independent state of “Azawad,” which is comprised of the three modern-day Malian provinces of Timbuktu, Kidal, and Gao (fig. 1). However, since independence in 1960, the power has shifted inside Mali’s borders from the Tuareg communities in the North to the southern centers of political power.

The decision to marginalize the north after independence, which has been illustrated by the will of the central state to affirm its territorial integrity all over the country, added to the historical bias between northerners and southerners. Southern populations, indeed, have a profoundly negative perception of the north. . . . The role of some northern nomadic groups in the trans-Saharan slave trade also helps to explain the historic and long-standing distrust between north and south.¹⁵

Since then, this power shift has resulted in racially motivated attacks against the Tuareg and the political and economic marginalization of northern populations.



(image by The Tamoudré, <https://web.archive.org/>)

Figure 1: The traditional location of the Azawad

As a newly independent Mali progressed, so did governmental and societal prejudices against communities in the North. Northerners and Tuaregs struggled

to find a place within the new Malian state. As a result, they were consistently marginalized from positions of power, and “unequal access to state resources can be seen as the result of a divide-and-rule strategy implemented by the Malian government.”¹⁶ These tensions would result in four significant Tuareg rebellions in 1963, 1990, 2006, and most recently, in 2012. Even after the last uprising ended in 2015, the Malian army has been accused of extrajudicial killings of mostly Tuareg and Arab men for alleged participation in rebel groups. Similarly, “Tuareg separatists . . . have also been implicated in numerous serious abuses.”¹⁷ Unfortunately, the reality is that most of these issues have been born of a systemic ostracization of one particular ethnic group.

Despite the multiple Tuareg uprisings, there was a brief time when Mali was considered a paragon of democratic potential. In 1968, a young army lieutenant, Moussa Traoré, took power in a coup d'état and began a 23-year reign. Col Amadou Touré staged another coup in 1991, but rather than hold power like his predecessor, he returned it to the civilian government and allowed Mali to become a functioning democracy. The success of presidential elections in 1992 and again in 1997 and 2002 (the latter of which returned Amadou Touré to power as a civilian) turned Mali into a darling of the West and a symbol for how democracy could look in Africa.¹⁸

Unfortunately, under the surface, the same ethnic tensions still simmered. Even during the 1991 coup and democratic transition, the Malian military was engaged in fighting a Tuareg uprising in the North. Bamako and the Tuareg separatists signed a peace accord in 1996, but the issues at the root of the conflict remained unresolved and were never far from the fore of the nation's political climate. The “succession of crises in the north, alleged preferential treatment and fears of new military involvement fed continuous southern distrust regarding Malian's irredentist north. Meanwhile, people in the north continued to suffer from developmental inequalities and internal divisions.”¹⁹ Mali's “Tuareg problem” was an intractable issue with no clear resolution on the horizon and posed a constant threat of a return to violence.

Though Tuareg marginalization has had the most impact on Malian history and serve as the roots of the crisis today, it is not the only example of ethnic tensions contributing to the violence. Notably, the persistent conflict between the pastoral communities such as the Fulani tribes and sedentary agricultural communities like the Dogon has resulted in a dramatic increase in violence and provided a useful recruitment tool for extremist organizations like JNIM. “In recent months, the incidence of massacres has increased rapidly. Violence is now taking place on a different scale and the (ethnic) nature of these attacks is no longer in

doubt.”²⁰ While the intensity of these clashes may be a relatively new phenomenon, warfare between ethnic groups in the Sahel is not.

Taking the example of the Fulani people, though their origins remain unknown, history does record the creation of Fulani states beginning in the eighteenth century. In fact, these Fulani states were the result of a series of ethnic and religiously based uprisings by Fulani against various West African governments. The most prominent of these states was the Sokoto Caliphate, which was created in 1804 by a Fulani scholar, Usman dan Fodio. To build his Fulani empire, dan Fodio “recruited Fulani nomads into a jihad that overthrew the Muslim Hausa Emirs of the Sahel and attacked the non-Muslim tribes of the region in the first decade of the 19th century.”²¹ As with many of the ethnic groups in conflict in Africa, the Fulani were not tied to national borders. The Sokoto Caliphate was in modern-day Nigeria, but its rise inspired similar Fulani states in Guinea, Senegal, and Mali. One such state, the Macina Empire, gives its name and historical gravitas to a JNIM subgroup, the Macina Liberation Front (MLF).²² All these states brought the Fulani people into conflict with other groups in the region. There are some scholars who claim that some of today’s conflicts are continuations of those begun in the nineteenth century.²³

Bad Neighbors

If conflicts between rival tribes can have a destabilizing effect on a country, violent conflicts in neighboring countries can play a disastrous role as well. Unfortunately for Mali, it lives in a region where conflict is endemic, especially as a result of colonization and lingering ethnic tensions and violence. While any number of wars has had a deleterious effect on Mali’s history, it is the civil wars in Algeria and Libya that have been the most damaging to Mali and that truly lie at the root of Mali’s present-day problems.

Algeria

The 1990s in Algeria was a time of war, terror, and death. The Algerian Civil War was fought between the Algerian central government, represented by the *Front de libération nationale* (FLN), and various rebel groups and militias, starting in late 1991. Since independence from France in 1962, Algeria had been under a one-party dictatorship that funneled money and power to a small group of individuals who comprised the Algerian elite. Unfortunately, the inequality and poor conditions such an arrangement engendered chafed the working classes for 20 years. Throughout the 1980s, the influx of fighters returning from the war against the Soviets in Afghanistan further radicalized Algerian society.²⁴

The same period saw the return of an estimated 1,000 Algerians who had gone to join the Afghan mujahedin in the fight against the Soviet invasion of their country. Overall, it is believed that between 3,000 and 4,000 Algerians had gone through the training camps in Afghanistan and Pakistan.²⁵

The dissent culminated in severe riots in 1988 that spread throughout the country, giving birth to a host of political, ethnic, and religious opposition groups.²⁶ Most formidable among these new entities was a fundamentalist organization called the *Front Islamique du Salut (FIS)*.

Established in 1989, the FIS was the main opposition group to the Algerian central government, and though it was an Islamist organization, it originally only sought legitimacy via electoral victory. This victory came in late 1991, when the FIS swept many local races and found itself on the verge of political ascendancy in Algeria. However, in January 1992, the Algerian military intervened, nullified the election, and seized power. The new military junta killed or imprisoned many FIS leaders, and as a result, “vindicated those radicals among [the Islamists] who held that the violent overthrow of the secular regime in the tradition of the Afghan jihad would be the only way to obtain the establishment of a government based on Islamic principles.”²⁷ The coup proved to be the spark that ignited the civil war.

The conflict between the FIS and the government of Algeria would quickly explode into a multifront civil war that lasted until 2001 and caused the deaths of more than 100,000 people.²⁸ Despite being an internal Algerian conflict, the Islamic fundamentalist nature of FIS played a critical role in inviting outside organizations like al-Qaeda to play a role. Recognizing the opportunity posed by violence, al-Qaeda moved to support its fellow Islamists: “al-Qaeda’s infiltration of the Algerian Islamists can be explained by the latter’s sophisticated underground organization in Europe. By cultivating their leaders and providing training and finance, al-Qaeda absorbed this ready-made network.”²⁹ However, once it had a foot in the door, al-Qaeda was not content merely to support FIS financially.

The violence and depravity of the war as well as the influence of al-Qaeda began to influence the FIS’ most extreme elements. Notable among these groups was the hardline *Group Islamique Armee (GIA)*. Originally, the GIA was part of the FIS but broke with the latter organization because of its emphasis on electoral politics and its declared uneasiness with violent resistance to the government.³⁰ In 1993, the GIA split completely from the FIS, citing the latter’s willingness to negotiate with the Algerian government and pursuit of limited objectives.

For the GIA, the goals put forth by the FIS were no longer sufficient. Simply regaining power in the Algerian government would not bring about the hardliners’ lofty goals. Moreover, the GIA saw anyone who stood in the way of this ideal as an enemy.

Heavily influenced by returning veterans of the Afghan jihad, the GIA aimed at more than reforming the state along the lines of the Islamist agenda. Rather, it sought the wholesale transformation of society, viewing those who did not share its convictions as apostates from Islam who could be legitimately killed.³¹

In support of this ideology, the GIA carried out a wave of terror and civilian attacks that continued through the remainder of the war. In some cases, the GIA would even find itself pitted against the FIS and its allies, particularly as war wound down and these other organizations began to seek a peaceful resolution.

However, as the war progressed into the late 1990s, the brutality of the GIA's attacks against civilians began to affect the organization's support and popularity. "It's bloody massacres of civilians caused public support for the group to dwindle and persistent rumors of the group being manipulated by the Algerian intelligence agencies further discredited it."³² As a reaction to this loss of prestige and in anger at the indiscriminate targeting of Muslim civilians, al-Qaeda abandoned the GIA and encouraged former GIA commander Hassan Hattab to leave as well. In 1998, Hattab and approximately 100 former GIA members broke away to form the *Groupe Salafiste pour la Prédication et le Combat* (GSPC). Though not officially an al-Qaeda affiliate, by 2002, the GSPC had maintained links with al-Qaeda and developed into the strongest extremist group in Algeria.³³

The GSPC remained active for the next ten years, carrying out attacks in Algeria, Mali, Mauritania, and Libya. In the beginning, the GSPC maintained links to al-Qaeda, but Hassan Hattab saw a declaration of allegiance to be a potential distraction. Though he espoused the Salafi jihadist ideology of al-Qaeda, Hattab wanted to focus all his efforts on what he saw as the true enemy—the Algerian government—and to avoid a struggle against any foreign power. "As a result, . . . Hattab was excluded from the GSPC leadership and replaced by Nabil Sahraoui, who was himself succeeded, after his death in June 2004, by Abdelmalek Droukdel."³⁴ Droukdel immediately applied to be an al-Qaeda affiliate. In 2007, al-Qaeda announced their newest affiliate in the Sahel, al-Qaeda in the Islamic Maghreb (AQIM), the rebranded incarnation of the GSPC.³⁵

After joining al-Qaeda, AQIM divided into two branches: one in northeastern Algeria and the other in the Sahel. The first branch, AQIM in Kabylia, remained under Droukdel and continued the group's efforts in Algeria. However, the southern command, AQIM–Sahel (also known as AQIM–Sahara), would fall to Mokhtar Belmokhtar, turning its focus south of Algeria to the Sahel, specifically, to Mali. Belmokhtar quickly began to solidify AQIM's hold on northern Mali through alliances with local extremist organizations, integration into local society, and activation of cross-border smuggling routes.

For AQIM–Sahel, alliances were vital to their survival. In 2011, AQIM formalized an alliance with the *Mouvement pour l'unicité et le jihad en Afrique de l'Ouest* (MUJAO) as part of an effort “to accommodate the local population in order to have it join the organization, especially through a strategy of promoting Tuareg leaders to key positions.”³⁶ AQIM's other important ally was Ansar al-Din (AAD). Created in 2011 by Iyad Ag Ghali after the failed Tuareg rebellion in 2006, AAD's goal was to impose sharia across Mali. For AQIM, it represented a strong ally with identical religious ideals as well as local legitimacy.

All three groups had different origins and motivations. Yet, together they shared the same goal along with AQIM in Kabylia: to turn northern Mali and the Sahel into a Salafi sharia Islamic state and use it as a platform for the organization's operations.³⁷ With AAD and MUJAO as allies, AQIM had legitimacy from local ethnic leaders and, thus, had the makings of a powerful force with which to pursue its goals.

Not all the Tuareg in northern Mali were as interested in partnering with AQIM as was the MUJAO. The *Mouvement National pour la liberation de l'Awazad* (MNLA) was a secular coalition of Tuareg militias, all of which sought independence for the Tuareg homeland in Mali, traditionally called Azawad (fig. 1). The MNLA did not share the Salafi jihadist motivations of MUJAO but agreed on Tuareg autonomy and, thus, had some links with the other group: “Though not ideologically aligned, there are shared interests and perhaps a pragmatic alliance, between AQIM and the members of the Tuaregs, including tribal ties and smuggling.”³⁸ AQIM pursued a strategy of assimilation and integration into local societies. This ensured that AQIM could be cast as ally and protector of the local community, thus, bringing MNLA solidly into its sphere of influence.

At the moment of its naissance in 2007, AQIM lacked a consistent source of funding. The group's expansion into the Sahel, however, promised new revenue streams. The region represents a channel for criminal trafficking, which offered plentiful modes by which AQIM could fill its coffers.³⁹ Arms, drugs, cigarettes, and even people were available for trafficking to and from AQIM's bases in northern Mali. With help from alliances that had influence in local operations, trafficking was easier, safer, and far more lucrative. Starting in the early 2000s, AQIM also began kidnappings for ransom operations and established a “kidnapping industry” in the Sahel. Between 2003 and 2012, AQIM earned between approximately 150 million USD in ransoms.⁴⁰ Some of this money funded operations, but much of it was distributed among the population. Stealing from the government and giving to the people served to give AQIM a “Robin Hood” façade and further ingratiate the jihadist groups into Malian society. Still, by 2010, AQIM and its allies did not represent an existential threat.

Libya

Starting in the early 1970s, many of the Tuareg who had been alienated by the Malian government went to work for Libyan dictator Mu'ammar Gadhafi, who, for more than 30 years, hired them as mercenaries and paramilitary troops. However, in 2011 when the Libyan Civil War resulted in the toppling and execution of Gadhafi, those same Tuareg fighters returned to Mali. "Estimates of the number of returning Tuareg mercenaries ran as high as 4,000 . . . these fighters brought arms and military experience with them and by late 2011, had reignited the Tuareg separatist movement."⁴¹ Though this influx of battle-hardened fighters contributed directly to the country's destabilization in 2011, it was not the only problem exported by the Libyan Civil War.

As fighters came back to Mali from Libya, most rejoined militias and armed groups. With them they brought experience, tactics, and often an Islamist ideology that fit in perfectly with AQIM's objectives. However, arguably more important to their cause was not the additional personnel but the weaponry they brought with them. In Mali, "transfers from Libya qualitatively enhanced the military capacity of nonstate opposition groups by supplying military weapons that had previously been unavailable or in short supply."⁴² By late 2011, thousands more fighters had access to armament like antitank weapons, mortars, and heavy machine guns. The alliance of AQIM-Sahel, AAD, and MUJAO along with secular Tuareg groups like MNLA was prepared to launch what would be the most devastating of the Tuareg uprisings in Mali's history.⁴³

With the AQIM, AAD, and Tuareg alliances in place and incited by the returnees from the Libyan Civil War, the stage was set for the Tuareg uprising. The violence began in January 2012, when MNLA and AAD forces attacked Malian army outposts in the northern cities of Kidal, Tessalit, and Aguelhok. The unprepared Malian defense forces put up a token defense but, in the end, were caught off guard by the rebel advance: "the government had failed with the ammunition and other logistical support they needed."⁴⁴ Within two months, most of Kidal Province was under separatist control.

The state of complete disarray into which the rebellion had thrown the Malian government in Bamako did nothing to ameliorate the situation. The Malian government was completely surprised at the speed of the rebellion and the weakness of its own forces. President Touré—who was faced with an incompetent military, a looming presidential election, and many political peers who viewed negotiations with the Tuareg as treasonous—failed to react in any meaningful way as the rebel army continued its march south. Protests erupted outside the presidential palace

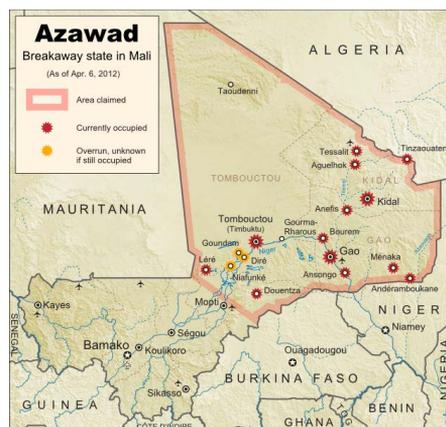
as a result of the people's anger with the government's handling of the situation; yet, the government remained paralyzed.⁴⁵

In response to rising fear and tension in the capital, junior army officers staged a coup d'état and stormed the presidential palace on 22 March 2012. They chased President Touré into exile and declared the dissolution of all government institutions, accusing the Touré administrations of "failing to responsibly combat the growing rebellion."⁴⁶ The international community was swift to condemn the coup and maintained "pressure on the coup leaders and the military to respect civilian leadership, to withdraw completely from politics and to permit the full restoration of a democratically-elected government."⁴⁷ On 6 April, the coup leaders signed a power-sharing deal that brought government leadership back to Mali but, by that time, whatever chances there may have been to respond militarily to the rebellion had been lost.

By April, four months after hostilities commenced, the MNLA controlled 800,000 square kilometers of Mali and 10 percent of the population and had accomplished its goals (fig. 2).⁴⁸

As a consequence of the instability following the coup, Mali's three largest northern cities, Kidal, Gao, and Timbuktu were overrun by the rebels on 3 consecutive days. On April 5, 2012, after the capture of the town of Duwenza, the National Movement for Liberation of Azawad, or the MNLA, said that it had accomplished its goals and called off its offensive. The following day, it proclaimed independence of their homeland, Azawad, from Mali.⁴⁹

Ostensibly, the Tuareg uprising of 2012 could have been over. The Malian army was beaten, and the Tuareg finally had their homeland. However, a free Azawad was not the only goal of AAD and AQIM.



(image modified from original by Orionist, Wikimedia)

Figure 2: MNLA declared state of Azawad as of 6 April 2012

Almost immediately after declaring the uprising's objectives accomplished, the MNLA began to lose power over their territorial gains. AAD and MUJAO, backed by AQIM, were not satisfied with merely controlling Azawad but instead began to work toward their real objective, the institution of sharia law. In their drive to establish a sharia state, AAD and MUJAO turned on the secular MNLA. "The first clashes between the MNLA and Ansar Al Dine reportedly occurred on 8 June 2012 in the surroundings of Kidal, triggering a parallel non-international armed conflict between Tuareg and Islamist rebels. By the end of the month, Ansar Al Dine, MUJAO and AQIM expelled the MNLA from major cities in the north."⁵⁰ By December, many of the Tuareg chose to side with the Malian government rather than subject themselves to the harsh rule of the jihadists. With the secular Tuareg out of the way, AAD and its allies saw the opportunity to carry their fight beyond Azawad and on to Bamako itself (fig. 3).



(image modified from original by Orionist, Wikimedia)

Figure 3: Furthest extent of jihadist rebel territory before French intervention

While watching the events of 2012 unfold, the French government was debating intervention and at what level. In December 2012, the United Nations Security Council unanimously passed Resolution 2085, authorizing the deployment of what was named the African-led International Support Mission to Mali. The French planned to join the UN mission in February 2013. However, on 8 January 2013 the jihadist forces advanced further south, passing the Niger River bend, taking the town of Konna and, for the first time, threatening Bamako. As the paradigm had now officially changed from "another Tuareg uprising" to a full-scale jihadist assault, France chose to intervene.⁵¹

French forces, along with remaining Malian personnel, executed Operation Serval in three phases from 11 January to 1 May 2013 (fig. 4). Phase 0 was a de-

ensive maneuver to block the jihadist advance and retake Konna. Phase 1 involved pushing jihadist forces back to their pre-2013 positions north of the Niger River bend, and Phase 2 was clearing the Gao region up to the Ifoghas Mountain. By May, French forces had pushed AQIM almost to the border with Algeria and were prepared to relinquish military control. Both French and Malian troops were to be integrated into the larger stabilization force of the UN *Mission Multidimensionnelle Intégrée des Nations Unies pour la Stabilisation au Mali* (MINUSMA). French forces have remained in Mali since 2013 as Operation Barkhane augments and assists MINUSMA as a quick reaction force.⁵²

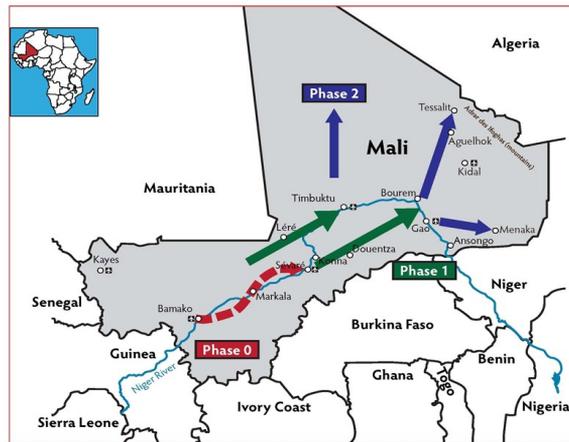


Figure 4: Operation Serval

Since Operation Serval ended, the international forces in Mali have taken on two military missions: UN peacekeeping under MINUSMA and regional French-led counterterrorism operations. Despite the success of Operation Serval and the continued presence of international forces, the jihadist situation has festered since 2013. The vastness of ungoverned reaches of northern Mali means the MINUSMA, the French, and the nascent refashioned Malian security forces have limited ability to respond to attacks. On 20 June 2015 a peace deal was signed between the Government of Mali (GoM) and the umbrella secular Tuareg organization, the Coordination of Movements for Azawad. However, the terms of the agreement have been seen as foreign-imposed, and thus far, the GoM has proven too weak to enforce the provisions.

All the major provisions had yet to be implemented: the application of decentralization measures, the establishment of interim authorities or the restoration of state authority in the north, the launch of mixed patrols, the disarmament, demobilization and reintegration (DDR) process, and security sector reforms (SSR) have not produced meaningful progress beyond symbolic gestures.⁵³

Even after Operation Serval, and as time went on, the GoM showed itself unable to maintain governance in the northern parts of the country and unable to enforce or implement the provisions of the 2015 peace accords.

The events of 2012 revealed Mali for what it really was. What had been held up as a model for how African democracies could be, instead proved to be a façade behind which were weak institutions, mismanagement, “big man” interests, and deep-seated racial and ethnic cleavages.⁵⁴ The chaos caused by the crumbling of this façade proved to be the perfect launching pad for the jihadist groups that, in time, would compose JNIM. Partially as a result of government inability to preserve security, attacks by jihadist groups rose steadily after 2015. In 2016, there were 257 attacks attributed to jihadist groups and 276 attacks in 2017.⁵⁵ Notable among these attacks were those directed at the Radisson Blu Hotel in Bamako and other hotels in Burkina Faso and Côte d’Ivoire. AQIM and its allies claimed responsibility for those attacks, which killed 66 people. In 2017, those jihadist groups, most of which had been involved in fighting since the early 2000s, united under a single banner: that of Jama’at Nasr al-Islam wal Muslimin.⁵⁶

Jama’at Nasr al-Islam wal Muslimin Today

As discussed earlier, JNIM is an alliance of four al-Qaeda-linked Salafi jihadist groups. The unification was declared via a video released 2 March 2017, which featured leaders of the four groups—all of whom announced the creation of JNIM. In the video (from left to right) are Amadou Diallo (alias Amadou Koufa), leader of the MLF; Djamel Okacha (alias Abu al-Hammam), leader of AQIM-Sahel; Iyadh Ag Ghali (alias Abu al-Fadhel), leader of AAD; Muhammad Ould Nouini (alias Hassan al-Ansari), deputy leader of al-Mourabitoun (under Mokhtar Belmokhtar); and Abderrahman al-Sanhaji (alias Abderrahman al-Maghrebi), deputy leader of AQIM-Sahel.⁵⁷



(screen capture by Alwatan News)

Figure 5: Video of 2 March 2017, announcing the creation of JNIM

In the video, Iyadh Ag Ghali, who also stepped into the role of JNIM's leader, spoke and declared the existence of JNIM and declared allegiance both to AQIM and al-Qaeda Central. "On this blessed occasion, we renew our pledge of allegiance to our honorable emirs and sheikhs: Abu Musab Abdul Wadud (aka Abdelmalek Droukel), our beloved wise man Sheikh Ayman Zawahiri (head of al-Qaeda Central), and from him to the Emir of the Islamic Emirate of Afghanistan, Haibatullah (leader of the Afghan Taliban), may Allah preserve them and grant them victory." With this declaration, Iyadh Ag Ghali and the rest of the terrorist leaders present in the video solidified their place in the overall al-Qaeda structure. JNIM, as a union of four other groups, remains under the authority of AQIM, which is, in turn, under al-Qaeda Central.⁵⁸

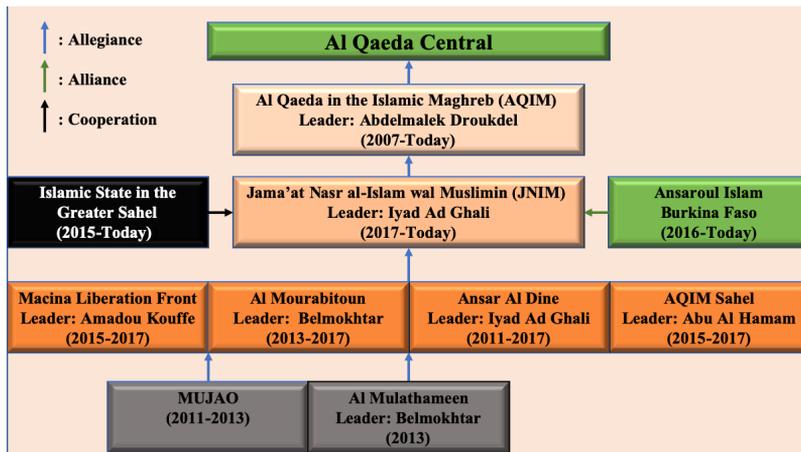


Figure 6: Al-Qaeda and JNIM organizational structure

Al-Qaeda's Grand Strategy

To effectively strategize methods for countering JNIM, it is first important to investigate the group's goals, motivations, and resources. There must be a clear understanding of how the organization has been successful since its creation in 2017 and how its component groups were successful previously. Yet, it would be negligent to first analyze JNIM or any of its subgroups without looking at the bigger picture and analyzing its "parent" organization: al-Qaeda. It is only with a clear understanding of al-Qaeda's history of success that we can effectively frame JNIM's contemporary effectiveness.

Over the last 20 years, al-Qaeda has been the most recognizable and infamous terrorist organization on the planet. The group has authored thousands of violent attacks, spurred dozens of offshoot affiliates and copycat groups, and even created rival Islamic extremist organizations. Despite all this, and subsequently spending

the last 20 years at war with the world's most effective militaries, the group continues to carry out its operations. Moreover, the success of foreign al-Qaeda affiliates illustrates that the group has become a global threat. Analyzing the tools that the organization has used to succeed will also give us a better understanding of how to combat al-Qaeda. Perhaps more importantly, it may help intelligence agencies recognize what strategies they will likely employ in the future. This article argues that the main factors contributing to al-Qaeda's continued global success are decentralization, effective narratives and propaganda, and the specific targeting of locations with a preexisting history of instability and violence.

Before we can discuss how al-Qaeda has achieved its success, we must first define *success*. If the term is to be defined as the completion of each organization's stated goals, none of these groups have yet succeeded. For example, "For al-Qaeda in the Islamic Maghreb . . . the goal is to overthrow regimes in North Africa, especially Algeria, and replace them with an Islamic regime."⁵⁹ Moreover, if one takes the global end state as described by al-Qaeda's leader Ayman al-Zawahiri: "It is the hope of the Muslim nation to restore its fallen caliphate and regain its lost glory,"⁶⁰ then al-Qaeda has not even come close to accomplishing its goal.

As of today, the regime in Algeria remains. AQIM and AAD came close to toppling the government in Bamako, but it remains (with Western support), and al-Zawahiri is still far from restoring his fallen caliphate. Thus, to examine al-Qaeda's successes, I will need to define it in my own terms. For the purposes of this article, *success* is defined using three criteria: (1) relative freedom to carry out violent attacks with low probability of state interference, (2) steady sources of recruitment and resupply, and (3) high probability of continued survival of the group and its leaders. I will show that due to the success factors listed above, al-Qaeda, as a global organization, has been successful.

Decentralization

The first key to al-Qaeda's success is its ability to operate in a decentralized fashion. Currently, it has a global network of affiliates, allies, and supporters across the planet, including at least five major regional affiliates and more than 14 allied terrorist groups.⁶¹ However, this was not always the case. Before 2001, al-Qaeda was a more centralized organization with most of the operational control falling under Osama bin Laden. Then, as pressure from the United States and its allies mounted, the organization was forced to adapt and change how it did business: "In the following years (after 2001), al-Qaeda adapted to increased pressure, especially from the U.S. military in Afghanistan and Pakistan, by further decentralizing its decision-making and operational planning. Bin Laden recognized regional groups that became their own centers of operation."⁶² As it evolved, the organiza-

tion's focus naturally shifted to a more decentralized operational model. It began to create affiliates like al-Qaeda in the Arabian Peninsula (AQAP), AQIM, and al-Qaeda in Iraq (AQI) and allowed these subordinate organizations to conduct attacks autonomously, establish interactions among themselves, and set up further alliances in still more regions and countries.

Before continuing, it is important to identify the nature of the connections that largely comprise the global al-Qaeda network. Broadly, the organization can be split into four categories: al-Qaeda Central, affiliates, allied groups, and inspired networks. al-Qaeda Central is the group's leadership nexus, commanded by al-Zawahiri and primarily located in Pakistan. One can argue as to which organizations fall into the categories of affiliated groups and which are merely allies; however, in general, affiliates are formal yet geographically separated branches of al-Qaeda. AQIM, AQIS, AQAP, and al-Shabab all fall into this category. Third are the allied groups "that have established a direct relationship with al-Qaeda but have not become formal members. This arrangement allows the groups to remain independent and pursue their own goals, but to work with al-Qaeda for specific operations or training purposes when their interests converge."⁶³ Lastly, there are the inspired groups, which do not have any formal contact with al-Qaeda but have been inspired by the message, actions, or branding of al-Qaeda as a whole.

All these entities have ties of varying degrees to al-Qaeda Central. Furthermore, all these organizations, particularly the affiliates, contribute to the overall success of al-Qaeda as a whole by virtue of their links to the organization. AAD falls into the third category of al-Qaeda allied groups. Though al-Qaeda would classify AAD as an ally rather than an affiliate, according to the US Department of State, "AAD is an organization operating in Mali which cooperates closely with AQIM, a designated Foreign Terrorist Organization . . . AAD has received support from AQIM since its inception in late 2011 and continues to maintain close ties to the group. AAD has received backing from AQIM in its fight against Malian and French forces."⁶⁴ This means that AAD has autonomy to carry out its own main objectives—fighting the French and local Malians—while still receiving training, funding, and legitimacy from its links to al-Qaeda.

How does this translate into a tool for success for the global al-Qaeda enterprise? In addition to making worldwide operations possible, decentralization can be effective in spreading the al-Qaeda brand: "What gives al-Qaeda its global reach is its ability to appeal to Muslims irrespective of their nationality, giving it unprecedented reach. It can function in East Asia, in Russia, and the heart of Europe, in sub-Saharan Africa and throughout Canada and the US with equal facility."⁶⁵ Working with allies like AAD means that the al-Qaeda brand is being carried to many countries and peoples. Furthermore, it is heightened by local in-

dividuals who carry the message to their own towns and villages. This gives al-Qaeda global reach and influence that translates into recruitment potential and local support; thereby, providing AAD and, by consequence, al-Qaeda with one of the criteria of success: a steady source of recruitment and resupply.

However, arguably the greatest benefit of decentralization, whether through allies like AAD or regional affiliates like AQIM, is simple strength and resilience. By having a solid global network, al-Qaeda is stronger, harder to fight, and more tactically and strategically effective: “al-Qaeda’s expansion is made much more dangerous by the existence of such relationships . . . It is now sharing finances, fighters, and tactics across large geographic areas. . . the entire network is stronger.”⁶⁶ This means that not only does decentralization aid in recruitment and spreading narrative but also gives the group more freedom to carry out attacks in myriad locations, while simultaneously making the al-Qaeda leadership more protected from the consequences of those attacks.

Conflict Locations

The second manner in which al-Qaeda has found success also stems from decentralization. In its need to establish geographically distant alliances, al-Qaeda consistently chooses locations where there is a preexisting history of instability and violence: “al-Qaeda has flourished in an environment of weak or quasi-states that are undergoing disruptive political or social change. Vast swaths of political instability in many parts of the world—particularly in Africa and Asia—have provided a breeding ground for al Qaeda and its analogues.”⁶⁷ These locations are rife with poor governance, armed groups, and militias not tied to the state but which are supplied with unregulated weapons. These conditions make for the perfect foundation of al-Qaeda success as defined above.

If one examines al-Qaeda’s main affiliates—AQAP, AQIS, AQIM, and al-Shabab—as well as most of its allies, like AAD, they all came into being amid conditions of conflict and unrest in their respective locations. This is not to say that al-Qaeda has not set up cells and alliances in places that are more stable. However, it is in conflict zones that the local al-Qaeda affiliates flourish. Thus, due to widespread war and civil conflict, postcolonial Africa has presented a perfect growth environment for al-Qaeda Central and has been its breeding ground for nearly 30 years.

I have already shown in detail how AQIM and its subsidiary AQIM–Sahel began thanks in large part to the devastation the Algerian Civil War caused. From that conflict and due to the simple geographic fact that vast swaths of the Sahel are ungovernable, AQIM’s presence in the region represents one of al-Qaeda’s greatest successes. The Sahel grants AQIM and AQIM–Sahel relative freedom to

conduct violent attacks as evidenced by the dramatic increase in the number of and countries in which they have been able to strike. The war provided the GIA and, subsequently, the GSPC and AQIM with a steady source of angry and violent recruits as well as access to the Islamist networks of North Africa and Europe. Finally, until recent military operations by Western countries, the vast deserts of the Sahel have provided ample protection that further enhanced the probability of the continued survival of AQIM and its leaders. Thus, one can safely say that using the Algerian Civil War to establish an African affiliate was a highly successful move for al-Qaeda.

Propaganda and Narrative

The third and final method by which al-Qaeda is able to succeed regularly is the use of effective narratives and propaganda networks. We have already seen how al-Qaeda used the preexisting hatred and rivalries during the Algerian Civil War to gather recruits to its name. We also saw how AAD used its affiliation with al-Qaeda to gain prestige and legitimacy, while al-Qaeda Central used AAD to spread its brand. However, the propaganda networks are not limited within the bounds of war nor are they static in their growth, evolution, or distribution: “Over the years, al-Qaeda and its fellow travelers have transitioned to new platforms and mechanisms as circumstances have changed . . . in late 2012, the extremists’ migration to social media such as Twitter and beyond accelerated.”⁶⁸ Al-Qaeda and its allies and offshoots made use of its already decentralized structure to quickly and poignantly spread its narrative globally.

In the case of JNIM, each of the groups that make up the organization have unique narratives (to be discussed later) but also simultaneously have signed on to support, propagate, and make use of the overarching al-Qaeda narrative. JNIM has consistently propagated “its intention to destabilize local governments in favor of their interpretation of sharia law . . . JNIM’s ideology aligns with that of all al-Qaeda affiliates, preaching vehement antipathy toward the West and local governments that collaborate with western countries.”⁶⁹ While in the Malian context, narrative may translate to specific objectives like attacking French or UN forces, the fundamental ideology remains connected to al-Qaeda.

There is not an affiliate that has not participated in the pervasiveness of al-Qaeda propaganda, though some have done so with greater success than others. For example, AQAP has been the most prolific affiliate, with products that range from magazines to Twitter accounts, targeting anyone who may be vulnerable to radicalization, all with the goal of attracting recruits and support.

al-Qaeda uses a combination of “written and audiovisual messages that [transcends] both technology and literacy barriers.” Most recently, al Qaeda added online magazines such as Inspire, launched in 2010 in several languages... The ease of disseminating the magazine via the Internet, it has become a vital recruitment method for al-Qaeda.⁷⁰

These tactics have been absolutely fundamental in spreading al-Qaeda and building its recruitment base. Narrative as a tool for motivation, recruitment, and group identity builds upon the other keys to success, is by far the most shareable, and, thus, represents the most formidable of al-Qaeda’s global strategies.

Al-Qaeda’s keys to continued global success have been decentralization, effective narratives and propaganda, and a focus on locations where there is a preexisting history of instability and violence. With this model, al-Qaeda has relative freedom to carry out violent attacks with low probability of state interference, steady sources of recruitment and resupply, and high probability of continued survival. Moreover, given the efficacy of these strategies, it would not be difficult to assess that al-Qaeda will continue using them to prolong its achievements. Those same strategies, particularly when applied to affiliates like JNIM, take a slightly different shape as the organization both uses those strategies and benefits from them.

Jama’at Nasr al-Islam wal Muslimin: Strategic Estimate

Narratives and Objectives

Because JNIM is an alliance of four separate groups, any analysis of its objectives must, by necessity, consider JNIM as a whole and simultaneously examine each groups’ unique goals as well. Similarly, when dissecting the groups’ narratives and propaganda efforts, it is important to view JNIM’s united narrative as well as the individual narratives of the groups of which it is comprised. Also, as al-Qaeda narratives and objectives are inextricably linked as keys for success, so are they for JNIM. Therefore, this section will first look at JNIM as a whole then dissect it and investigate the goals and narratives of its four subgroups: AQIM, the MLF, AAD, and al-Mourabitoun.

JNIM’s foundational objectives are in line with those of al-Qaeda. As an al-Qaeda affiliate, JNIM plays an important role in carrying out al-Qaeda’s ideology in Africa. Though JNIM may act with substantial autonomy, its objectives remain those of a Salafi jihadist group: “The group’s goals and ideological basis are closely aligned with those of AQIM and it seeks to build up a Salafi-Islamist state while restoring the caliphate...and effectively implement Shariah law.”⁷¹ While this is al-Qaeda’s grand strategic vision for JNIM, the alliance’s unique goals involve the drive to “expand its presence over larger territory and train militants against

JNIM's enemies, while preserving relations with local communities."⁷² To peruse that objective, JNIM must use its individual groups and their corresponding unique objectives.

JNIM's narrative is strongly reliant on a combination of its affiliation with al-Qaeda and its ties to local populations. The organization also relies heavily on the idea of unity—the notion that once disjointed and fragmented groups have now joined together under “One banner, one group, one Emir.” In a place where ethnic tensions and violence are a constant threat and marginalization from the government with reprisals from the military are commonplace, the slogan of unity between groups of different backgrounds and ethnic compositions is extremely impactful.⁷³

The narrative and propaganda efforts do not stop with preaching unity, however. Like AQIM and other affiliates, JNIM has its own propaganda arm, *az-Zallāqa*, with which the group preaches several main narratives: martial prowess and jihad, victimization of Muslims (mostly in the Sahel), and dehumanization of the enemy.⁷⁴ *Az-Zallāqa* often produces high quality publications, including images of training camps, drone shots of military formations, and videos of successful operations all interwoven with text, speeches from terrorist leaders, and eulogies of fallen terrorists—all with the objectives of recruitment, awareness, and indoctrination.

Other important pieces of JNIM's narrative are a desire to maintain good relations with local populations and to be seen as an alternative to the national government for defense and income. Part of JNIM's efforts to integrate locally is to use revenue gained from criminal operations to pay fighters, offer financial incentives to impoverished Malians, and provide basic services in places that the government cannot.⁷⁵ JNIM also seeks to appear as the righteous defender of the people and of Islam. JNIM Emir Iyadh Ag Ghali even laid out the organization's military policy by explaining that it seeks to continue “expanding geographically as much as possible, undermining (the) enemy by attacking him wherever he may be, inciting the people to do the same and protecting them, and securing popular support.”⁷⁶ To truly integrate with the people, however, JNIM must rely on its subgroups and the legitimacy many of them already have.

Al-Qaeda in the Islamic Maghreb–Sahel

In general, AQIM is aligned with al-Qaeda's broader goals to institute sharia in all its areas of operation and claims that all non-Islamist governments are illegitimate and therefore must be replaced by whatever means necessary.⁷⁷ As verbalized by AQIM's leader Abdelmalek Droukal, “Our general goals are the same goals of al-Qaeda the mother, and you know them. As far as our goals concerning the Islamic Maghreb, they are plenty. But most importantly is to rescue our coun-

tries from the tentacles of these criminal regimes that betrayed their religion and their people.”⁷⁸ AQIM has also made statements naming the overthrow of the governments of Mauritania, Morocco, Tunisia, and Mali and the reclamation of lost Islamic lands in southern Spain among its long-term goals.⁷⁹ As AQIM–Sahel was originally just an offshoot of AQIM, and even now represents a subgroup of JNIM (which is in turn loyal to AQIM), it is safe to say that AQIM–Sahel’s goals are the same as those of AQIM but with a focus on the smaller group’s primary areas of operations: the Sahel and Mali.

AQIM–Sahel’s narrative, like that of other al-Qaeda affiliates, focuses around the authority and fear generated by the al-Qaeda brand. AQIM must simultaneously seem to be “one of the people” in their areas of operation while also having the ability to control the populace and use them for the organization’s own means. As an example, in 2015, several dozen masked AQIM fighters took over several intercommunal meetings in the Timbuktu region. They read a letter “encouraging reconciliation between communities, threatened those that collaborated with the ‘Enemies of Islam,’ and promised to act against rural criminality.”⁸⁰ This illustrated AQIM’s effort to ensure its narratives walk the line between striking fear and ingratiating them to the people. One of the other ways in which they do this is by allying with organizations that already have that local legitimacy.

Al-Mourabitoun

Of the four main jihadist groups that make up JNIM, al-Mourabitoun has arguably the most complex history. In 2011, Mokhtar Belmokhtar was leader of AQIM’s Sahel branch under the command of AQIM commander, Abdelmalek Droukdel. However, Belmokhtar was unhappy with Droukdel’s leadership and split from AQIM to form the al-Mulathamun Battalion in 2012. In 2013, the al-Mulathamun Battalion merged with significant elements of the MUJAO to form al-Mourabitoun. Despite their earlier schism, al-Mourabitoun rejoined AQIM–Sahel in 2015 and united under the JNIM banner in 2017.

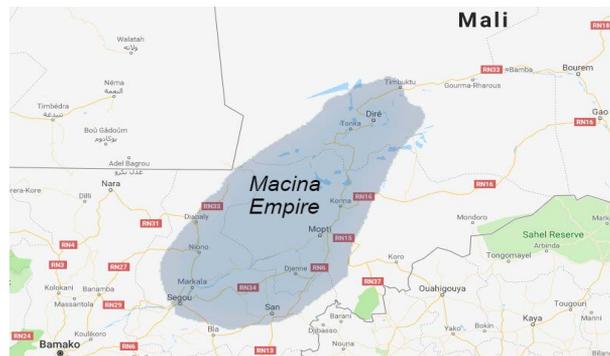
Despite the schism with AQIM in 2013, al-Mourabitoun’s overall objectives never strayed far from those of AQIM. Similarly, its narrative does not represent a significant departure from that of AQIM–Sahel or JNIM more generally. Like the MLF, the name al-Mourabitoun harkens back to a historical empire. The Almoravid dynasty was an eleventh-century Berber empire known for religious zeal “that came from the merger between the preacher movement and the tribes they embedded in, ruling over the Maghreb and the Iberian Al Andalus.” Without doubt, the selection of this name was made with the objective of conjuring up images of past Muslim power and piety.⁸¹

Ansar al-Din

If AQIM's objectives are continent-wide and AQIM–Sahel's objectives are regional, AAD's strategies focus still further into northern Mali and local issues. Though still an adherent to Salafi jihadist ideologies, AAD and its leader, Iyadh Ag Ghali have shown, since 2011, that its priority is bringing those ideologies to a northern Mali that is free from governmental oversight and control. It is notable that AQIM used its AAD allies as the face of the jihadist front during the 2012 uprising: "The use of Malians allowed AQIM and MUJAO to hide their actions behind those of AAD, while also tapping into local religious, ethnic, and cultural divides to fuel support and recruitment."⁸² Being the "local face" of AQIM and now JNIM has not only driven AAD's goals but likewise its narrative. Iyadh Ag Ghali's installation as the publicly recognized leader of JNIM can be seen as both a reason and a consequence of this narrative of local legitimacy.

Macina Liberation Front

Above all, the FLM can and should be seen as a branch of AAD with specific cultural and tribal association. The group was created in 2015 by Fulani members formerly serving as MUJAO cadres. Therefore, though the FLM's broad objectives remain the same as AAD, its narrative and some of its unique objectives are shaped by the group's Fulani tribal affiliation.⁸³ The name Macina is a reference to the Macina Empire which, from 1818 to 1863, was a Fulani power in the Sahel. As discussed previously, the Macina Empire was one of the series of Fulani states that arose in the eighteenth and nineteenth centuries. As a result, the FLM has leaned heavily on narratives of this historical empire for legitimacy and power and to gain support among disenfranchised Fulani. Parallel to the goal of sharia law in Mali, the MLF also maintains the goal of conquering the traditional area of the Macina Empire and substituting that for the Malian government.⁸⁴



(Image: Tommy Lorne Miles; map data: Google)

Figure 7: The Macina Empire, c. 1830

For the JNIM, the Fulani comprise a significant portion of its recruits; likewise, the inclusion of the FLM was key to maintaining the stream of fighters. Moreover, the FLM area of operations, central Mali, is currently one of the most dangerous in the region. In 2018, 500 civilians were killed, more than 60,000 people have fled the violence, and 972,000 people are in need of humanitarian assistance. In fact, the MLF is believed to be one of JNIM's most active groups, currently linked to 63 percent of the violence in the country.⁸⁵

The FLM's increasing importance and activity is reflective of JNIM's gradual shift of focus from the North to the more turbulent central parts of Mali. As one of JNIM's most active groups, the FLM has followed Droukdel's orders to "pretend to be a 'domestic' movement that has its own causes and concerns" and to avoid "showing that we have an expansionary, jihadist, al-Qaeda or any other sort of project."⁸⁶ Thus, by portraying itself as a "liberation movement," the FLM can avoid scrutiny by international counterterrorism organizations, carry out attacks, and simultaneously provide JNIM with local support. As a result, since approximately 2015, it has become one of the primary attack arms of JNIM and shifted the security situation into central Mali.⁸⁷

Ansaroul Islam and Islamic State in the Greater Sahara (ISGS)

Although not part of JNIM, one cannot talk about extremist violence in Mali without mentioning Ansaroul Islam. As Mali's neighbor, Burkina Faso has been a victim of JNIM attacks along their shared border, but Ansaroul Islam is Burkina Faso's first homegrown Islamist group. In 2016, Malam Dicko, an ethnic Fulani, founded the group, which for the next two years would be responsible for more than half the violent attacks in Burkina Faso. Ansaroul Islam's alliance with FLM and links with AQIM ensure the frequency and severity of its and helps to protect its presence near the Burkina-Mali border. In 2018, Ansaroul Islam carried out 137 attacks accounting for 149 fatalities.⁸⁸

This article will not focus on Ansaroul Islam nor on the Islamic State in the Greater Sahara (ISGS). The latter is not an ally of JNIM and is comprised mostly of fighters that actively defected from AQIM or FLM to pledge allegiance to the Islamic State. Also, most of its attacks are focused in Burkina Faso and Niger. That said, it remains a player in the greater Sahel, where the organization has been as deadly as JNIM. Moreover, in some cases though not a part of JNIM, "ISGS maintains close ties with JNIM members facilitating the coordination of their respective activities. The ability and willingness of ISGS to coordinate with JNIM enables them to deconflict their activities while expanding the areas in which the militants operate."⁸⁹ Therefore, any analysis of violent extremist organizations in the region is lacking without at least mentioning ISGS.

Methods and Tactics

Once one understands JNIM's goals and the narrative it uses to pursue them, the next step is to analyze the organization's capabilities. According to authors, Kim Cragin and Sarah Daly, there are five indicators by which one can assess how capable a terrorist group is:

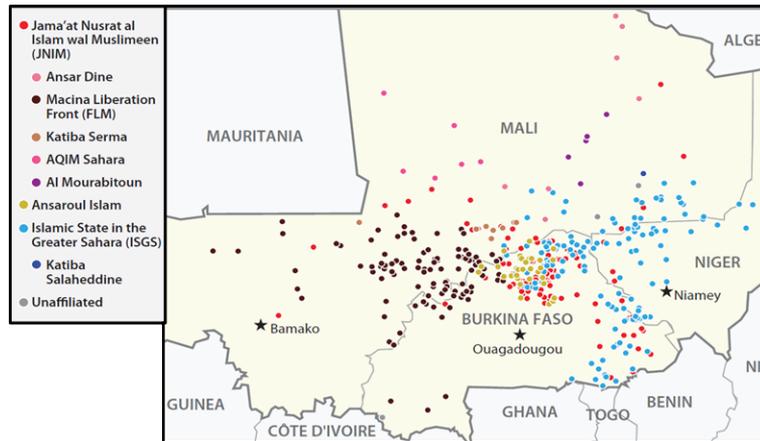
1. Killing/injuring 50 or more people in a single attack;
2. Targeting unguarded foreign nationals;
3. Killing or injuring 150 or more people in a single attack;
4. Striking guarded targets; and
5. Successfully conducting multiple coordinated attacks.⁹⁰

JNIM or its subgroups have met and exceeded every one of these threat indicators. The first two have been met by numerous attacks since 2013. Though technically before the announcement of the JNIM's formation, al-Mourabitoun carried out a suicide attack in January 2017 that resulted in 79 dead and 108 wounded—meeting the third threshold.⁹¹ On the anniversary of its 2 March inauguration, JNIM conducted a coordinated attack on the French embassy and Burkinabe Army headquarters in Ougadougou, Burkina Faso, meeting the fourth and fifth indicators. Thus, by this measure, JNIM qualifies as being a highly capable extremist organization.

Not only is it capable, but the organization conduct its attacks using a broad spectrum of technologies. It has been responsible for complex attacks such as the 14 April 2018 Timbuktu airport attack, in which it sent four suicide vehicle-borne improvised explosive devices into the airport, followed by an armed assault that resulted in a gun battle and the death of a UN peacekeeper.⁹² Yet, there have also been reports of booby-trapped corpses and roadkill.⁹³ Generally, JNIM's preferred weapon has been improvised explosive devices (IED). Of 276 attacks in 2017, 71 came as a result of IEDs. However, most of the attacks that are considered "high casualty" (10+ casualties) are armed assaults and shootings.⁹⁴

By its very nature as an alliance of four distinct groups, JNIM is willing and able to pull off attacks in coordination with other extremist groups. JNIM's very creation represents a complex organizational structure of communication, delegation, and operation coordination. This deconflicts attacks and mitigates the potential for group infighting and is evidenced by the geographic concentration of its operations (fig. 8). Furthermore, JNIM can also act like an "umbrella" for its constituent members. This is exemplified by the FLM, which, though it is the leading militant actor in Mali, is able to maintain a low profile. As previously stated,

JNIM obscures the group's true capabilities and the extent of its actions to avoid attention from government or international actors.⁹⁵



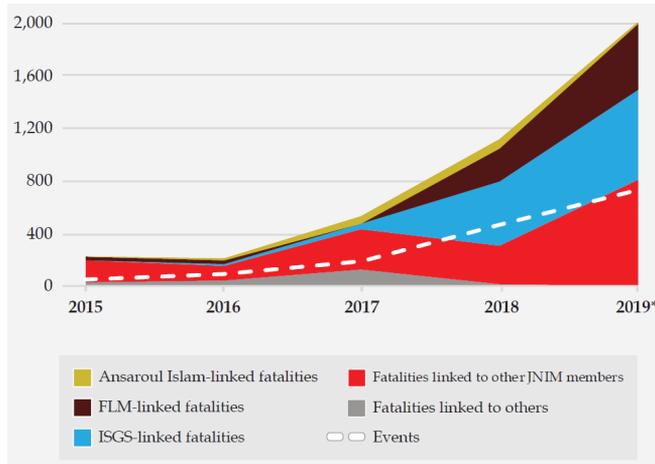
(Data source: Armed Conflict Location & Event Data Project [ACLED])

Figure 8: Violent events involving the designated groups in 2019. Note: Data points represent violent events involving the designated groups in 2019.

Training is another key piece of the JNIM's overall capabilities. Al-Qaeda places significant emphasis on the training and development of operatives in all its affiliates, and JNIM is no exception: "JNIM controls a large territory in which to train new operatives . . . Training operations consist of both physical exercises and propaganda and trainees are given a manual of comprehensive instructions for conducting terror operations."⁹⁶ As part of its propaganda operations, JNIM features training camps in a video the organization released in 2018.⁹⁷

Since the peace treaty was signed in 2015, JNIM and its constituent groups have undergone two shifts in their methods and overall strategy. First and most obvious, they have steadily increased their operational tempo to include more attacks with high casualty results (fig. 9). However, the second shift is more insidious, yet in line with the al-Qaeda keys to success previously discussed. To take advantage of conflicts between ethnic groups in the central parts of the country, JNIM has shifted its operations from the North to Mali's central regions. There, the group has access to fertile recruiting grounds and has the ability to push its narrative into communities that are already rife with conflict. In these communities, JNIM can exploit the grievances against other tribes and against the government. JNIM, and especially the FLM, "have tapped deep-seated local grievances to exploit social cleavages between Fulani and other local groups like the Bambara and Dogon. These recriminations have degenerated into ethnic clashes in central Mali."⁹⁸ Furthermore, for those communities that, until now, have avoided any

intercommunal violence, JNIM can foment those divisions, then present itself as the only viable choice for stability protection.



(Data source: Armed Conflict Location & Event Data Project [ACLED])

Figure 9: Fatalities caused by extremist groups

Resources and Means

The primary means of supply for AQIM–Sahel and by extension, JNIM, was generally weapons smuggling from Libya and Algeria. Between 2011 and 2014, the majority of weapons trafficking in the Sahel originated in Libya and moved through Algeria or Niger on the way to AQIM. Though Libyan weapons remain a problem, recent evidence indicates that JNIM and other extremist movements have “employed an increasing proportion of heavy weaponry from Malian government stockpiles—particularly ammunition for larger weapon systems such as rockets and artillery—as opposed to Libyan or other foreign sources.”⁹⁹ The decrease in smuggling is mostly due to the efforts of the French and Operation Barkhane. However, as clashes with Malian security forces continue and governance in the central and northern regions does not improve, JNIM will have continued access to weapons from both domestic and international sources.

Outside of weapons, Mali is still a crossroads for trade and commerce of both licit and illicit goods (fig. 10). Smuggling has been a part of the local livelihood since even before independence. Thus, JNIM makes much of its revenue through exploiting these commercial routes and smuggling operations. Networks that traditionally exchanged licit goods such as gas and foodstuffs, often evolve into illicit networks wherein JNIM and al-Qaeda operatives smuggle weapons, narcotics, tobacco, and

even people.¹⁰⁰ Of these revenue streams, there are two that have largely been the most lucrative for JNIM and its allies: kidnapping and drug trafficking.

Kidnapping has been a part of AQIM's arsenal since the early days of its appearance in Mali and became a mainstay of its tactics in the years leading up to 2012. Starting in 2003, AQIM committed a dizzying array of kidnappings, with victims ranging from 32 Europeans in one event to individual French tourists who were merely in the wrong place at the wrong time. For a decade after 2003, AQIM made more than 100 million USD, of which kidnapping was the predominant income source, allowing the organization to spread its influence throughout the Sahel. Kidnapping was an effective and extraordinarily high-reward practice. Between 2008 and 2013, AQIM netted 91.5 million USD on just seven ransom payments for 20 individuals (roughly 4.6 million USD per hostage).¹⁰¹ While JNIM did not exist at that time, kidnapping is still one of its primary means of revenue. In 2017, under the auspices of JNIM, AQIM kidnapped a South African and eventually received a 4.2 million USD ransom.¹⁰²

Next to kidnapping, drugs represent JNIM's main revenue stream. Each year, 1.25 billion USD of cocaine transits through West Africa. JNIM subgroups, specifically, make the bulk of their funds "from their control of 'ancient trade routes through the Sahara' used for trafficking drugs . . . (and) taxes on shipments going through their territory."¹⁰³ Though historically kidnapping for ransom has been the most lucrative activity, JNIM has taken a globalized trajectory. It has shifted its focus away from kidnapping to protection rackets, robbery, human trafficking, and money laundering and with that shift toward al-Qaeda networks, facilitating drug trafficking from South America into Europe.¹⁰⁴

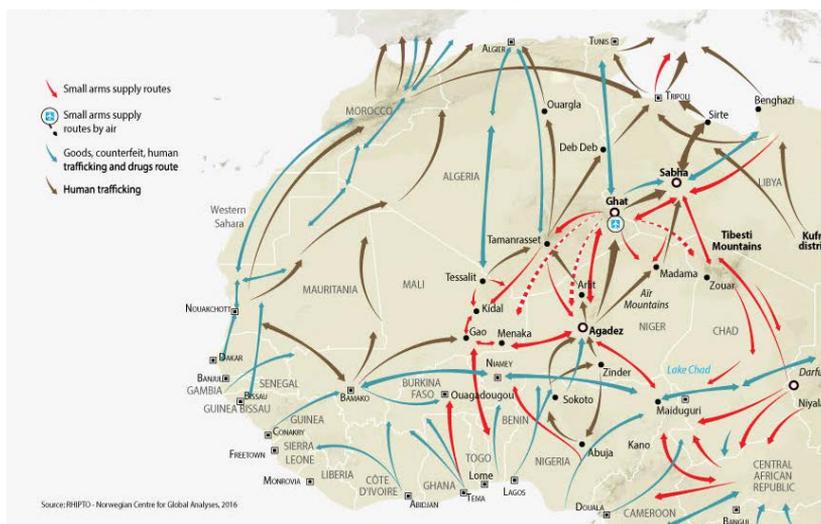


Figure 10: Trans-Saharan trafficking and threat finance

Conclusion

Before 2012, the international community saw Mali as an example of what success in Africa could look like. Unfortunately, Mali's institutional weakness under the surface meant that success was a façade. Thanks to the deep-seated scars of colonization, simmering ethnic conflicts, and detrimental effects of nearby civil wars, Mali was unable to maintain its pretense of stability in the face of an ethnic revolt. The result was the near-complete collapse of the Malian state and—perhaps more dangerous for the continent as a whole—the creation and empowerment of radical groups that would in time become JNIM.

JNIM's activity in Mali and the greater Sahel, coupled with the group's integration into society, represents an existential threat to Mali. Similarly, continued degradation of the Malian state is advantageous to JNIM and fits into its narrative of state weakness and lack of governance. By understanding both the root causes of Mali's current instability and the characteristics of its most dangerous extremist group, one can begin to develop strategies that simultaneously combat JNIM and improve Malian stability and governance. Therefore, a subsequent article in this journal will take on that objective, building upon the information here to provide strategies for both combating JNIM and improving conditions on the ground in Mali.

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Lassoing the Haboob

Countering Jama'at Nasr al-Islam wal Muslimin in Mali, Part II

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The preceding article argued that Jama'at Nasr al-Islam wal Muslimin (JNIM) activity in Mali and the greater Sahel, coupled with the group's integration into society, represents an existential threat to Mali. It illustrated how the gradual degradation of the Malian state is advantageous to JNIM and fits into its narrative of state weakness and lack of governance. As state power declines in Mali, the possibility of the government's efforts to thwart JNIM similarly devolving into something resembling Afghanistan increases precipitously. The objective of the first article was an increased understanding of the root causes of Mali's current instability and the characteristics of its most dangerous extremist group. Armed with such understanding, one can begin to develop strategies that work toward the goals of simultaneously combating JNIM and improving Malian stability and governance—thereby avoiding a fate similar to that of Afghanistan. Providing and explaining strategies with those objectives is the main thrust of this article.

This piece provides two strategic recommendations, both of which are inspired by lessons learned from US and international actions in Afghanistan. I argue that by developing policy based on the successes and failures of international efforts in the Middle East and South Asia, the international community might be able to ensure that the situation in Mali does not follow a similar path.

The first strategy, defense institution building (DIB), is intended to reform and revitalize the Malian security apparatus so that it can be independently responsible for the protection of Malian citizens and interests. DIB as a strategy eschews training and equipping, which are tactically important but short-term. Instead, as the name implies, it focuses on building the military institutions from which a stable, just, and effective security force can grow and be resilient.¹

The second strategy argues for community engagement and reconciliation. It is based on the recognition that a significant portion of Mali's violence is intertwined with intercommunal conflict. This is especially true where state presence is weak. Groups like JNIM take advantage of these disputes and “provide safety and protection to populations as well as social services in exchange for loyalty.”² Thus, to be effective, reconciliation efforts must be accomplished in a local context. In-

stead of only security, Mali also must pursue programs for healing ethnic divides around access to justice and local authorities.

DIB and community engagement are recommendations that derive some of their inspiration and development from lessons learned in Afghanistan since 2001. Both policy recommendations come in part from analysis of the errors made by the United States and its allies and attempt to learn from those mistakes so as not to repeat them in Mali. Given the similarities between the situation in which Afghanistan found itself in 2001 and the circumstances in which Mali finds itself today, the comparisons are not only appropriate and timely but also will illustrate the likelihood of efficacy of the strategic recommendations contained in this work.

Unfortunately, even since the original publication of my previous article in fall 2020, the political situation in Mali has had a tectonic shift that demands, at a minimum, recognition. Overnight, on 18 August 2020, an argument over promotions—mixed with built up tensions between the government, the Malian people, and the military—boiled over into a coup d'état. The immediate results were the ousting of the democratically elected sitting president and the installation of a military junta. As of this writing, the military leaders have promised elections in a “reasonable” amount of time, but meetings with Malian civilian leadership and representatives from Economic Community of West African States (ECOWAS) have failed to produce concrete plans for a transition to civilian rule.

As the landscape in Mali has changed and the future is more uncertain than it has been in years, the feasibility and potential of these strategies is similarly in flux. If the military coup is evidence of an ever-weakening state, applying the lessons of similar conflicts and situations is all that much more vital. Unfortunately, though the recommendations themselves and the lessons upon which they are based remain valid and would be effective if implemented, the current state of affairs in Mali likely means that such implementation represents an even greater challenge than before.

Strategic Recommendations

JNIM represents an existential threat to Mali. Therefore, countering the organization must be a high priority. It is a complex problem requiring many actors, much funding, and adequate time. For simplicity, this work has broken the recommended strategies to the jihadist threat into two broad solutions: DIB and community engagement & reconciliation. These strategies represent differing levels of foreign influence. DIB requires significant international participation with Malian cooperation. Conversely, because community engagement involves interaction with local actors, the onus of success is on the Malian state—with the international community in support.

Since 2012, Mali's military has been unable to counter JNIM and other jihadist groups without international assistance. That assistance comes from the 15,000 military and police personnel of the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA).³ Also present are the 4,500 French troops of Operation Barkhane and the 5,000 soldiers of the G5 Sahel Joint Force (G5S)—a five-member partnership among Burkina Faso, Mali, Mauritania, Niger, and Chad, aimed at coordinating efforts against terrorists operating in the Sahel. Both operations are intended to support MINUSMA but have commitments spread over the entire Sahel region (fig. 1).⁴ The US military does not have a significant footprint in Mali but does provide intelligence and logistics support to Operation Barkhane.⁵ Additionally, in 2018, Washington spent 9.3 million USD on various training-and-equipping programs.⁶ These programs are vital to maintaining security in Mali. Without them, the Malian Army would have been unable to stop the jihadist advance in 2013 and would be unable to respond to violence now.



(Image courtesy of the Africa Center for Strategic Studies)

Figure 1. Regional security efforts in the Sahel

Unfortunately, these efforts have not been enough. As previously discussed, violence is increasing and is spreading to neighboring countries like Burkina Faso and Niger. Operation Barkhane, which was created for counterterrorism operations, has neutralized more than 600 terrorists; however, JNIM shows no signs of ceasing its attacks.⁷ The EU has conducted training in Mali since 2013, yet today the Malian Army remains unable to sustain operations against jihadist groups. MINUSMA has experienced 206 fatalities since 2013, earning it the dubious distinction of being the most dangerous UN mission in the world.⁸ Threat of attack has forced the mission's leaders and personnel into a myopic, short-sighted fight for survival: "UN peacekeeping compares to counter-insurgency, counter-

terrorism or imperial pacification, but such comparisons have been limited to tactical and operational concerns, thus largely missing the ‘big picture.’⁹ The reason for this litany of failure is these operations, while somewhat effective, represent stopgap tactical solutions to long-term, strategic problems.

If the international community wants Mali to be able to counter JNIM and ensure resilient stability, then the best long-term strategy is to build the Malian Armed Forces into a high-capability partner. However, without a significant strategic adjustment, Mali is unlikely to become fully independent of outside aid in the long term.¹⁰ The prevailing wisdom of the last two decades says that providing low-capability partners with more training, more equipment, and inevitably more money would result in a more effective military. However, as Dr. Mara Karlin puts it in her book, *Building Militaries in Fragile States*, “Simply training and equipping these militaries will not enable them to effectively exert the government’s sovereignty throughout its territory.”¹¹ While “train and equip” may have its uses tactically, it is short-sighted and ineffective at the strategic level.

One does not need to go far to see the unfortunate effects of the overreliance on short-term security assistance programs. Mali’s recent history is a lesson in what can happen when foreign powers focus security cooperation efforts on the tactical rather than the strategic level. Between 2003 and 2011, Mali was provided with over 13.9 million USD—worth of training, weapons, and support.¹² However, the train-and-equip methodology prioritized training individuals and specific units on tactical or technical matters.¹³ Again according to Dr. Karlin, “The U.S. approach consisted of ad hoc assistance programs, which failed to comprehensively strengthen Mali’s military or address issues such as organization, discipline, and mission.”¹⁴ The result was that the Malian Army was unprepared for the Tuareg onslaught and 2012 coup d’état, and it was only the French intervention that saved the government.

Even after 2012, international focus remained on train and equip at the cost of institution building. In 2015, Mali was receiving significant military equipment and training as a part of the Security Assistance Initiative. When US security cooperation officers landed in Mali to evaluate the program, they found most of the equipment was not only unused but, in many cases, unopened or unaccounted for. None of the new equipment had been transported to conflict areas. Moreover, none of the training offered to the army was being utilized.¹⁵ Such institutional capacity deficits will never result in Malian military success.¹⁶ In his 2017 article for the Brookings Institution, “Reconstructing Local Orders in Mali,” Andrew Lebovich explains that “reinstating central government authority in northern Mali must also come with a thorough reform and reorganization of the Malian Armed Forces. These reform efforts must go beyond the training currently

underway.”¹⁷ If the international community seeks to make the requisite strategic changes and internalize the lessons of 2011–2013, it will have to begin focusing on Mali’s defense institutions and building them for the long term.

It is important to be clear that a cessation of all these programs is not the solution for Mali. Building defense institutions may be the right long-term solution, but it cannot be pursued without continued short-term security efforts. MINUSMA, Operation Barkhane, and the G5S represent a vital part of Mali’s defense infrastructure and will continue to be such until the Malian defense sector can take over for itself. Also, programs like the International Military Education and Training, though specifically focused on training and equipping, can play a role in strong defense institutions.¹⁸ However, none of these programs represents a path to an operative and resilient Malian security sector.

Defense Institution Building

Therefore, the best strategy for improving and professionalizing the Malian Armed Forces is DIB. Whereas most security assistance and cooperation efforts to this point have been oriented toward providing tools and training, DIB focuses on the foundational institutions of a nation’s military. It focuses on the “people, organizations, rules, norms, values, processes and behaviors that enable oversight, governance, management, and functionality of the defense enterprise.”¹⁹ The objective is to transform an ineffective partner into an effective one and to have those results last.

US engagement in institution-building efforts is not only for the benefit of the partner nation. While the objective is the improvement of their military institutions, this is done in the service of US interests as well: “In order to be effective defense partners countries, need professional defense sectors, which in turn require effective defense institutions. If a country’s defense sector is unaccountable, poorly managed and not subject to civilian control it will be difficult for the rest of government to govern efficiently.”²⁰ With effective partners, the investments of the United States and other international allies can pay strategic dividends in the long term. It is the job of those executing DIB to find the ideal solution between the often-competing US objectives, partner-nation objectives, and general DIB requirements and principals.

The DIB Team and DIB process

Thus, DIB represents the first recommendation for improving Mali’s security forces, but it is important to lay out tangible ideas for implementation. To do this, I propose the creation of a “DIB team,” ideally at the US embassy in Bamako. This

team, under the administrative leadership of the Department of State, should be comprised of representatives from applicable government organizations such as the Department of State, Department of Defense, and USAID. The requirements in Mali may dictate other departments be included, but that decision will fall to the experts on the DIB team. Additionally, the team should have representatives from the Malian Army and governmental organizations as well as reach-back capability to academicians and experts in the United States. Once formed, the job of the DIB team will be to plan and execute the DIB model for building partner capacity (fig. 2).²¹

The first step is scoping, which is the process of transforming guidance into recommendations and goals that communicate the intent of the DIB process. Once solidified, the DIB team would then be charged with designing a plan for how best to build partner capacity. Step three is implementation. Step four is monitoring the implementation to ensure it stays on task and necessary adjustments are made to bring it to fruition. Finally, step five is evaluation, and depending on the assessment, the process repeats, with new objectives and requirements.²²

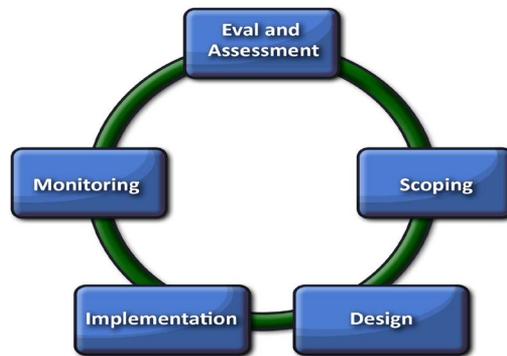


Figure 2. The DIB model for building partner capacity

Curbing Abuses

Though prioritization will be in the purview of the DIB team during the scoping and design phases, there is a critical area that requires immediate consideration: alleged abuses carried out by Malian security forces against local communities. This work will not litigate culpability for potential atrocities, but there is sufficient evidence to suggest that Malian security forces have been responsible for serious human rights violations: “Since late 2016, Malian forces have committed extrajudicial killings, enforced disappearances, torture, and arbitrary arrests against men accused of supporting Islamist armed groups.”²³ These abuses are

among the most powerful tools that JNIM can use against the government and, thus, addressing this issue should be the priority for building defense institutions.

Malian security forces play directly into JNIM's narrative. If JNIM can portray the Government of Mali (GoM) as malevolent, people will look to other authorities for protection and leadership and may settle on jihadists. Moreover, even if Malians do not join JNIM directly, they will be more disposed to provide JNIM with freedom of movement, supplies, and financial support. According to the International Crisis Group, "Violent extremist groups prosper in areas of tension where the state is absent, where its authority is contested or where it is only present in the form of its security forces, especially if those commit abuses."²⁴ Extreme actions by the state or the perception of state-sanctioned victimization leads to disaffection and the mass appeal of jihadist groups.²⁵

Preventing abuses by the Malian security forces is, in part, a requisite of professionalization. The US government, as part of its DIB efforts, should highlight professionalization as a vital line of effort: "Military professionalism is much more than an administrative concept. The stability and vibrancy of the society depends on militaries conducting themselves in a disciplined and honorable manner. The pursuit of professionalism in African militaries will begin with inculcating the fundamental values of ethics."²⁶ Until the Malian security sector has strong institutions in place that can counteract the possibility of human rights violations, any other strategy for countering JNIM will be fruitless. Simultaneously, the United States should ensure that individuals involved in such abuses are identified (through Leahy vetting or similar procedures) and not permitted to work with international partners engaged in professionalization efforts.

Professionalization

Professionalization is a part of the broader institution of human resource management (HRM). Helping the Malian Armed Forces develop strong policies, plans, and programs for managing its people is vital to long-term strategies. Strategic HRM involves developing personnel systems to better manage the role, structure, and mission as defined by its personnel.²⁷ Examples of HRM systems that a DIB team can establish or improve are the systems of compensation and benefits, promotions, quality of life, performance assessment and management, and succession planning.²⁸ All these systems can benefit from the efforts of a dedicated DIB team.

HRM, and any effort to develop the institutions therein, is a challenge for many reasons, but one in particular stands out: the sensitivity of personnel issues. If the United States intends to be effective in building HRM as an institution, Washington will have to involve itself in some of the more sensitive parts of

Mali's security sector. The reality is, "deep US involvement in a particular state's sensitive military affairs is critical for transforming a military."²⁹ It is for this reason that the DIB team should fall under the Department of State and have host-nation members. While the Department of Defense will be the foremost entity for practical planning of the DIB process, these "sensitive conversations" will likely be best served by interactions between US diplomats and Malian governmental representatives.

It is in these sensitive discussions that we see the most important GoM role in the DIB process. Though DIB itself is the responsibility of the US government, it will be ineffective and wasteful without active and willing participation from the partner nation: "Lack of long-term, sustained engagement decreases the effectiveness of training programs and allows little time or space for institution building. But sustained engagement requires both recipient and donor participation and planning."³⁰ Washington can provide the process, funds, and personnel, but without a willing partner, the DIB team or any DIB efforts will be futile.

DIB faces other challenges and pitfalls. Systemic corruption undermines any institutions that need reform and renders them foundationally weak. Corruption among the Malian Armed Forces was one of the causal factors behind the military's collapse in 2011 and 2012.³¹ Also with train and equip, it is simple to show how many weapons were sold, how many students were trained, and how many exercises were managed. However, effective DIB is a slow process that often lacks definitive tools for measuring success. Furthermore, that success may not be tangible until a decade in the future.³²

These obstacles, particularly the gradual pace of reform that DIB requires, mean that it cannot be the only line of effort for countering JNIM or for dealing with Mali's crisis. Moreover, as discussed before, DIB is mostly the responsibility of foreign governments. The GoM must be open to security reforms but is, by and large, the beneficiary of DIB, rather than the executing entity. That said, the effects of the 2020 coup d'état have yet to be completely understood, particularly from the perspective of military aid. The UN and the French forces of Operation Barkhane have stated that, for the time being, their counterterrorism efforts will not be curtailed or changed.³³ However, an effective DIB program will be extremely difficult without a civilian government with whom to partner.

Comparison: DIB in Afghanistan

As the situation in Mali regresses and the northern parts of the country become more lawless, it is beginning to seem eerily reminiscent of Afghanistan. Vast swaths of ungoverned space, a growing and violent extremist element tied to al-Qaeda, and tribal and ethnic tensions accompanied by and funded through illicit

cross-border trade all combine to give the astute observer the feeling that the international community has seen this before. The good news with this historical facsimile is that Western powers have been dealing with the situation in Afghanistan for well nearly 20 years, meaning there are lessons to be learned from those failure and applied to ensure Mali avoids a similar fate.

Learning from the errors of the Afghanistan experience begins with identifying those errors. Since the beginning of the war in 2001, the United States has been engaged in some form or another of train-and-equip programming with the various forms of Afghan security forces. Though these efforts often looked good on paper, they have rarely resulted in sustainable and effective security organizations. Rather, they repeatedly have proven to be costly façades of efficacy with weak defense institutions at their core. As described by the Project on Government Oversight,

... the U.S. has spent over \$13.7 billion providing the Afghan government with equipment in an effort to create a modern military force. Unfortunately, a great deal of the equipment the U.S. provides to the Afghan government is for a military force it cannot possibly hope to sustain independently ... providing advanced weapons and management systems to a largely illiterate and undereducated force without also providing the appropriate training and institutional infrastructure created long-term dependencies, required increased U.S. financial support, and hampered efforts to make the ANDSF [Afghan National Defense and Security Forces] self-sustaining.³⁴

Two decades of warfare and billions spent on training and equipping the various Afghan security forces with little to show for it throws the reality of the situation into stark relief; no amount of money, armament, or training can be sustainably effective if the institutional framework on which it stands is weak. The same thing that has been true in Afghanistan, will hold true in Mali; security assistance efforts must focus on institutions first to be effective in the long term.

The next logical question is; which institutions should receive the bulk of the attention? Again, one can look to the experience in Afghanistan for answers. One of the most important aspects of the DIB programs in Afghanistan has been the importance of combating corruption. Corruption can create enormous resistance to change and to the development of a system of checks and balances, while simultaneously ensuring those who are responsible for institutional failures are protected.³⁵

As previously discussed, Mali today is in a similar situation, which, if left unattended, will only deteriorate much like the one in Afghanistan: "Corruption is widely recognized as one of the fundamental drivers of conflict in Mali. . . . by reducing the operational effectiveness of the Malian armed forces, corruption undermines the state's ability to field a defense and security apparatus that can guar-

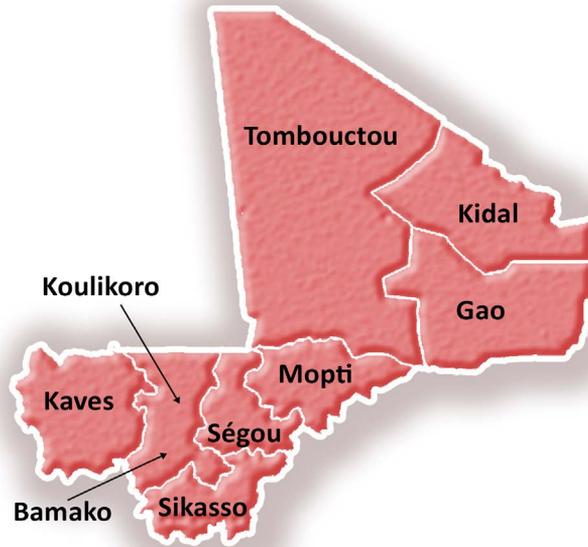
antee the population protection from insurgent groups.”³⁶ In both countries, a critical piece of the institutional framework that must be addressed is the corruption within the defense sector. Unfortunately, this lesson has been 20 years in the making for Afghanistan, but proactively dealing with the prevalence of corruption would mean that it need not be so hard in Mali.

Secondly, it became apparent in Afghanistan that education and literacy of security force members are vital components of an institutionally strong organization. Without literacy, DIB programs have little chance of ever even getting off the ground, much less causing long-term change. Once again, this took many years to learn in Afghanistan, and when it finally did become clear, addressing the issue “required an all-out-effort to immediately to incorporate literacy education at all levels.” As valuable as this was, it was also resource-intensive and would have been unnecessary had the United States understood literacy’s value from the beginning. Mali has a literacy rate that is lower than that of Afghanistan (35 percent and 43 percent, respectively)³⁷ and so will face similar challenges, particularly if not addressed early and with vigor.

Granted, DIB programs can address literacy, but at great cost in both time and money. Ideally, literacy is something that might be addressed by the government in the local communities with children, prior to enlistment into the security forces. This is outside the purview of a DIB program; however, in one example of the interconnectedness of the two strategic recommendations presented in this article, illiteracy (particularly in marginalized areas) is something that might be ameliorated through community engagement.

Local Community Engagement and Governance

While DIB represents a remedy for endemic problems within the Malian defense sector, it is not a panacea. DIB represents a methodology by which the international community can partner with Mali to directly fight JNIM and improve the professionalism of Malian forces. However, this is an incomplete solution and fails to entirely counter JNIM’s success. As Bruno Charbonneau states, “The focus on the war on terror, however, does not help resolve the conflicts in Mali. At best, this war can only be a bandage on symptoms that hide deeper wounds.”³⁸ To be comprehensive, the GoM must also employ strategies to combat JNIM in the minds of Malian citizens. It must address social problems with as much vigor as it does military ones, by improving the integration of the communities in the central and northern parts of the country that the Malian state have historically neglected or marginalized (this article defines the central provinces as Segou and Mopti and the northern provinces as Timbuktu, Gao, and Kidal).



(Image courtesy of Acntx at English Wikipedia)

Figure 3. Provinces of Mali

Two of Mali’s most pressing social problems can be distilled into the following interconnected categories: state absence and intercommunal conflict. Both sets of problems act as a cause for the other, meaning addressing one requires effective lines of effort for the other. The entire effort also requires a balance between incorporating communities of different tribal and ethnic affiliations under the central government in Bamako, while simultaneously permitting an appropriate level of autonomy and self-determination. This balance can be struck by focusing on two keys to community integration and governance: access to justice and empowering traditional leaders.

Before elaborating on each of the major problem sets and providing recommendations for addressing them, it is important to make two caveats. Like with the recommendation for fixing the security sector, the following strategies are intended to be long-term. However, efforts to ameliorate immediate and short-term problems should not be curtailed or eliminated. On the contrary, short-term humanitarian efforts are vital to establishing and maintaining conditions in which the following strategies can be effective. A survey conducted by Afrobarometer in 2017 indicated most Malians identify food security, health, poverty, and water as the most important issues facing the country.³⁹ In 2018, the United States spent

just under 220 million USD on foreign assistance to Mali—of which most went to health services, humanitarian assistance, and economic development.⁴⁰ Though my recommendations do not address urgent humanitarian needs, it is important that the international community continue its development aid and assistance “judiciously and with diligent monitoring.”⁴¹ Aid should play a continued role in fostering Malian institutions and robust foundations for peace and development.⁴²

The second caveat has to do with the ever-present balance between security and development. Former Secretary-General of the UN Kofi Annan said, “I argue that we will not enjoy development without security or security without development.”⁴³ Mali is no exception to this rule, and I recognize that any of the following recommendations are reliant on an improved security situation. Development in the volatile areas of the country is critical, but it is impossible if violence remains at its current level. Similarly, improvements to the security sector proposed in the previous section will only be resilient if social and economic conditions in Mali improve.

Access to Justice and Rule of Law

The first problem set is the lack of state presence or representation in the central and northern parts of the country. A combination of lack of political will, ethnic divisions, antigovernmental violence, and the inability of the GoM to manage this complex sociopolitical landscape has driven most viable government representation into the southern regions around Bamako.⁴⁴ In 2017, only 20 percent of officials were in place in northern communities. In Mopti, only 33 percent of officials were present. Dr. Daniel Eizenga, a research fellow at the Africa Center for Strategic Studies, explained the situation succinctly when he said that the GoM has largely had a highly centralized system since independence. This centralization makes governance challenging and increases the difficulty of extending state presence into rural areas.⁴⁵ It also contributes to JNIM’s ability to recruit and operate in areas far from the government’s sphere of control.

Without governmental support and protection, communities in regions like Mopti and Gao have no reason to rely on the state, and so “various armed groups and multiple international actors make up for its absence or incapacity.”⁴⁶ Again, according to Dr. Eizenga, of possible community engagement efforts, the provision and delivery of justice is the most important and should rank highest in the priorities for improved governance.⁴⁷ Unfortunately, “not only is state-provided justice largely absent from the north of Mali, but it is also contentious, given the unresolved identity and governance issues.”⁴⁸ According to a separate 2017 Afrobarometer survey, “responses in Mali suggest that access to justice remains severely compromised. Public trust in the judiciary is low and perceptions of cor-

ruption are high. Malians have some of the lowest contact rates with the judicial system among the 36 African countries surveyed.”⁴⁹ Weak governance brings with it a myriad of problems and deficiencies, but a lack of rule of law is the most detrimental to any efforts at community engagement.

To amend this problem, my first recommendation is the GoM must focus on improving access to justice and rule of law in remote regions. Mali is riven with ethnic and racial conflicts and is severely limited in its ability to redress crimes or atrocities that occur within its borders. With this impotence paired with the perception of bias, vulnerable communities are likely to use local sources of justice, even if those leaders are loyal to groups like JNIM. When asked why they choose not to use the government court system, 32 percent of Malians said they prefer to take disputes to local authorities, and 20 percent did not expect fair treatment from the courts.⁵⁰ With the power over justice, JNIM and other extremist groups can control lives, manipulate violence, and control the narrative that the state has no authority in those communities.

Rule of law is vital on an even larger scale, however, as it is a critical piece in defining overall state legitimacy. Rule of law has a profound impact on how the state relates to society. When there is mutual respect, accountability, and transparency in the security forces’ everyday interactions with citizens, then there is a higher likelihood that the populace will trust state institutions. That could also lead to a greater sense that those institutions are legitimate.⁵¹

Access to justice creates the conditions by which the state can exert its authority over communities and redress wrongs done to its citizens. More importantly, it can also ensure that the narrative is one of accountability, openness, and efficacy under the law, thereby restoring trust between communities and the state. This serves to directly counter JNIM’s success by limiting the organization’s ability to recruit and its freedom of operation in formally ungovernable areas.

Arguably more important to the idea of trust and legitimacy than holding citizens accountable is the government’s willingness to hold its security forces to account. As previously discussed, abuses by the security forces have been a serious problem in Mali as violence and civil conflict worsen in the country: “Local communities often view Malian security forces as part of the problem and some soldiers have been implicated in gross human rights abuses. (The GoM) should prioritize identifying, arresting and prosecuting the main perpetrators of attacks to send a clear signal that these atrocities will not be tolerated.”⁵² Many Malians see the government as providing its forces with impunity while prosecuting anyone less represented. This renders the government no more trustworthy and reliable than the local militias and jihadist groups and furthers the extremist narra-

tive. Reining in abuses (or the perception of abuse) by government security forces and prosecuting those who carried them out must be priorities for the GoM.

As implementing programs that focus on the justice sector should be a priority, those efforts should also be accompanied by similar programs to link security with justice. Even if the GoM can provide a fair and accountable system of courts that have the capacity to address terrorism, the formal justice system will have limited effectiveness if the security forces, investigators, and magistrates do not develop more frequent and closer technical linkages. If these links existed, they would enable the referral of criminals into the state justice system on the evidentiary basis that is needed to consider hearings or prosecution.⁵³

Community Integration and Reconciliation

JNIM's primary area of operations is in the northern provinces of Gao and Kidal; yet, the most significant escalation in fighting over the past two years has actually taken place in central Mali, particularly in the central provinces of Mopti and Segou. Though JNIM is generally involved in either exacerbating or supporting tensions, it is warring ethnic communities that are responsible for the gradual increase in civilian deaths in central Mali. According to the Armed Conflict Location & Event Data Project, intercommunal violence alone (not including Islamist groups or security forces) killed more than 650 civilians in 2019.⁵⁴ Not only are casualties mounting but the fighting also has driven thousands from their homes, destroyed local economies, and caused widespread hunger.⁵⁵ To make matters worse, due to the impotent judicial system, these events go without any intervention from the GoM.

Though ethnic Tuaregs were responsible for the 2012 uprising and are often identified as the antagonists in Mali's history, they are not the only ethnic group involved in the crisis. Instead, over the past 3–4 years, the dramatic increase in ethnic violence stems mostly from friction between the agricultural Bambara and Dogon people and the pastoral and quasi nomadic Fulani (also called Peuhl). The diminishing of their traditional grazing areas in North Mali due to both environmental issues and the presence of JNIM has forced the Fulani to move south into Dogon and Bambara lands. With increased contact and dwindling usable land comes tension on both sides. Farmers accuse herders of stealing land and destroying crops. Herders accuse farmers of cattle rustling.⁵⁶ These issues, mixed with deep-seated colonial and precolonial prejudices, enflame the already hostile environment.

In response, ethnic communities have turned to "self-defense militias" that carry out raids and the majority of the fighting. Perhaps the most infamous example of a self-defense militia is a society of "sacred hunters," known as Dozos. Though not a unique ethnic group, Dozos protect villages and, therefore, generally

side with the sedentary Bambara and Dogon as a paramilitary force in their fights against Fulani militias.⁵⁷ The increase in intercommunal tensions causes attacks such as the one in March 2019. Allegedly carried out by Dozos, the attack was on a Fulani village and left more than 130 people dead.⁵⁸ This, in turn, led to reprisals from Fulani armed groups (at times supported by JNIM) perpetuating “tit-for-tat” violence. This empowers armed ethnic militias and creates the spike in intercommunal violence in Mali’s center.

Before 2012 there were traditional methods by which both sides of a communal conflict could mediate and seek redress. However, JNIM has filled this power vacuum. In the absence of state justice or government security, jihadists use the conflicts to their ends: “Employing asymmetric tactics and close coordination, these militant groups have amplified local grievances and intercommunal differences as a means of mobilizing recruitment and fostering antigovernment sentiments.”⁵⁹ JNIM also uses the legitimacy of its subgroups like the Macina Liberation Front to act as arbiters in conflicts, favoring their supporters, while simultaneously legitimizing reprisals against opposition communities.⁶⁰

Ameliorating the problem of ethnic and intercommunal violence is a complex and complicated problem. However, any efforts made in that direction must be done after or in conjunction with security reform and increased judicial availability. Without those two strategies being in place and effecting change, any movement toward mediation of tribal conflict or resolving herder–framer disputes will be ineffective at best and counterproductive at worst.

Therefore, the first proposed solution is to begin or to enhance efforts to work with the leaders of these marginalized communities. The GoM should imbue local leadership (both religious and secular) and local orders with more responsibility and agency. This might mean that “forms of policy are put in place by establishing a dialogue between the states and local actors known for their integrity more than their opportunism, and initiatives to rehabilitate rebels and religious extremists.”⁶¹ Traditional leaders have moral legitimacy from their communities and historically played a part in dispute arbitration. They are key in regulating intercommunal tensions and acting as intermediaries to diverse ethnic groups.⁶² By seeking their counsel on controversial topics, the state will instill in these leaders “top-down” legitimacy. Conversely, strong relationships between government entities and traditional leaders help give the government legitimacy where it had little before.

As a similar line of effort, the GoM should not only imbue traditional leaders with more state authority but also conversely seek to incorporate those leaders into government institutions in Bamako. As a model, Mali could look to its neighbor Niger. Starting from independence in the 1960s, Niger has had a policy of inclusion regarding traditional Tuareg leadership. As of 2014, Niger has had a

Tuareg prime minister, chief of staff, deputy chief of staff, deputy chairmen of the joint chiefs, and a myriad of other Tuareg in important positions throughout the government and military. This has not completely stopped Tuareg unrest in Niger; there was an uprising in 2007. Yet afterward, the Nigerian government was able to quickly reintegrate Tuareg leaders and even former rebels into the national dialogue.⁶³

It is important to note that the GoM wrote the peace accords with an almost exclusive focus on the Tuareg. Thus, it says little about ethnic struggles in Mopti and Segou. As Charbonneau states, “although it is unsuitable for the situation in central Mali, it seems to us that the 2015 Agreement and its implementation processes must be preserved.”⁶⁴ Therefore, I recommend first that the GoM implement the reforms promised in the accords and do so with inclusivity for all Mali’s ethnic groups. Also, and perhaps more importantly, the GoM should not carry out any inclusivity efforts in the clientelist approach of colonial France, instead any, “appropriate political and security arrangement today would have to be done in the context of democracy and a general concern for equity.”⁶⁵ Though I am advocating the inclusion and legitimization of traditional leaders, this must be approached with the understanding that not all leaders would make positive contributions to the country’s development.

This institutional reform was supposed to be one of the key tenets of the 2015 Peace Accord and was meant to enhance local participatory governance.⁶⁶ However, this and many of the other reforms proposed in the accords remain unaccomplished. The deadlines for implementation have been extended several times. Yet, each time such drifting occurs, distrust, further conflict, and frustrations result.⁶⁷ Were Mali to make serious efforts in effectively empowering traditional leaders in their communities, it would not only stimulate positive community-based dialogue but also simultaneously deflate JNIM’s narrative of impotence and illegitimacy.

Comparison: Community Engagement in Afghanistan

In Afghanistan, as with Mali, community engagement by the central government with aid and assistance from the international community should represent one of the most effective ways to bring peace and stability. Unfortunately, over the 19 years of US involvement in Afghanistan, sustaining such interactions has proven challenging. The result of failures has left the nation in disarray and, in some cases, little better off than it was prior to US involvement. Despite years of work toward judicial reform, most Afghans still have little or no access to judicial institutions.⁶⁸

This is not to say that the international community has been silent on the issue. Since 2003, academicians, politicians, and security stakeholders have argued the

importance of access to justice in Afghanistan: “Though Afghan and international officials often refer to rule of law development as one of the highest priorities in the reconstruction process, the necessary measures are not being treated with urgency . . . little progress has been made toward building a functioning justice system.”⁶⁹ To successfully enact such reforms in Mali, the international community should look at the challenges faced in Afghanistan and apply those lessons learned.

Many such challenges have faced Afghanistan since 2001, and similar concerns will or already do face Mali. However, one that has consistently stymied reform efforts has been government accountability. In both nations, abuses by government entities, be they security forces, high-ranking politicians, or other elite members of society, often go un-tried and unpunished. This lack of accountability and the inability to remedy the situation have proved detrimental to Afghanistan by undermining government legitimacy while adding to one of the claimed attractions to the Taliban.⁷⁰ If the Malian government cannot rein in the abuses of its own administration or security forces, the people will similarly look to extremists for leadership and protection.

The similarities do not end with access to justice. The call to empower traditional or religious Afghan leaders has been a tradition in and of itself over the past two decades. Unfortunately, despite these appeals from the international community, little has been done by the Afghan government. “Today, formal financial support to religious groups and organizations seems to be less common—and probably more difficult. Religious organizations are generally viewed with skepticism by the government, the international community and modern civil society organizations.”⁷¹ Avoiding a fate similar to that of Afghanistan will require the Malian state to work with traditional leaders while simultaneously ensuring judicial punishment for those who partake in extremist violence.

The benefits of effective systems of justice and rule of law are not limited to improved community relations and the delegitimization of extremist forces. In another example of how both strategic recommendations are linked, one of the other lessons learned in Afghanistan that can subsequently be applied to Mali is that rule of law is a prerequisite for an effective DIB programs. “Rule of law is critical for DIB . . . One particular problem in Afghanistan was the linkage of the formal rule of law system and the traditional rule of law systems.”⁷² A common, fair justice systems ensures order and enables development. Only with order and development can one effectively apply DIB. Moreover, if a nation has institutionally strong security forces, community engagement and justice become far easier and more common.

Conclusion

If one is willing to plan for the future, the wisest course is to look at the failings of other countries' past endeavors. When looking at the past 20 years of warfare in Afghanistan, a multitude of lessons learned emerges. Yet, for the situation in Mali, DIB and community engagement—focusing on rule of law and traditional leader empowerment—rise to the top as being the most likely to achieve success. By taking and adapting these lessons, the GoM (when it is reestablished) and the international community can chart a course toward greater stability as well as peace and begin the process of suppressing violent extremism that has plagued the nation and the continent for decades.

It can be tempting to look at the increased instability and unclear future for Mali and decide that any strategic recommendations are pointless. As both the leadership and the citizenry of the country grapple with who they want to lead them and what shape they want their government to take, policy ideas regarding building defense institutions, community engagement, and rule of law can seem superfluous and overly optimistic. This is, however, short-sighted and, even in turbulent times, Malians and the international community should continue planning for the future even while solving the problems of the present. ★

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A Peacekeeping Mission in Afghanistan

Pipedream or Path to Stability?

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Abstract¹

This article analyzes how an international peacekeeping operation (PKO) can support an intra-Afghan peace settlement by mitigating information and commitment problems and fostering compliance during the settlement's implementation phase. To frame the information and commitment problems currently hindering an intra-Afghan settlement, I briefly review noncooperative bargaining theory, its application to civil conflicts, and how PKOs can lessen mutual uncertainty and foster stability. Anchoring this research on Afghanistan, I analyze the first peacekeeping mission in Afghanistan, the 1988–1990 United Nations Good Offices Mission in Afghanistan and Pakistan (UNGOMAP). UNGOMAP's eventual failure to foster peace highlights Afghanistan's complexities and the dangers of an insufficiently resourced PKO operating in a state without a viable, incentive-compatible settlement. I apply these lessons to policy analysis, where I explore possible PKO options and their potential for incentivizing compliance with a future intra-Afghan deal. Though a viable PKO currently seems improbable given Afghanistan's ongoing violence and the Taliban's insistence on the complete withdrawal of foreign forces, future conditions may change, and I highlight necessary prerequisites where a PKO may become possible. If designed properly, an Afghanistan PKO can fill a critical monitoring and verification capacity and bolster Afghanistan's prospects for long-term stability.

Introduction

The possibility of a stable Afghanistan presents a welcome opportunity for the Afghan people, who have endured 42 years of continuous civil conflict. If warring parties can reach an incentive-compatible, bargained settlement, then all have much to gain from the cessation of ongoing hostilities. Beyond benefiting parties within Afghanistan, a stable Afghanistan would benefit neighboring states and the international community, who have dealt with the negative externalities of Afghanistan's civil conflicts.² It is widely recognized that a political settlement among Afghan parties is the most practical way to end the fighting and attain lasting stability.³ Given the large risks associated with Afghanistan's civil conflict continuing, the United States should assess the viability of an international peace-

keeping operation (PKO) that may alleviate Government of Afghanistan (GOA) uncertainties in negotiations with the Taliban and support compliance with an eventual intra-Afghan peace settlement.⁴

The US–Taliban settlement, signed on 29 February 2020, provides a starting point for intra-Afghan talks and a conditional exit strategy for remaining US and NATO forces.⁵ If the Taliban continue negotiations with GOA, maintain a reduction in violence, and uphold their commitment that Afghanistan will not be used as a terrorist safe haven, then all US and NATO forces could be completely withdrawn from Afghanistan by 2021. Increasing US domestic pressure to end the 19-year US military mission is impacting political decision making, and it is unlikely that US/NATO forces will remain in Afghanistan for the long term, despite the Taliban’s continuing offensives against the GOA.⁶ Widespread uncertainty remains regarding the possibility of a bargained settlement between the Taliban and the GOA, as evidenced by the latter’s May 2020 announcement that Kabul would continue large-scale offensive operations against the Taliban.⁷

Uncertainty over an intra-Afghan settlement is manifested in two primary forms. First, it is unknown if warring parties can reach a feasible settlement, especially without US/NATO forces maintaining coercive pressure to compel the Taliban to negotiate with the GOA. Potential impacts to Afghanistan’s political structure, legal system, security forces, disarmament, reintegration, and civil liberties all remain unknown, and there is deep, mutual mistrust. Second, if a settlement is reached, there is significant uncertainty as to whether internal parties would comply with the settlement’s provisions, especially without a credible enforcement mechanism to deter violations. If intra-Afghan parties *do* reach a bargained settlement, the historical record and conflict research suggests there will be incentives to cheat or spoil the peace process among Afghanistan’s numerous armed groups, complex tribal networks, and regional power brokers.⁸ Further, given Afghanistan’s rugged terrain, remote villages, and the GOA’s limited reach, covert defections will likely go unobserved, increasing incentives to cheat.

Noncooperative bargaining models in civil conflict settings provide helpful starting points for analyzing these complex problems.⁹ These models advance information asymmetries and commitment problems as driving factors resulting in bargaining failures. If unaddressed, these problems may prevent combatants from reaching settlements or lead to relapsed fighting after a settlement is reached. Conflict research also suggests monitoring and verification mechanisms may offer partial relief from commitment and information problems and incentivize compliance with peace settlements.¹⁰ Given the US strategic interest in fostering long-term stability in Afghanistan, the US government should advocate for a proven monitoring and verification mechanism in postconflict environments—an

international PKO.¹¹ While the United States cannot *direct* other states to contribute to a PKO, Washington can leverage US diplomatic and economic power to identify willing contributors, secure financial donors, and shepherd the process through the UN Security Council (UNSC).

Two critical scope conditions are required for a PKO to be a viable option in Afghanistan. First, the Taliban and the GOA must successfully negotiate an incentive-compatible, intra-Afghan peace settlement.¹² Second, Afghan parties (including the Taliban, the GOA, opposition, and civil society leaders) and the future Afghan government must consent to an international PKO.¹³ Objectively, these scope conditions seem improbable given ongoing violence and the Taliban's insistence on the complete withdrawal of foreign forces. However, it is also improbable that 150,000 Taliban could decisively defeat the GOA's 300,000 soldiers and take over Afghanistan.¹⁴ As ongoing fighting imposes large costs on the GOA, it also imposes costs on the Taliban—costs that may not be sustainable in the long run. To end a costly status quo and gain desired reforms, the Taliban may willingly accept a short-term, consent-based PKO in the future, in exchange for bargained concessions that produce an incentive-compatible agreement. If the United States and the international community lay the groundwork for a credible PKO and it becomes a viable option during intra-Afghan negotiations, then it may offer both sides relief from information asymmetries and commitment problems and incentivize settlement compliance during the implementation phase.

Since an Afghanistan PKO has not been seriously discussed, this article analyzes the conditions where a PKO may become viable and provides initial analysis for a hypothetical PKO's ideal composition and disposition. This article proceeds as follows. First, I review contemporary research on noncooperative bargaining in civil conflicts and how PKOs can alter conflict dynamics. Leveraging historical lessons, I then review the 1988–1990 UNGOMAP to explain why that PKO was unsuccessful in creating stability in Afghanistan following the Soviet withdrawal. I close with policy recommendations, where I explore several possible PKO options and analyze their potential for incentivizing compliance with a future peace settlement. If designed properly and paired with an incentive-compatible intra-Afghan settlement, an Afghanistan PKO can fill a critical monitoring and verification capacity and bolster Afghanistan's prospects for long-term stability.

Noncooperative Bargaining, Civil Conflicts, and Peacekeeping

Noncooperative bargaining theory allows for a structured analysis of armed conflict and provides a useful lens to analyze Afghanistan's continued fighting.¹⁵ Based on rational actor assumptions and formal models, these works attempt to explain the paradox of why costly wars occur when less costly bargained settle-

ments may exist.¹⁶ Emerging from this literature, information asymmetries and commitment problems emerge as two primary factors that generally explain why bargaining fails and wars occur.¹⁷ While much of the noncooperative bargaining theory is designed around interstate wars, civil conflict researchers have found that these bargaining obstacles are further exacerbated during civil conflicts, impeding bargained settlements and incentivizing conflict recurrence when settlements are in place.¹⁸

During civil conflicts, information asymmetries create large obstacles that obstruct warring parties from reaching bargained settlements and adhering to peace settlements. Since combatants want to get the best deal possible, each side has incentives to misrepresent private information about their capabilities, financing, strategies, goals, and resolve to appear tougher than they may be in reality.¹⁹ It is often difficult for opponents to ascertain this private information, and these problems are exacerbated when rebels use guerilla tactics, enjoy covert external support, and exploit international borders for sanctuary.²⁰ Rough, inaccessible terrain also provides rebels with a degree of sanctuary, shielding them from government information collection efforts.²¹ Civil conflicts ending with decisive military victories are less likely to revert to fighting, compared to conflicts ending through bargained settlements.²²

Combatants also struggle to make credible commitments required to end ongoing civil conflicts and sustain peace settlements. First, given the high-stakes nature of armed conflict and the possibility that one side may be destroyed, civil conflict combatants face large obstacles in realizing the benefits of mutual cooperation by credibly committing to a peace settlement.²³ Weaker groups are particularly apprehensive to accept compromises that reduce their relative power. This is apparent when rebels with consistent financial flows from contraband items like diamonds or opium may have incentives to continue fighting to maintain access to those financial flows.²⁴ In cases where a peace settlement does exist, relative power shifts can incentivize one side to defect from the agreement and continue fighting. If a credible third party is not present during demobilization and disarmament, then one side may prefer continued fighting rather than expose themselves to future exploitation from a stronger opponent.²⁵ Taken together, these incentives to misrepresent private information and difficulties overcoming credible commitment problems present clear obstacles to ending civil conflicts and sustaining peace settlements during the implementation phase.

Applied to Afghanistan, this research provides helpful insights that partially explain why the current civil conflict has persisted for decades. Information asymmetries complicate intra-Afghan talks, as much remains unknown about the Taliban's strength, the nature of its relationship with Pakistan and al-Qaeda, or

even the organization's ultimate goals.²⁶ The Taliban exploit cross-border sanctuary in Pakistan and Afghanistan's rugged terrain, limiting the GOA's and coalition's military superiority. Vast uncertainty also surrounds the GOA. Though the GOA still relies on foreign aid for the majority of its expenses (especially for security forces), external donors are already curtailing aid spending.²⁷ Afghan National Security Forces (ANSF) also remain largely dependent on US and NATO military support, and it is unclear how they will perform without foreign support.²⁸ At the same time, Pres. Ashraf Ghani's credibility is diminished following the contested 2019 presidential election.²⁹ Given these factors, large uncertainty exists regarding the GOA's ability to sustain independent operations. These information problems represent significant hurdles for power brokers participating in intra-Afghan talks.

In the long run, additional commitment problems will present challenges in implementing and enforcing an agreement if one is reached. The Taliban have resisted initial negotiations with the GOA and avoided commitments that would limit their military strength, like agreeing to ceasefires with the GOA prior to finalizing an intra-Afghan settlement.³⁰ The GOA has similarly resisted releasing 5,000 Taliban prisoners as a precondition for starting intra-Afghan talks, since that would strengthen the Taliban's fighting force. Further complicating matters, there appears to be widespread resistance against Taliban ideology among the GOA's core constituents, especially those in urban areas.³¹ Given these challenges, both sides may prefer the high costs of ongoing conflict, rather than risk future exploitation that may follow an intra-Afghan settlement. However, noncooperative bargaining models suggest monitoring mechanisms, like international PKOs, may partially alleviate information asymmetries and commitment problems.³²

PKOs generally improve compliance with peace settlements, reduce violence against civilians, and increase the duration of peace in post-civil conflict environments.³³ PKOs have historically taken on two general forms: traditional and transformational.³⁴ Traditional missions are based on impartiality and are focused on monitoring and verifying settlements where conflicts have generally ended. Transformational missions have expanded mandates, authorizing peacekeepers to use force to defend their mandate, and are often paired with more expansive state-building missions. During settlement implementation, PKOs deter violations by imposing political and military costs on potential defectors.³⁵

Traditional PKOs primarily impose political costs through passive monitoring and verification, serving as a neutral arbiter to investigate and report on suspected violations and often acting as a buffer between former combatants. In addition to those same political costs, transformational PKOs also impose military costs through controlled violence aimed at actively compelling defectors toward settle-

ment compliance. Both types of PKOs can directly lessen commitment and information problems by serving as a neutral third party that can offer protection during disarmament, demobilization, and reintegration.³⁶ PKOs with widespread geographic coverage and increasing numbers of peacekeepers significantly improve monitoring capacity and are associated with lower levels of violence against civilians, compared to missions with smaller troop levels.³⁷

While Afghanistan suffers from several information and commitment problems that complicate attempts to create and implement an intra-Afghan settlement, PKO research suggests a policy option to mitigate these problems. Afghanistan experts have also stated the need for a third-party monitoring and verification mechanism during settlement implementation.³⁸ In the short term, if a PKO was agreed on by Afghan parties during talks, this may lessen their uncertainties, supporting a bargained solution. In the long term, a PKO would incentivize compliance with a settlement through monitoring and verification mechanisms. While a transformational PKO in Afghanistan will likely be a nonstarter with potential troop-contributing countries and the Taliban, a traditional monitoring PKO may present a more acceptable option. Though research suggests a properly resourced PKO would support settlement implementation and long-term stability, others suggest that underresourced missions do not represent credible monitoring mechanisms and are not effective at fostering peace.³⁹ To highlight the dangers of an insufficiently resourced PKO, I next analyze the UN PKO that deployed to Afghanistan during the Soviet withdrawal in 1988.

Lessons Learned from UNGOMAP

Building on conflict research, I briefly analyze the UN's first peacekeeping mission in Afghanistan, the UNGOMAP. The mission was launched in 1988 at the end of the Soviet Union's ten-year occupation, with a traditional mandate designed to provide limited monitoring and verification mechanisms.⁴⁰ Since a transformational mission with a peace enforcement mandate is not a feasible option for a future Afghanistan PKO, analyzing UNGOMAP provides useful lessons in designing a credible traditional PKO. In short, the UNGOMAP failed to foster stability because it was severely underresourced and lacked the force capacity to credibly accomplish its mandate. Further, UNGOMAP was not paired with a viable intra-Afghan peace settlement that granted rebels meaningful concessions from the ruling regime in Kabul. This case supports noncooperative bargaining theory's projections of civil conflicts continuing in the face of significant information and commitment problems. Moreover, it highlights an underresourced PKO's acute inadequacies and provides important lessons for optimally designing a future Afghanistan PKO.

The Soviets invaded Afghanistan in December 1979 to support Kabul's besieged communist regime, the People's Democratic Party of Afghanistan (PDPA). Soviet and PDPA forces were confronted by various Islamist mujahideen insurgent factions, which were financially and logistically supported by the United States, Pakistan, Saudi Arabia, and China. The Soviets and PDPA failed to reestablish control, and the brutal fighting left one million Afghans killed and displaced five million refugees.⁴¹ Seeking to end its costly quagmire, the Soviets began multilateral negotiations in support of an exit strategy in 1986. While the Soviets sought to keep a friendly PDPA regime in power, after three years of failed intra-Afghan peace talks, Moscow eventually agreed to withdraw its military forces without an internal peace settlement.⁴²

The UN facilitated the subsequent Geneva Accords, which were signed in April 1988 by the United States, Soviet Union, Pakistan, and Afghanistan's PDPA regime. The Accords provided an international framework to end the Soviet occupation and enable the voluntary return of Afghan refugees.⁴³ As the Soviets were not yet willing to fully abandon their PDPA allies, the Accords failed to meaningfully address Afghanistan's ongoing civil conflict. All mujahideen leaders were excluded from the Geneva negotiations, and the PDPA retained power in Kabul.⁴⁴ The incomplete agreement failed to "provide a robust groundwork for future political stability, good governance, or peace," and intra-Afghan parties were left to seek a settlement on their own.⁴⁵

Entering this complex and ongoing civil conflict, UNGOMAP's mandate consisted of three primary tasks: to monitor (1) the withdrawal of Soviet forces, (2) the mutual noninterference between Pakistan and Afghanistan, and (3) the voluntary return of refugees.⁴⁶ However, the mission was severely underresourced, consisting of only 50 multinational military observers who were spread between five outposts.⁴⁷ While UNGOMAP successfully facilitated the Soviets' military withdrawal, the understaffed mission was simply incapable of credibly monitoring its latter two mandates or investigating alleged violations.⁴⁸ Without a credible UN monitoring mechanism in place to identify interference, the United States and its allies sought to unseat the communist PDPA regime and continued supporting the mujahideen with financial and military aid.⁴⁹ The Soviets reciprocated with ongoing military and financial aid to the PDPA regime. Separate UN efforts to negotiate a diplomatic solution among intra-Afghan parties were hindered by this ongoing covert proxy support, with both sides hoping to secure a decisive military solution.⁵⁰ While the PDPA in Kabul registered complaints of these Geneva Accords violations, UNGOMAP lacked the personnel to properly investigate, and in-fighting continued.⁵¹

Despite pressure from the Soviets, internal efforts to draft an intra-Afghan peace deal, like PDPA president Mohammad Najibullah's National Reconciliation Agenda, failed to grant enough concessions to mujahideen.⁵² The majority of mujahideen factions refused to even talk with the PDPA regime. Without an incentive-compatible peace settlement or a credible third-party monitoring mechanism, mujahideen groups fractured into numerous competing groups, spawning regional conflicts as warlords battled for local control.⁵³ As then-UN Secretary General Javier Pérez de Cuéllar recalled the breakup of various Mujahideen groups, he noted that "victory eliminated the single objective that united them."⁵⁴ Internal fighting quickly derailed intra-Afghan negotiations, and Afghanistan's various warring parties continued fighting following the final Soviet withdrawal in February 1989.⁵⁵ UNGOMAP's troop contributing countries (Austria, Canada, Denmark, Fiji, Finland, Ghana, Ireland, Nepal, Poland, and Sweden) were apprehensive about extending their peacekeepers as violence spiraled, and the UNSC ended the mission on 15 March 1990.

Analysis of UNGOMAP suggests the underresourced mission was destined for failure. First, the PKO was launched without a viable intra-Afghan settlement that would have incentivized peace among warring Afghan parties. Second, the mission's 50 personnel were incapable of implementing UNGOMAP's limited mandate. Third, the mandate was almost exclusively focused on interstate dynamics (among the United States, Pakistan, PDPA regime, and Soviet Union) and ignored intra-Afghan conflict.⁵⁶ Without a viable settlement or credible third-party monitoring mechanism backed by a legitimating mandate, internal Afghan parties proved incapable of overcoming information and commitment challenges and continued fighting. Beyond these internal dynamics, additional peacekeepers, with greater geographical reach, were needed for a credible monitoring and verification mechanism to incentivize mutual noninterference in Afghanistan from external parties and support refugee resettlement.

As the Cold War ended and Washington and Moscow agreed to cease supporting warring factions in December 1991, UNGOMAP was already disbanded, internal violence levels were rising, and the political will for a new PKO did not exist.⁵⁷ Two months after Soviet military and financial aid ceased, the PDPA government in Kabul collapsed and Afghanistan descended into chaos.⁵⁸ As the great-power proxy competition ended, the international political atmosphere facilitated the abandonment of Afghanistan, and remaining external influence from Pakistan fueled continuing civil conflict, eventually leading to the establishment of the Taliban's Islamic Emirate of Afghanistan in 1996 and a safe haven for international terrorists.

In summary, UNGOMAP provides an instructive case for how an under-resourced PKO may fail in providing stability and incentivizing compliance with a peace settlement. Commenting on states that relapse back into fighting, Barbara Walter notes, “Commitment problems are more likely to emerge in countries where no third party has offered to help with the transition, or where peacekeepers were inadequate (e.g., they failed to arrive, they were too few to offer a credible force, or they left before the military and political transitions were complete).”⁵⁹ Though successful in verifying the withdrawal of conventional Soviet forces, UNGOMAP was not paired with a viable intra-Afghan settlement and lacked the capacity required to credibly monitor Afghanistan and Pakistan’s mutual noninterference. Lacking a mandate and resources to credibly monitor intra-Afghan parties, the PKO failed to meaningfully ease commitment and information problems hindering intra-Afghan bargaining efforts. Applying the historical lessons from UNGOMAP’s shortcomings and conflict studies’ work on noncooperative bargaining and PKOs, I next outline several policy options for PKO packages that may incentivize compliance with an intra-Afghan peace settlement.

Policy Options for an Afghanistan PKO

Conflict research and history provide invaluable lessons for how a well-resourced PKO may support an intra-Afghan peace agreement and long-term stability in Afghanistan. Below, I briefly outline three PKO options and then analyze each option’s benefits and costs. As initially discussed above, this PKO cannot occur without an intra-Afghan peace settlement and consent. While this currently appears improbable, conditions may change over time, and a credible PKO’s possibility could lessen uncertainty during intra-Afghan negotiations and provide a means of arriving at a settlement, especially if talks are stalemated. Later, I assess the likelihood of Afghan parties granting consent.

As noted above, these options are based on traditional peacekeeping missions, designed to passively monitor and verify a settlement’s provisions. Specifically, all three PKOs presented below would likely monitor a cease fire, investigate alleged settlement violations, and support refugee resettlement. Peacekeepers would be lightly armed with relatively narrow mandates that only authorized the use of force for self-defense.⁶⁰ A robust peace enforcement mission with a transformational mandate that authorized the use of force to enforce a settlement would likely not be acceptable for the Taliban, nor for troop-contributing countries. From the Taliban’s limited public statements, it is clear that they would not accept a peace enforcement PKO, and pursuing this approach would immediately negate Afghan consent.⁶¹

- **Option 1 Broad Coverage:** Afghanistan's civil conflict has engulfed the majority of the country, and current estimates suggest that 190 districts (of 397 total districts) are currently contested between the Taliban and the GOA.⁶² Presumably, these districts would be ideal locations for a peacekeeping force to monitor a ceasefire and assist with combatant demobilization and reintegration. Though detailed troop-to-task analysis is required, company-sized elements would provide the minimum force required to monitor and patrol each formerly contested district, while providing requisite force protection functions at respective PKO outposts.⁶³ PKO battalions should also be located in the ten largest cities, with a regiment based in Kabul. In total, the entire PKO force would approach 25,000. Based on estimates from contemporary PKOs, this mission would cost approximately 2 billion USD annually.⁶⁴
- **Option 2 Medium Coverage:** Rather than focusing on contested districts and cities, this option would only deploy peacekeepers in major cities. Using a threshold of 200,000 residents to define *major city*, the PKO would send one to two battalions to each of Afghanistan's ten largest cities, and a regiment to Kabul. In total, this would comprise approximately 12,000 peacekeepers. Using similar financial projections as described above, this mission would cost approximately 1 billion USD annually.
- **Option 3 Narrow Coverage:** Options 1 and 2 may be too intrusive to attain intra-Afghan consent for a PKO. This final option presents the smallest PKO possible that could provide a credible monitoring mechanism. Under this option, a PKO regiment would be based in Kabul, with PKO battalions based in Kandahar, Herat, and Mazar-e-Sharif. In total, this mission would require 5,000 peacekeepers and would cost approximately 500 million USD annually.

Option Analysis and Recommendations

Option 1's broad coverage provides the most credible force to fulfill crucial monitoring, verification, and investigation mechanisms that would incentivize settlement compliance and deter violations. The PKO's wide geographic footprint supports widespread monitoring during the implementation phase and enables peacekeepers to verify if Afghanistan is being used as a terrorist safe haven. It further allows peacekeepers to promptly investigate alleged settlement violations. If acceptable to intra-Afghan parties, the sizable force in this option could monitor and assist with disarmament, demobilization, and reintegration of former combatants. Considering that the current US military mission costs approximately 45–50 billion USD annually for 12,000 troops, this option's 2 billion USD annual

cost is relatively modest.⁶⁵ However, there are also real drawbacks to this option. First, the large peacekeeping force and budget would make this one of the largest PKOs ever conducted, and it would require large financial and troop contributions from supporting states. As the COVID-19 pandemic has ravaged economies around the globe, this option's steep financial burden may not be feasible.⁶⁶ Further, the larger footprint means that peacekeepers will face increased vulnerabilities. Hundreds of small, company-sized outposts, and platoon-level patrols will be vulnerable to attacks by potential spoilers like Islamic State–Khorasan (IS–K).⁶⁷ Because it is difficult to mitigate option 1's increased risk, it is unclear if the political will exists in potential troop-contributing countries (TCC) to support the PKO. When Afghanistan's rugged geography is paired with the PKO's wide coverage, this also increases the logistical burden on the PKO headquarters, requiring additional service, support, and medical evacuation assets. Finally, and most importantly, it is unclear if key Taliban stakeholders would willingly consent to a large foreign force in their country, as suggested in Taliban Deputy Sirajuddin Haqqani's recent *New York Times* op-ed.⁶⁸

Option 2's medium coverage presents lower risk to peacekeepers but does so at the cost of significantly degraded monitoring and verification capabilities. Basing PKO contingents in the cities will allow for bases with hardened force protection measures. When paired with the PKO's concentration in fewer locations, the risk to peacekeepers is significantly reduced, which may assist in recruiting TCCs. The reduced troop requirements will also halve the required PKO costs and ease PKO headquarters' logistical burdens. Though it will not provide coverage to Afghanistan's rural population, option 2 still covers 22.4 percent of Afghanistan's total population of 36.6 million people.⁶⁹ Despite these benefits to TCCs and financial backers, option 2's reduced troop presence decreases the PKO's ability to credibly monitor and verify a future settlement. This reduced coverage increases risks of settlement violations in rural areas, as local power brokers may be incentivized to use violence to assert control. This plan lacks the requisite forces to support disarmament and demobilization throughout Afghanistan. Further, it increases the risk that terrorist organizations will use Afghanistan to train, plan, and conduct operations in remote areas. The smaller peacekeeping force will lack capacity to credibly investigate alleged violations, outside of the cities where peacekeepers are based. This risk can potentially be mitigated by sending PKO patrols to investigate violations and supplementing the mission with unmanned, unarmed surveillance drones to monitor remote locations. However, long-range patrolling increases risk to peacekeepers and will strain local PKO contingents' available manpower and logistical support.

Option 3’s narrow coverage magnifies the risks and benefits from option 2. The smaller PKO footprint located in major cities decreases risk to peacekeepers, decreases resupply burdens, and significantly lowers the mission’s financial costs. Approximately 17 percent of Afghanistan’s total population and most large business interests reside in these four cities, and those Afghans would benefit from the additional security and stability brought by the PKO’s direct presence. Though this option entails large risks with further reductions to monitoring and verification capabilities, it still provides a degree of geographic coverage. This force’s small size further reduces the PKO’s credibility, and it would not be able to support disarmament and demobilization, and its investigatory capacity would be limited to local areas surrounding the four host cities.⁷⁰

Table 1: Credible Afghanistan peacekeeping options overview

PKO Factors	Option 1 “Broad”	Opt. 2 “Medium”	Opt. 3 “Narrow”
Estimated Size	25,000	12,000	5,000
Estimated Annual Cost	\$2 billion*	\$1 billion*	\$500 million*
Monitoring Capability	High	Moderate	Low
Verification Capability	High	Moderate	Low
Afghanistan Population Coverage	30-40%**	22.4%	17%
Risk to PKO	High	Low	Low
PKO Logistical Burden	High	Moderate	Low
Shared Factors	Traditional PKO with lightly armed forces, authorized to use force in self-defense, focused on settlement monitoring and verification		

* See endnote 63. Further financial analysis is required.

** Depends on ultimate composition and disposition of company-sized PKO units.

Of these possibilities, the option 1 provides the best monitoring and verification capability. Its wider geographic coverage will better enable peacekeepers to support disarmament and demobilization and credibly monitor a ceasefire and an intra-Afghan peace settlement’s implementation. Further, it can promptly investigate alleged violations. Despite increased risks to dispersed peacekeepers, this PKO’s presence would be critical to deterring widespread violations and local power struggles. It is possible that intra-Afghan parties may consent to a PKO but resist this plan’s wide geographic coverage and large foreign presence. Further, COVID-19’s economic impacts and risk averse TCCs may avoid this option’s large costs and troop requirements. Under these circumstances, it is important to note that these options are clearly not distinct choices. Rather they represent a continuum of possibilities. The exact PKO composition and disposition could be scaled up or down, based on Afghan requests and TCCs’ willingness and avail-

ability to contribute. While the US government should advocate for a broad coverage plan, if that is not acceptable to applicable parties, then scaling down to medium or narrow coverage would still partially support a settlement. In the long run, even narrow coverage would still provide an intra-Afghanistan peace settlement with increased probability of success.

Anything less than option 3 would no longer represent a credible monitoring and verification mechanism. For example, a PKO regiment based only in Kabul would represent a purely symbolic force that would not incentivize compliance with an intra-Afghan deal. Investing in a suboptimal PKO would be unwise, since it will give the Taliban the illusion of granting a concession, yet the mission would lack credible monitoring and verification capacity, negating all potential benefits outlined above. Given likely Taliban objections toward a PKO and increasing Western impetuous to withdrawal, the most probable Afghanistan PKO outcome appears to be a lightly resourced, symbolic mission that lacks the resources needed to provide a credible monitoring and verification mechanism. As seen with UN-GOMAP, an ineffectual PKO will not relieve the information and commitment problems that prolong conflict and incentivize reversion to fighting. Should the Taliban reject all these options, then the US and international community will be forced to rely on ongoing financial aid as its primary mechanism to incentivize settlement agreement and compliance.

Critics of these proposals may allege that an Afghanistan PKO may result in another indefinite mission, similar to those seen in the Congo and Darfur. However, this PKO does not need to be indefinite. Rather, it needs to provide monitoring and verification mechanisms while an intra-Afghan settlement is being implemented. During this fragile period, former combatants who are demobilizing will be vulnerable, spoilers will seek to inject confusion and misattribute attacks in efforts to derail successful implementation and compliance. As described above, a credible PKO could support stability during that transition period. Others may worry about an aggressive PKO that is used to *enforce* a future settlement. However, as I argued above, this PKO should be used as a monitoring and verification mechanism, rather than a transformative state-building mission that seeks to enforce the settlement. As noted by Lise Howard, peacekeeping missions are not counterinsurgency operations. Rather PKOs are based on “impartiality, consent of the warring factions, and the non-use of force.”⁷¹

Beyond the features I outlined above, a potential Afghanistan PKO should consider the following points to increase the mission’s probability of success:

- Ideal Troop Contributing Countries: Operation Enduring Freedom combatants would not likely be acceptable to the Taliban, given neutrality con-

siderations. Thus, troops from NATO members, Jordan, South Korea, Japan, Nepal, Ukraine, Georgia, Australia, and New Zealand cannot be used. Similarly, history, regional interests, and geopolitics disqualify Pakistan, India, Russia, and China. Possible options include capable South American states (i.e., Brazil, Columbia), African states (i.e., Senegal, Egypt), Indonesia, and Bangladesh. Though these states lack advanced militaries and regional expertise, a lightly armed PKO would not require advanced capabilities, and interpreters and liaisons could be attached to smaller units.⁷² It is unclear whether any of these states would willingly contribute forces to this high-risk mission. However, if a neutral PKO was operating with intra-Afghan consent, then risk to observers would be reduced. The United States and UNSC could further entice TCCs with financial and equipment incentives—though these will further increase the mission's costs.

- **Leadership:** The UN Department of Peacekeeping Operations (DPKO) has the infrastructure and skill required to manage a complex PKO.⁷³ The multilateral nature of DPKO would enhance the mission's neutrality and legitimacy. Other regional organizations like the Collective Security Treaty Organization or the Organization for Security and Cooperation in Europe would not possess requisite neutrality. Considering the UNSC's interest in a stable Afghanistan, the Permanent Five would likely approve a DPKO-led PKO in Afghanistan.
- **Capabilities:** While the options above outlined basic PKO monitoring missions, several additional functions can be forecasted. In the options above, the PKO will not allow perfect coverage of Afghanistan's 397 districts. The mission should employ unmanned, unarmed surveillance drones to monitor districts without peacekeepers and conduct rapid aerial investigations of reported settlement violations. This drone capability would be even more important under medium or narrow coverage plans; however, most ideal TCCs lack these capabilities organically, and some technical requirements may need to be contracted. Explosive ordnance disposal units would be critical for demining and safely disposing of unexploded ordnance, which will be critical in minimizing harm to noncombatants.⁷⁴ Trained election monitors could monitor ballot stations if elections were part of a settlement.
- **Counterterrorism Mission:** Some analysts have argued that Afghanistan requires an external counterterrorism force to continue advise and assist operations with Afghan special forces to target remaining IS-K and extremist cells. Though not likely, if accepted by Afghan parties, this force should be excluded from the PKO, as this would violate the mission's impartiality.

Is a PKO a Realistic Option?

At this time, it appears unlikely that key Taliban power brokers would willingly consent to a PKO.⁷⁵ To date, the Taliban have consistently communicated that one of their main objectives is the departure of all international forces from Afghanistan.⁷⁶ Despite that fact, there is reason to believe that the Taliban may eventually be willing to accept a neutral PKO mission whose presence is based on Afghan consent, rather than a great power viewed as an invader. The status quo's ongoing fighting is costly, and estimates suggest at least 42,100 Taliban fighters have been killed over the last 19 years.⁷⁷ It is clear that intra-Afghan talks will be contentious and GOA power brokers doubt the Taliban's willingness and ability to credibly commit to a settlement's provisions. Stalemated negotiations will continue these costs for both the Taliban and the GOA. To gain desired reforms and end the costly status quo, the Taliban may willingly accept a short-term, consent-based PKO in exchange for bargained concessions that produced an incentive-compatible agreement.

The Taliban's success to date does not speak to the organization's ability to achieve a decisive military takeover of Afghanistan in its entirety. If the Taliban were to abandon intra-Afghan negotiations and seek a decisive military conclusion, it would incur large costs and face significant risks. While some estimates place the Taliban's military force at 150,000, the ANSF still have more than 300,000 soldiers.⁷⁸ While the Taliban control 19 percent of Afghanistan's districts, the GOA maintains control of 46 percent of the total population.⁷⁹ Survey data suggests that close to 70 percent of the population feel "threatened" by the Taliban, and large majorities oppose significant changes to the existing constitution's civil liberties.⁸⁰ These figures suggest the Taliban are far from parity with the GOA and lack the widespread support needed for a complete takeover. During the Taliban's initial rise to power in 1996, they failed to completely control the entire country and spent five years fighting the Northern Alliance.⁸¹ Even if the GOA were to fragment under pressure from the Taliban and reduced external support, many experts doubt the Taliban would gain complete control of the country.⁸²

Though not guaranteed, it is also possible that the United States may return to support its former GOA allies in a limited capacity. As seen in Operation Inherent Resolve and the campaign against the Islamic State in Iraq and Syria, the United States military and international partners provided critical combat capabilities with minimal ground forces to enable successful host-nation military offensives. Further, if the Taliban did abandon talks for a military offensive, the United States could pursue aggressive aerial targeting of Afghan opium fields in Taliban-held areas, cutting off a critical source of Taliban financing. Thus, while

the Taliban may consider a military solution, rather than a diplomatic one, doing so would likely entail high costs.

Continued financial aid also provides the international community with further leverage to advocate for a PKO. Afghanistan will require significant and sustained financial assistance for the foreseeable future. This is evident as the GOA currently collects 2.5 billion USD in revenue to support an annual budget of 11 billion USD.⁸³ Though security expenditures should decrease following a settlement, Afghanistan will still require significant funding to support recovery, basic government services, and economic development.⁸⁴ Several studies have found that external financial aid can lower the probability of civil conflicts recurrence.⁸⁵ To incentivize intra-Afghan consent, some aid could be conditional on intra-Afghan parties accepting a PKO. Since the Taliban would be part of a post-settlement Afghan state, they will directly benefit from this continued financial support. When this aid is paired with a PKO, it provides donors with an impartial method of verifying their funds are being used as directed.⁸⁶ Therefore, this international financial aid presents a critical tool to incentive intra-Afghan (especially Taliban) consent for a PKO.

Conclusion

Though the Taliban will not likely change their public insistence on the complete withdrawal of all foreign forces in the near-term, this could change in the future. Just as the PDPA maintained power for several years following the Soviet withdrawal, the GOA may prove it can independently maintain relative military superiority without US and NATO forces and continue inflicting large costs on Taliban forces. If this occurs, then the Taliban may be willing to consent to a credible PKO in the short term to reap the long-term benefits from an incentive-compatible settlement. Over the last 20 years, the Taliban have demonstrated an impressive strategic patience and willingness to play the long game.⁸⁷ The Taliban agreeing to a PKO would be an important signal that its leadership generally intend to comply with the provisions of an intra-Afghan agreement, and this signal may be critical in convincing GOA elites to reach a settlement. Though a PKO has not been widely discussed or advocated for by GOA elites, given the information and commitment problems outlined above, it represents a viable mechanism to dissuade Taliban defections.

While the United States has strategic interest in a stable, safe-haven-free Afghanistan, it appears likely that US troops will completely withdraw—potentially in the next year. To prepare for a future Afghanistan without the US military's coercive leverage, Washington needs to support options that bolster an intra-Afghan settlement's probability for success. While financial aid will be necessary

to provide a degree of leverage, it likely will not be sufficient to completely incentivize compliance with a settlement. Repeating Afghanistan's reversion to civil war following the Soviet withdrawal is not an acceptable option. If Afghanistan again becomes a failed state, it poses a direct threat to US and international security interests. Experts have forecasted a massive refugee exodus, which would further destabilize Europe.⁸⁸ Groups like IS-K and al-Qaeda would exploit the chaos to take advantage of the safe haven, recruit new members, and continue exporting violence outside of Afghanistan's borders.⁸⁹ Already filled with tension between Pakistan and India, South Asia's stability would be further threatened, and spillover into Pakistan places that state's nuclear arsenal at risk.⁹⁰ Given these dangers, the United States and international community should seriously consider reasonable measures to support a bargained solution and long-term stability in Afghanistan.

While an Afghanistan PKO may not be viable now, this could change in the future, and analyzing requisite conditions and a PKO's ideal composition is worthwhile, given the high stakes involved. If an intra-Afghan settlement appears possible in the coming years, an Afghan PKO offers a credible mechanism for intra-Afghan parties to attain desired concessions and achieve internal stability. US policy makers should conduct feasibility assessments on a future PKO. US negotiators could begin quietly socializing the possibility of a PKO with intra-Afghan parties, and the Department of State could begin confidential initial planning with the UN DPKO, potential TCCs, and financial backers. While the United States cannot direct other states to contribute to a PKO, Washington can leverage its diplomatic and economic power to identify contributors, secure financial backers, and work toward a UNSC mandate to authorize the mission. If a credible PKO was assembled, then GOA negotiators could bargain for a PKO during negotiations with the Taliban. Contingent on Afghan consent, this option may alleviate GOA uncertainties in negotiations with the Taliban and clear the way for an eventual acceptance and implementation of an intra-Afghan peace agreement. The dangerous prospects of continued fighting in Afghanistan necessitate immediate efforts to support long-term peace and stability. ♣

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Notes

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35. Doyle and Sambanis, *Making War and Building Peace*; and Fjelde, et al., "Protection through presence."

36. Fortna, *Does Peacekeeping Work?*, 83.

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59. Walter, "Bargaining Failures and Civil War," 258.
60. While a civilian protection mandate may be permissible, if it is not acceptable to intra-Afghan parties, then it should not be a red-line requirement for the PKO to proceed.
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Cyprus consists of 1,100. However, there are also examples of large traditional PKOs, like the United Nation's Operations in Mozambique approached 10,000 personnel. See "Troop and Police Contributors," Data Section, United Nations Department of Peacekeeping Operations, accessed on 9 April 2020, <https://peacekeeping.un.org/>.

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Path to Nuclear Weapons

Balancing Deterrence, Preemption, and Defense for South Korea

DR. HYUN JI RIM

In concept and in practice, alliances combine the capabilities of nation-states not simply for the sake of forming associations but essentially to preserve, magnify, or create positions of strength for diplomacy or war.

—Julian R. Friedman

Abstract

The US–Republic of Korea alliance has been crucial to South Korean security policy calculations, especially the component of extended nuclear deterrence. Recent Special Measures Agreement negotiations on sharing military cost suggests that the price for US extended deterrence is likely to increase in the years to come. In addition to the cost of the US–ROK alliance being put in the spotlight, North Korea’s insatiable appetite for nuclear weapons, including missiles of all ranges, arguments for South Korea’s nuclear weapons development and armament are surfacing in Seoul as they did in 2016 when North Korea conducted nuclear tests. This article examines policy options for South Korea by examining costs and benefits of the extended nuclear deterrence and nuclear weapons armament. Unless there is a crisis situation shocking enough to completely change the game and lead to disruption of the alliance relationship and its structure, or a change in North Korea’s level of violence and animosity, the shared values and goals between South Korea and the United States will make the nuclear path cost-prohibitive for South Korea.

Introduction

Despite the longstanding US–ROK alliance, there have been ongoing rounds of missiles tests of different ranges in addition to past nuclear tests by North Korea. Various policies of the South Korean government like the trust-building measures of previous administrations or the peace process of the current Moon administration have had dubious effects on North Korean policy decisions and are not as effective as the ROK leaders have envisioned.¹ There was an increased debate on developing South Korea’s own nuclear weapons in 2016 due to North Korean provocations: its fourth and fifth nuclear tests. A public poll in September of that year showed that 57.4 percent supported the idea of South Korean nuclear armament.² In addition, then-presidential candidate Donald Trump mentioned to the press the possibility of Asian allies’ nuclear armament, saying America is

spending too much on protecting its allies and raising questions about the future of the alliance.³ The very foundation of the US–ROK alliance, the concept of a security guarantee with a nuclear umbrella, was challenged.

Similarly, recent Special Measures Agreement (SMA) negotiations on sharing military costs have put the cost of the US–ROK alliance in the spotlight. The Trump administration's requested 5 billion USD per year, more than a 500-percent increase in payment, has drastically escalated the financial cost of the alliance and stirred anti-American sentiments in South Korea. This again fuels debates on alliance costs and the effectiveness of current arrangements, which in turn leads to support for independent self-defense and development for South Korea, including the pursuit of nuclear armaments.

As a formal treaty agreement, the US–ROK alliance was established in 1953 to target national security issues⁴ against a threat⁵ and to respond to preexisting and a constantly changing imbalance of threats.⁶ From the beginning, the two parties had a common interest in deterring North Korea and achieving stability on the Korean Peninsula and in the Indo-Pacific theater. Since then, the alliance has developed in such a way that South Korea has successfully established its own identity and interests within the US–ROK alliance, which has evolved toward comprehensive partnership.⁷ South Korean experts have argued the relationship has evolved from a blood alliance forged on the battlefields of the Korean War into a strategic alliance that provides strategic value in the region to the United States.⁸

When looking from the outside, especially from but not limited to the US perspective, these pro-nuclearization views present some significant challenges to the status-quo alliance structure that is a critical component of East Asian security dynamics and to the international nuclear nonproliferation regime. North Korea's rogue nuclear program; a militarily rising China, with its aggressive blue ocean strategy; and a declining but driven Russia pursuing conventional forces modernization do not help ease tensions in the Indo-Pacific theater. The region rife in geographic proximity to potential proliferators, the conflict-proneness of the regional territorial disputes, military arms races, and dramatic domestic politics. As scholars observe, the nuclear war scene is moving toward regional theaters.⁹ With support for nuclear weapons armament resurfacing and gaining support in Seoul, it is likely that the cumulative effect of such debate may potentially lead to the development of small nuclear powers who do not possess second-strike capability in East Asia—a second nuclear age, an Asian nuclear age.¹⁰

Acknowledging the pressing nature of the issue and the severity of the potential outcomes of nuclear weapons proliferation, this article explores the policy options for South Korea and investigates the costs and benefits of the US–ROK alliance and nuclear armament. In efforts to better understand what is at the core

of South Korea's security policy considerations, a simplified matrix is used to examine current security alliance arrangements and its challenges and to find implications for future US–ROK alliance policy and security relations in the region.

Framework: Nuclear Weapons and Deterrence

For South Korea, changing security settings have generated the security policy debate that essentially calls for a practical solution based on balancing deterrence, preemption, and defense. Fundamentally, South Korea has two security policy goals: (1) strengthening military preparedness to deter North Korean threats and to respond to potential attacks, and (2) pursuing peaceful unification with North Korea that has allegedly declared unification of the two Koreas under North Korean communism (적화통일, Jeok-hwa Tong-il) as its *raison d'être*. The very co-existence of these two concepts¹¹—security concepts and unification concepts—continues to complicate South Korean policy making and diplomatic initiatives toward North Korea.

Deterrence is defined as “power to dissuade,”¹² a preventive influence that uses negative incentives or more traditionally “the threat of retaliation to forestall a military attack.”¹³ Through the US–ROK alliance, the United States provides extended deterrence, which is an example of positive security assurances, “promises to respect or ensure the security of others.”¹⁴ There are four variants of assurance: deterrence-related assurance, alliance-related assurance, reassurance directed at potential adversaries, and nuclear proliferation-related assurance.¹⁵ In the case of South Korea, the positive security assurances fall under the category of nonproliferation-related security assurances, as well as alliance-related and deterrence-related assurance. Many argue the US nuclear umbrella is one of the drivers of a state's nuclear path along with the weakened Non-Proliferation Treaty, erosion of regional and global security, domestic politics, and aptitude to acquire technology.¹⁶ The reverse of these factors are what forestalled nuclear weapons proliferation among US allies for the past 75 years.¹⁷

Preemption here refers to countering a perceived imminent threat—to preempt an enemy's ability to attack one¹⁸ based on the belief that the adversary is about to attack and that moving first will be better than responding to an enemy's attack.¹⁹ Carrying out preemptive operations would require military readiness, consistent long-term strategy backed by military hardware, efficient command and control, and decisiveness and confidence in self-defense. For South Korea, which is part of a bilateral alliance structure, any military preemptive actions requires consultation with the United States. Different from deterrence, preemptive measures include actual military operations and require one to make a move before the adversary.

Defense is protecting oneself against attacks. Those in the South Korean domestic political arena have used the phrase *self-reliant national defense*²⁰ since the 1970s and did so more often in the Roh Moo-hyun administration. To achieve independent national defense, acquiring nuclear weapons is often suggested as a road to South Korea's autonomy in defense.²¹ However, for the most effective and affordable defense, South Korea needs to have good relations with the United States for nuclear extended deterrence and to update its overall conventional forces and missile defense systems. Amid the uncertainties posed by North Korea, it is a challenge for South Korea to balance the competing factors of the level of dependence on the United States, the level of self-reliance, deterrence and pre-emption, the domestic call for a nuclear weapons program, remain as a hedging state, and the level of conventional capabilities.

Utilizing the concept of extended deterrence, this article explores the security policy options for South Korea by analyzing the costs and benefits of the US–ROK alliance relationship that provide the nuclear umbrella versus the ROK acquiring independent nuclear weapons armament capabilities. In conventional terms, in order for the current nuclear umbrella strategy that was established in 1978 to stay in place, South Korea must maintain its nuclear-free status, the following conditions need to be met: the cost of nuclear weapons armament (N_c) is high, the benefit of nuclear weapons armament (N_b) is low; whereas, the cost of maintaining the alliance relationship (A_c) is low, the benefit of the relationship (A_b) is high. This leads South Korea to opt for the US nuclear umbrella over developing its own nuclear weapons. From this simple rationale, the hypothesis for this article is set as:

$$A_b > N_c > A_c > N_b$$

The foundation of the US–ROK alliance is the security guarantee including US extended nuclear deterrence; thus, here it is assumed that the current level or current form of alliance relationship does not exist without the nuclear umbrella component. Since possessing nuclear arms may imply South Korea's breaking away from this alliance, the equation above can be established.

Throughout this research, South Korea will be the subject of benefits or costs—when it benefits, the society in general benefits from the security policy decision. For the purpose of analysis, negative impacts of the policy decision are treated as costs, while positive impacts as benefits.²² This article does not rely on costs and benefits analysis; however, it borrows from the methods to conceptualize the security policy decisions in the South Korean case. Looking at each part of the equation above—alliance benefits, nuclear weapons armament benefits, alliance

cost, nuclear cost—this article will examine how the components of preemption, deterrence, and defense are at work.

South Korea's Nuclear Options

While Seoul has remained a strong supporter of the international nonproliferation regime, South Korea is also seen as a nuclear hedging state and one for the most successful latent nuclear powers—along with Japan and Taiwan.²³ The US extended deterrence has been critical in South Korea's security calculations²⁴ and also has been a supportive tool for curbing Seoul's willingness to go down the nuclear path.²⁵ As mentioned earlier, the alliance relationship may not remain the same with nuclear weapons development in South Korea or without extended nuclear deterrence provided by the United States. In this context, below are the possible costs and benefits that South Korea must face from having the US nuclear umbrella through the alliance and from pursuing independent nuclear weapons armament. What do these costs and benefits imply for the South Korean military capacity and security policy?

Alliance Benefits (Ab) and Alliance Costs (Ac)

The key benefit of the US–ROK alliance is the security guarantee through extended nuclear deterrence provided by US Forces Korea (USFK). Currently, South Korea hosts around 30,000 US military personnel. USFK consists of army elements (Eighth US Army), air elements (Seventh Air Force), naval, and marine forces under the United Nations (UN) Combined Forces Command (CFC).²⁶ In addition, under the Flexible Deterrence Option and Time Phased Force Deployment Data, more than 690,000 personnel, 160 battle ships, and 2,000 fighters can be deployed when necessary. At the 43rd Security Consultative Meeting in 2011, the Extended Deterrence Policy Committee was established, and the two parties signed the Tailored Deterrence Strategy in 2013. The presence of US troops and the resultant deterrent effect is the greatest benefit of the alliance and the extended nuclear deterrence.

The alliance has allowed South Korea to position itself at a tactically higher level in terms of modernized assets. In addition, the alliance sends a strong message to North Korea that South Korea has a militarily capable and strong friend having its back. Joint military exercises have been held annually until recently, including the Key Resolve and Foal Eagle in 2016 290,000 Korean military personnel participated in coordination with 15,000 USFK personnel.²⁷ In addition to military personnel participation, core nuclear strategic assets such as F-22 fight-

ers, B-2 stealth bombers, and the USS *John Stennis* nuclear aircraft carrier have been deployed to put pressure on North Korea.

However, to be on the receiving end of the extended deterrence also works against South Korea at times. North Korea belittles South Korea, using phrases in North Korean media referring to South Korean troops as a *puppet force* or to Seoul being under US control.²⁸ As seen in the recent US–North Korea dialogue, Pyongyang attempts to not recognize South Korea as an equal summit party. Earlier this year Chung Eui-yong, National Security Advisor for the Moon administration, passed along President Trump’s birthday message to North Korean leader Kim Jong-un, only to be mocked by North Korean media, which asserted that it has its own channels to communicate with Washington, that South Korea does not know its place, and that Seoul should not meddle in US–North Korean relations.²⁹ This anecdote shows how North Korea values direct interaction with the United States and puts less significance on South Korea’s role as the mediator for the United States and North Korea. It is in North Korea’s best interest to strike a deal with the United States, forgoing any South Korean involvement—another way of diplomatically provoking South Korea. In other words, Seoul’s open dependence on the United States in terms of nuclear tactics can be perceived by its northern foe as South Korea’s inferiority in weapons technology and in independent military forces.

Moreover, recent SMA negotiations signal an increase in alliance costs. The annual 5 billion USD contribution, which has ballooned from the previous 860 million USD South Korea paid in 2018,³⁰ was requested by the United States. President Trump’s cost consideration seems to have been one of the major factors in suspending joint military exercises around the time of the Trump–Kim meeting in 2018.³¹ The new budget negotiation makes the extended deterrence more costly than it has been and draws down the relative cost of acquiring nuclear weapons for South Korea.

Another aspect of the nuclear umbrella and the alliance relationship is that it requires continuous fine tuning of the command chain. This is also related to the issue of wartime operational control (OPCON) of ROK military forces. Since the Status of Forces Agreement signed in the 1960s, the wartime OPCON of military forces is in the hands of the US president. The debate on OPCON transfer has been going on for years without bearing any fruit. Because of this clause, USFK and the South Korean military have to be in sync at all times to avoid any possible organizational errors.

In addition, the cost of alliance includes a growing gap between conservatives and progressives in the domestic political arena of South Korea. This so-called South–South conflict (“남남갈등”) of pro-alliance conservatives and pro-independence

progressives leads to political confrontation between two sides and increasingly triggers social divide and segmentation that hinders long-term strategic policy making that is not swayed by political populism.

Nuclear Weapons Armament Benefits (Nb) and Nuclear Weapons Armament Costs (Nc)

While some argue how the US–ROK alliance is too valuable to risk over the arguments for South Korea’s nuclear weapons development,³² the supporters of South Korean nuclear armament believe that acquiring nuclear weapons will grant the country higher status in international society. This “prestige” factor of nuclear weapons³³ has been argued by rightist politicians like Chung Mong-joon³⁴ and is emotionally appealing to the public when he tries to show how all the strong states have nuclear weapons and, therefore, no one can ignore them. This argument stimulates South Korea’s sentiments toward independence or military self-defense and to some degree anti-American sentiments as well.

On a side note, the South Korean government called upon the United States to lend a helping hand in the early post–World War II era, and as Stephen Walt argued “the provision of economic or military assistance can create effective allies, because it communicates favorable intentions, because it evokes a sense of gratitude, or because the recipient becomes dependent on the donor,³⁵ it remains as a strong ally. However, with the restoration of self-confidence in South Korea through economic development and growing discontent with crimes committed by US troops, the government is now being criticized for being dependent on the United States. Because of this underlying mechanism, anti-American sentiments trigger antigovernment movements in South Korea. In the case of nuclear armament, the arguments for South Korea’s independence from the United States also gains support from those who are not satisfied with the government when conservatives are in power, especially when the government is blamed for the current situation in South Korea.

Putting these elements aside, from a tactical viewpoint, what does South Korea gain from possessing nuclear weapons? Pyongyang continues to provoke South Korea and threaten the world, showing that North Korea is far from giving up its nuclear bombs. Kim Sung-han argues that South Korea needs to develop a better tool for proactive deterrence to be prepared for additional North Korean threats in the future.³⁶ USFK has provided extended deterrence over the years; however, it may lack in securing preemption and the independent self-defense aspect of South Korea’s security policy. In this sense, nuclear options may seem attractive.

On the other hand, the same prestige factor can be counted toward the cost of nuclear armament in the international relations aspect. Despite some discrepancies in the 1970s, South Korea has been an active supporter of the global nonproliferation regime. With a policy and capability change embracing acquiring nuclear weapons, South Korea will face consequences—its diplomatic power will be damaged, and its status as an active supporter of global norms in the international political arena will be weakened. On a more practical level, with this move against the nuclear nonproliferation regime, South Korea may also face possible sanctions as has been the case with Iran and North Korea. It is ironic that the prestige factor can be both an encouragement and discouragement for nuclear armament.

Moreover, a nation needs second-strike capability to ensure the opponent perceives that any nuclear attack will lead to assured damage on its part, meaning stronger combat power is a prerequisite for nuclear deterrence to work. In addition to second-strike capability, a missile defense system and some type of a delivery system that can employ a nuclear warhead is also necessary. In this context, updating conventional weapons that can be actually used and strategic force structure is much more effective than nuclear armament. In other words, nuclear weapons alone do not effectively guarantee stronger military power, nor can one use nuclear weapons freely. This is a loophole in the argument for South Korea's nuclear weapons development.

Are the costs of a nuclear weapons program higher than the costs of having the nuclear umbrella provided by the alliance? ($N_c > A_c$)

As mentioned in the previous section, nuclear weapons require an advanced missile delivery system as well as investment in weapons research and development (R&D) that can support the execution of nuclear missions. This suggests that when calculating the costs of nuclear weapons armament, it is important to consider the costs of developing nuclear warheads as well as the costs of developing the support system for them. In essence, it is the comparison of the costs of developing a new system versus the costs of maintaining the current system. Without a doubt, South Korea will need to expand its defense budget and invest in R&D projects over a long period to form a complete system, and this is much more expensive than maintaining the current system.

Moreover, in addition to the technical aspect of developing nuclear weapons and the support systems, establishing a command chain and carrying out test runs are necessities. Since nuclear weapons would be a new type of strategic asset to South Korea, Seoul will need to figure out how it will proceed when nuclear weapons are required to be employed. Under current USFK and UN CFC in

Seoul, it is likely that even if South Korea manages to develop its own nuclear weapons, the final decision for their use would have to go through not only South Korean military but eventually through the US president due to the security treaty. This would be the same command chain used to carry out existing US nuclear extended deterrence measures, which lessens the appeal for an independent South Korean nuclear capability.

Unless there is a significant event that completely changes the current alliance structure and its calculations, South Korea's decision to develop nuclear weapons is unrealistic. It is, however, safe to assume that the cost of alliance for South Korea is likely to increase in the coming years, based on recent SMA negotiations on the defense cost sharing deal. If this trend continues, it is only a matter of time before South Korea's nuclear armament issue starts resurfacing again, as it did in 2016.

Other determining factors that could potentially bring about these changes are North Korea's unprecedented level of provocation or exhibition of the intentions for such, disruption of current command chain, unavailability of the current level of support from USFK, and failure of completing Kill Chain—South Korea's detection and preemptive strike doctrine—by 2023 as planned. South Korea and the United States share the common goals of keeping China engaged in solving the North Korean problem, changing current North Korean behavior, and eventually securing stability in the region. As long as these are firmly understood between the two allies, it will not be easy for South Korea to tip over to the nuclear armament side. It is also important at the same time that Washington understands and respects the South Korean urge to explore various policy tools—not just nuclear weapons but also its own missile defense system, precision-guided munitions, intelligence capacity, and so forth.

Relational issues should also be factored into setting the costs for South Korea's nuclear armament. How would US–China relations, Sino–North Korean relations, US–North Korean relations, and inter-Korean relations affect a South Korean nuclear armament scenario? If US–Chinese strategic competition intensifies to the level that requires escalation dominance or generates military confrontation, Sino–North Korea relations worsen to the extent where the Kim regime has nothing to lose, or US–DPRK relations hit the bottom and sour significantly, it could be in the interest of the US–ROK alliance to consider the NATO-style nuclear sharing option. When it comes to inter-Korean relations, more tension will naturally push for South Korea's nuclear option, whereas more peace talks will lead to diminished need for it. Yet, there is one condition where South Korean nuclear armament may be welcomed by the North under flourishing inter-Korean relations: withdrawal of US troops, the end of security alliance, and a step closer to North Korean-led reunification.

Conclusion

North Korea's insatiable appetite for nuclear weapons and missiles of all ranges makes achieving the dual goals of strengthened military preparedness for deterring North Korean threats and of pursuing peaceful unification with hostile North Korea more challenging for South Korea. While some of the factors may lead up to more intense nuclear confrontation on the Korean Peninsula or contribute to maintaining the status quo, the assumption throughout this article has been that North Korea will remain a hostile state with a strong drive to further develop nuclear capabilities.

Under such circumstances, it is natural for South Korea to consider all its security policy options and tools to balance deterrence, preemption, and defense to better respond to additional North Korean provocations. In this context, this article has examined costs and benefits of the extended nuclear deterrence provided through the US–ROK alliance and nuclear weapons armament. Arguments for South Korea's nuclear weapons armament may help South Korea to further advance its military tactics, but not under current settings. Nuclear weapons alone do not automatically promise stronger military power; there has to be a missile delivery system, various measures to carry the nuclear warheads, second-strike capability to support the nuclear assets, and a new command chain. Overall, expanding the military budget to fund R&D projects, restructuring the command chain, and so forth will be an expensive long-term option. This suggests that under the current system it will be much more costly for South Korea to develop its own nuclear weapons than to maintain the extended nuclear deterrence under the US–ROK alliance.

The US–ROK alliance has been crucial to South Korean security policy calculations, especially the component of extended nuclear deterrence. Unless there is a crisis situation shocking enough to completely change the game and lead to disruption of the alliance relationship and its structure, or a change in North Korea's level of violence and animosity, the shared values and goals between South Korea and the United States will make the nuclear path cost-prohibitive for South Korea. ♣

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Notes

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Stout Pilots and Aircraft

Air Transport in the 1944 Burma–India Campaigns

CHRISTOPHER L. KOLAKOWSKI

American-born lieutenant Scott Gilmore, serving with the 8th Gurkha Rifles in the February 1944 siege known as the Battle of the Admin Box, reflected on the reasons the besieged forces defeated the Japanese. “Air supply had been the foundation for success, as it was to be for the rest of the war in this theater,” he wrote. “That trusty warhorse of the Burma fighting, the C-47 Dakota, has been called the ‘new wonder weapon’ of those times. So it was. We infantry came to feel great affection for it.”¹

This battle was one of a series of clashes along the 500-mile India–Burma border during the first eight months of 1944. While US Lt Gen Joseph W. Stilwell’s Chinese and American forces fought their way from India to Myitkyina, Burma, British Maj Gen Orde Wingate’s Chindits marched and flew into Burma for a campaign against the Japanese rear, lasting from March to August. Meanwhile, Japanese armies launched two major offensives against British general William Slim’s Fourteenth Army in India. The first one came in February, resulting in defeat in the Arakan at the Battle of the Admin Box. The next month the Japanese undertook a major invasion of India that failed after months of fighting at Imphal and Kohima, India. These operations collectively involved thousands of troops maneuvering in some of the toughest terrain in the world, in an area the size of Pennsylvania.²

In regions where surface communications are limited or problematic, air transport becomes the essential lifeline. The experiences of the US Army Air Force (USAAF) and British Royal Air Force (RAF) air transporters in Southeast Asia in 1944 demonstrate how air transport can sustain and facilitate ground operations. The fliers’ diverse experiences offer three basic types of case studies: the Admin Box and the Imphal Airlift (sustainment for a surrounded force), the Chindits and reinforcements for Imphal and Kohima (strategic mobility), and North Burma (facilitating and sustaining tactical ground operations).

Sustainment of Pockets: The Admin Box and Imphal

The Japanese Arakan offensive, code-named Ha-Go, commenced on 4 February 1944. With attacks on the front and flank of the British XV Corps’ 5th and 7th Indian Divisions. On the morning of 6 February, Japanese forces overran 7th Indian Division’s headquarters, forcing its survivors back to the supply area, where

they formed a hedgehog position, or *Box*, ever after known as the Admin Box. Other divisional units also assumed all-around defense. Slim issued orders to hold in place and sent reinforcements to relieve the surrounded troops.

Slim also summoned Brig Arthur “Alf” Snelling, Fourteenth Army’s supply officer, and ordered him to start supplying 7th Indian Division by air. Snelling’s staff, aided by their comrades in the RAF and USAAF, had already assembled supplies and planned an airlift down to individual planeloads. Ground crew also improvised parachutes out of jute material to solve a shortage of actual parachutes. “The switchover [to air supply], as far as I was concerned,” said Slim, “was simple, thanks to the preparation that Fourteenth Army, Third Tactical Air Force, and Troop Carrier Command together had made – it required only the word, ‘Go!’.”³

The first groups of C-47s appeared over the Admin Box on 11 February. This was the second lift attempt, the first having been turned back by Japanese fighters. This time Troop Carrier Command’s leader, US Brig Gen William D. Old, personally piloted the lead plane. He bored in on the drop zone through Japanese ground fire at an altitude of 250 feet, with the rest of the transports following. Parachutes erupted from the rear of each transport as the supplies were pushed out the door. The planes circled and made repeated runs to make sure all supplies were dropped. Separate lifts brought supplies to the other brigade positions. “It is difficult to describe the light-heartedness these low and slow-flying Dakotas produced among the troops,” recalled Brig M. R. Roberts, commanding one of the surrounded brigades. “Ammunition, food, medical comforts, rum, and cigarettes poured out of the sky.” Brig Geoffrey Evans, the Admin Box commander, also marveled at the supply operation. “The thoroughness of the air supply was remarkable,” he said. “Everything that was ordered was flown in, even such items as razors and toothbrushes.” Mule fodder came in, as did mail; issues of *SEAC*, the theater newspaper; fuel and oil for the tanks; and replacement clothing. Morale soared among the defenders.⁴

Above the surrounded soldiers, air battles raged as the RAF and Japanese Army Air Force planes wheeled and whirled in a battle for supremacy. The Japanese mounted a major air effort, with large fighter sweeps over the battlefield. Third Tactical Air Force countered with its Hurricanes and Spitfires, the latter new to the theater. By mid-February, more than 150 Japanese planes had been shot down, and the British owned the skies over the Arakan. On 24 February, a relief column broke through to the defenders. The Battle of the Admin Box was over—a notable Allied success on the ground and in the air.⁵

Five weeks later, on 29 March, Lt Gen Geoffrey A. Scoones’ British IV Corps was cut off at Imphal. Four divisions, plus support troops, concentrated around the town and its surrounding plain. Heavy Japanese attacks were occurring all

around the corps' perimeter, with the expectation of more to come. At the present rate of consumption, IV Corps had supply reserves for about 30 days of operations. Scoones cut rations to his men and animals by a third and ordered economy of movement to save fuel. Brig L. T. Loup, IV Corps' chief quartermaster, directed, "Continuous and energetic steps will be taken to ensure maximum economy."⁶

It was clear that IV Corps could only survive on air supply. The Imphal Plain boasted six airfields, four fair-weather with dirt runways and two all-weather with paved runways. The first planes landed 8 April, bringing in supplies and artillery, and taking out wounded. Scoones flew out noncombat units on outbound aircraft to reduce his ration strength and get them out of the way.⁷

Loup provided to Fourteenth Army a weekly list of "demands" for supplies and transport priorities and would continue until the siege was lifted. His first one, delivered 11 April, quietly laid the situation on the line. "It is not at present known what tonnage can be expected by air daily or whether it is possible to give any indication as to whether a regular allotment of so many sorties a day can be made to 4 Corps," Loup wrote. "Equally, it is realized that weather and/or other operational commitments make it difficult to forecast any definite daily allotment. It is, however, suggested that an attempt be made . . . as it is most important from every point of view that units and formations [of IV Corps] be kept up to strength." He then outlined IV Corps' key needs in order of priority—personnel to replace losses, arms, ammunition, equipment to fortify defensive positions, food, other supplies, and stationery. "May early information be sent as to approximately what rate of sorties may be expected?" he asked.⁸

On 17 April, in response to Loup's message, the staffs of Fourteenth Army, Third Tactical Air Force, and Troop Carrier Command met at Comilla, India (today Bangladesh) to plan a long-term airlift into Imphal. IV Corps' 155,000 men and 11,000 animals needed 540 tons per day to sustain the unit in fighting condition through the end of June. The conferees decided to start an organized lift from the Bengal airfields into Imphal under the codename Operation Stamina. They assembled an Anglo-American force of 232 C-47s to execute the operation.⁹

Operation Stamina started 18 April with 75 flights into Imphal—a significant jump over the previous high of 46 on 11 April. The next day, more than 100 planes landed for the first time, and landings ranged between 106 on 19 April and 166 on 23 April. On 28 April, only 87 planes arrived. The cargoes included requested supplies, personnel, mail, and stationery. Bithess, a geosynthetic paving material, also came in and was immediately put down on some of the dirt airfields to help them drain during the coming monsoon.¹⁰

Even so, it was not enough. The airlift delivered 1,250 tons less than needed in its first 12 days. Some planes arrived empty, while others had problems navigating

weather and clouds over the mountain ranges between Bengal and Imphal. Slow loading and unloading processes hampered performance, while careless truck drivers sometimes damaged planes in collisions. Lack of paved hardstands also caused congestion on flight lines at Imphal's airfields. To simplify loading, many of Bengal's airfields became single-commodity loading points, while all fields in Imphal were used for deliveries. On the plus side, the Allied air supremacy over eastern India, coupled with the Japanese commitment of their aircraft elsewhere, ensured the transports could fly with little interference from Japanese planes.¹¹

On 30 April, Scoones sent Slim an appreciation of the situation at Imphal. "The initial enemy plans on all fronts have been frustrated," Scoones wrote. "The enemy is likely to continue his operation for the capture of Imphal." Scoones promised to mount the best defense he could, including counterattacks where possible. As for supply, Scoones and Loup assumed the monsoon would start on or about 21 May; when that happened, only half the daily sorties were likely to come in, as four of Imphal Plain's six airfields would be largely unusable due to mud and wet. "Against a total tonnage demand of 37,360 tons up to 31 July," Loup warned, "it will only be possible to fly in 21,995 tons, i.e. *a deficiency of 15,365 tons.*" Without land communications reopened by 15 June, "when resources will be eaten down, then about two divisions and a proportion of Corps troops must be flown out of the area." Imphal could hold for the time being, but IV Corps would start to wither for lack of sufficient supplies. After six more weeks, IV Corps would start folding.¹²

The pilots did their best, but problems continued into May. Against a daily requirement of 189 supply landings, on most days between 90 and 110 flights reached Imphal. Weather was the biggest issue: on 22 May it kept all but 14 flights away, and on 27 May all but 11. The rains also limited use of airfields outside Imphal Main and Palel after mid-May, resulting in even greater congestion. The threats of Japanese infiltration and long-range shelling from the nearby front lines further restricted the use of Palel.¹³

RAF 221 Group, with its Spitfires, Vengeances, and Hurricanes based in Imphal, managed to maintain air supremacy over the area, although they could not prevent all Japanese air incursions. Nonetheless, the British, Indian, and Burmese fliers took to the air as often as possible to support the ground troops and the airlift. By battle's end, the RAF had flown over 25,000 sorties and shot down 33 Japanese fighters with another 22 probable and 61 damaged, against a loss of 18 Spitfires.¹⁴

Stamina's shortfalls limited IV Corps' fighting ability. Artillery firing was limited to six rounds per day per gun, unless Corps headquarters authorized more firing. Fuel was at a premium, and trucks were often operated in tandem to save gasoline and oil. Rations were cut to a level unable to sustain active troops, and by

mid-May hunger was prevalent in many formations. “Scaling hills became a problem and patrols were given extra food,” remembered a lieutenant in 17th Indian Division. “We smoked a lot to stop thinking of hunger.” Lack of rain gear and new clothing added to the hardships. “We had the means to ensure survival, but no more,” recalled a staff officer. “Life during the siege of Imphal was strenuous for all and devoid of comfort and it imposed a strain on the nerves.”¹⁵

The situation in June did not improve. Despite the weather, an average of 259 tons per day arrived during the period 4–15 June. Rations were again cut. Most ominously, by mid-June, fuel and oil stocks for IV Corps were estimated to run dry in just more than a week. At the same time, the weather socked in Imphal and prevented many deliveries. On 20 June, IV Corps had to report that “Stocks in the RIASC [Royal Indian Army Supply Corps] depot are practically exhausted and unless petrol is received daily . . . it will be necessary to eat down the very small . . . reserves.” Fortunately, this was the lowest point. On 22 June, relieving forces from Kohima reopened land communications and raised the siege.¹⁶

Strategic Mobility: Chindit Invasion and Reinforcements for Imphal–Kohima

Allied air transport also facilitated two important strategic air movements in March 1944: Operation Thursday, the Chindit invasion of Burma, and a rapid reinforcement of Imphal and Kohima by the 5th Indian Division. Each of these represented the largest troop movements by air to that date.

General Wingate had developed and refined his concepts of long-range penetration and prepared to mount a winged invasion of Burma. His force came under Fourteenth Army and was officially designated 3rd Indian Division or Special Force—but best known by its nickname of *Chindits*. Gen Henry “Hap” Arnold, Chief of the US Army Air Forces, sent two of his best young officers, lieutenant colonels Philip Cochran and John Alison, to India with whatever air force they could find. Their 1st Air Commando departed with 30 P-51 Mustangs, 20 B-25s, 32 C-47 transports, 225 gliders, 100 L-1 and L-5 liaison aircraft, and six prototype Sikorsky helicopters. Aviation engineers of the 900th Field Unit also joined the burgeoning force.¹⁷

On 5 March, Wingate prepared to kick off Operation Thursday, the Chindits’ invasion of Burma and the largest airborne operation of World War II to date. Thursday had three objectives: “1. To help the advance of combat troops (Ledo Sector) [Stilwell’s forces] to the Myitkyina area by drawing off and disorganizing the enemy force opposing them and prevent the reinforcement of these forces. 2. To create a favorable situation for the Chinese [Y Force] advance westwards

across the Salween. 3. To inflict the maximum confusion, damage, and loss on the enemy forces in Burma.”¹⁸

One of Special Force’s six brigades (16 under Brig Bernard Fergusson) had set off on a 450-mile march from Ledo a month earlier. Now Wingate planned to fly in two brigades (77 under Brig Mike Calvert and 111 under Brig W.D.A. “Joe” Lentaigne) to join 16 Brigade near Indaw, Burma, in the Japanese rear, holding the other three brigades in reserve. The 1st Air Commando would handle air support and glider operations. Planners identified three landing zones in the jungle, all within 40 miles of Indaw and the railroad that served as the supply line for the Japanese opposing Stilwell. The zones were code-named Broadway, Piccadilly, and Chowringhee; each was large enough to house a C-47 airstrip and offered good access to Indaw.¹⁹

Wingate’s orders also envisioned a system of fixed bases for his men to use behind enemy lines. Called *strongholds*, these fortified centers would hold airstrips, supplies, and artillery. Floater units would operate nearby to ambush the Japanese and if possible draw them into the stronghold itself. “The Stronghold,” instructed Wingate, “is an orbit around which columns of the brigade circulate . . . The motto of the Stronghold is ‘No Surrender.’”²⁰

On the afternoon of 5 March, Calvert’s 77 Brigade and part of 111 Brigade stood at Lalaghat airfield, India, ready to board the 61 gliders that would take them into Burma. Slim, who the day before had briefed Stilwell on Wingate’s plans, was also present. The planes were scheduled to take off at 1800 for a night landing by the light of a near-full moon.

Suddenly at 1630 an intelligence officer appeared with new photos of the landing zones. One was blocked with logs, but the reason was unknown; the other zones were clear. Was this an ambush? Nobody was sure, and there was no time to investigate. Postponement was not an option; they had to go that night or cancel. Slim and Wingate stepped aside for a chat. “The decision is yours,” said Wingate, Thursday’s commander, to Slim.²¹

“I knew it was,” recalled Slim. “Not for the first time I felt the weight of decision crushing in on me with an almost physical pressure . . . On my answer would depend not only the possibility of a disaster with wide implications on the whole Burma campaign and beyond, but the lives of these splendid men, tense and waiting around their aircraft. At that moment I would have given a great deal if Wingate or anybody else could have relieved me of the duty of decision. But that is a burden the commander himself must bear.” After some discussion, the plan was modified so as to fly all Calvert’s men into Broadway that night. Slim signaled his assent. The planes took off at 1812.²²

The Broadway landing did not go smoothly, as Calvert soon discovered ruts in the land undetectable from the air. After a string of glider crashes, he closed the field for the night with the second wave en route. The next morning US Army engineers of the 900th Field Unit, who made it in with most of their equipment, began smoothing out the field. By nightfall Broadway was back open; Wingate himself arrived for a look in one of the 64 C-47s to land on the night of 6–7 March. Over the next week, relays of C-47s came into Broadway and Chowringhee (opened 10 March) while light aircraft flew out casualties. “In a few days,” remembered Calvert, “we had 12,000 men, 2,000 mules, masses of equipment, anti-aircraft and field guns all established behind the enemy lines.”²³

Allied air mobility also provided decisive reinforcements to Imphal and Kohima. The Japanese offensive had forced IV Corps to commit all its reserves, and General Slim activated a contingency plan to fly in troops from XV Corps. In the latter half of March, Maj Gen Harold Briggs’ 5th Indian Division started its fly-in via USAAF C-46s and C-47s. Some of Briggs’ units came off the firing line in the Arakan, moved to the airfield, packed and loaded, flew 200 miles to Imphal, unloaded, and went into action—all in the span of three days. Fortunately, Fourteenth Army logisticians had provided detailed loading tables that guided and speeded the process. Leading was Brigadier Evans’ 123rd Brigade, which flew in on 20 and 21 March, followed by General Briggs on 22 March, when weather and the need for pilot rest slowed operations, then the divisional artillery, and lastly 9th Brigade. By 26 March, 531 airplane sorties had brought in 5,924 men, 129 jeeps, 313 mules, 36 motor-carriers, and 40 guns into Imphal.²⁴

For Briggs’ men, it was quite an adventure. “It was the first and only time,” recalled a staff officer, “that a division was transported by air out of action on one battle front to immediate action on another front several hundred miles distant.” Most of the soldiers had never been on a plane before. The American pilots, the first Americans many men had ever seen, merely added to the exotic flair of the trip.²⁵

The arrival of Briggs’ troops stabilized the crisis north and northeast of Imphal. However, Slim understood another crisis was developing 60 miles to the north at Kohima and Dimapur 40 miles beyond. “Within a week of the start of the Japanese offensive,” he recalled, “it became clear that the situation in the Kohima area was likely to be even more dangerous than that at Imphal. Not only were the enemy columns closing in on Kohima at much greater speed than I had expected, but they were obviously in much greater strength.” Slim had expected a strike toward Kohima by a Japanese regiment, but a captured Japanese order confirmed an entire enemy division was on its way. “We were not prepared for so heavy a thrust,” Slim admitted. “Kohima with its rather scratch garrison and, what was worse, Dimapur with no garrison at all, were in deadly peril.” Slim diverted the

5th Indian Division's last brigade, the 161st, to Dimapur and Kohima, where it turned back the Japanese advance in an epic defensive action.²⁶

Air Transport and Tactical Ground Operations: North Burma

Simultaneously with the battles in India, General Stilwell's Chinese-American forces pushed south to open the Ledo Road corridor and captured the key city of Myitkyina. Part of the spearhead was the 5307th Composite Unit (Provisional), popularly known as Merrill's Marauders, which repeatedly made wide flanking movements into the Japanese rear. At the same time, General Wingate's Chindits fought to disrupt Japanese communications, later shifting northward to meet Stilwell's advance. The Chindits also established new strongholds—named White City, Aberdeen, and later Blackpool—to support their expanding operations. Both of these campaigns dispersed bands of men, usually a few thousand but sometimes no more than a few hundred in strength, over an area as large and remote as West Virginia.²⁷

In these conditions, supply and communication came to depend on air transport—the 1st Air Commando for the Chindits, and 2nd Troop Carrier and 803rd Air Evacuation Squadrons for Stilwell's troops. Light planes, usually American L-1s and L-5s operating from dirt runways cut out of jungle clearings, moved commanders and staff officers around, assisting in liaison between widely scattered leaders and units. This was especially important during fluid operations when the terrain and atmospherics sometimes rendered radio transmissions of questionable reliability and security. USAAF and RAF C-47s delivered prepackaged loads of supplies from stocked airfields in India to the men and their supporting animals, sometimes when in close contact with the Japanese and through ground fire. "Despite the fire," noted Capt H.L. Greengus of the 2nd Troop Carrier Squadron, USAAF, "the ships flew in at stalling speed, only a few hundred feet above the ground, to make sure the water and ammunition were received by our Allies instead of the Japanese. In the pattern over the dropping target, the Second Troop Carrier Squadron constantly was under machine gun fire."²⁸

The aircrews and ground forces quickly established a mutual understanding, usually through training but occasionally having the aircrews spend a few days with frontline units. "We don't give damn if the weather's bad or the Japs are raising hell," commented an American pilot, "those fellows on the ground need the stuff and we're going to get it to them regardless of consequence." Those below appreciated what the aircrews could do for them. "Please be assured," said Lt Col D.C. Herring to the Air Commando leadership, after a fatal training accident involving his Chindit command, "that we will go with your boys any place, any time, anywhere." The latter part of this statement became the 1st Air Commando motto.²⁹

One of the transporters' most important roles was casualty evacuation from the battle zone in Burma to hospitals in eastern and northeastern India. Despite ground personnel shortages, slowness of loading and unloading stretcher cases, and at times insufficient aircraft, the American aircrews strained every effort to get the wounded back to India. By campaign's end, ten percent of casualties arrived at hospitals in India the same day of their wounding; others arrived usually within 1–3 days, depending on distance from their wounding site to an airfield.³⁰

The casualty evacuation effort in Burma also made military history. On 21 April 1944, a light plane, carrying three casualties and an American pilot, went down 15 miles west of White City. Planes could not get in to rescue the men, so an overland rescue expedition started from White City. "Send the egg-beater in," commanded Cochran from 1st Air Commando headquarters. The Commandos' lone operational Sikorsky YR-4B helicopter flew to Aberdeen in stages, arriving 25 April. The helicopter pilot, Lt Carter Harmon, learned that Chindits had secured an airstrip in a riverbed not far away from the stranded men. He flew to the streambed, landed and refueled, got his bearings, and took off immediately. Harmon knew the Sikorsky would struggle to carry himself and one passenger, and that four trips would be needed. On the 25th, he picked up two casualties before the engine overheated and needed a rest. The next day he made two trips to pick up the final casualty and the pilot, taking off as troops (which turned out to be the rescue party) swarmed the landing zone. Harmon flew back to Aberdeen, having accomplished the first battlefield helicopter rescue in military history.³¹

This rapid evacuation of casualties had a major morale impact on the ground troops. "For those of us who [on a previous Chindit operation behind enemy lines] so often had the misery of abandoning our wounded . . . the powers of the light aircraft lifted a great weight from our hearts," recalled Brigadier Fergusson after the war. "The pilots were as stout as the aircraft." Later he expressed a common opinion among Chindit and Marauder veterans: "When we Chindits are old, garrulous and thundering bores," he said, "we will remember what you did for us, and tell our children . . . we shall not forget the L.P.F. [Light Plane Force], nor what its light-hearted pilots did for us in their ramshackle planes."³²

Conclusion

"A most distinctive aspect of our Burma war," wrote General Slim in 1956, "was the great use we made of air transport. It was one of our great contributions towards a new kind of warfare and I think it fair to say that, to a large extent, we discovered by trial and error the methods of air supply that later passed into general use . . . Ours was a joint land and air war; its result, as much a victory for the air forces as for the army."³³

The efforts of the air transporters did not win the 1944 India–Burma battles by themselves but did provide essential sustainment, strategic mobility, and tactical agility to the Allied ground forces. The men who flew the large transports and light planes alike assisted and enabled the ground battle to be prosecuted to victory.

Although technology has changed transporters' operating environment, the fundamentals of these case studies remain valid today. Air transport was, and still is, a system of which the flight itself is just one component; to be fully effective, transporters require reliable ground support on both departure and arrival of a shipment to ensure accurate and efficient handling. Good communication, collaboration, and coordination between air and ground forces defined requirements, smoothed out operations, and minimized misunderstandings. None of it would have been possible without air superiority or preferably air supremacy, which proved an essential and overriding requirement for success.³⁴

Even as the campaign raged, General Stilwell understood the important lessons for the United States from the 1944 India–Burma battles. "I believe the operations which are now being, and for some months have been, conducted in Northern Burma and in the Imphal area," he told General Arnold in June 1944, "constitute an exemplification of the kind of joint air and ground operations which you have in mind." His statement remains true 76 years after it was made.³⁵ ★

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Notes

1. Scott Gilmore, *A Connecticut Yankee in the 8th Gurkha Rifles* (London: Brassey's 1995), 144.
2. Excellent popular histories of the Burma operations in World War II are Louis Allen, *Burma: The Longest War* (New York: St. Martin's, 1984) and Frank McLynn, *The Burma Campaign: Disaster into Triumph 1942–45* (London: Vintage, 2011). For official accounts, see Maj Gen S. Woodburn Kirby, *The War Against Japan, Volumes I–V* (London: H.M. Stationary Office, 1957–1969; Naval & Military Press, reprint 2004); Charles F. Romanus and Riley Sunderland, *Stilwell's Mission to China* (Washington, DC: US Army, 1953); Charles F. Romanus and Riley Sunderland, *Stilwell's Command Problems* (Washington, DC: US Army, 1954); and Charles F. Romanus and Riley Sunderland, *Time Runs Out in CBI* (Washington, DC: US Army, 1958). All references to Kirby are to Volume III; all references to Romanus and Sunderland, unless otherwise noted, are to *Stilwell's Command Problems*.
3. William Slim, *Defeat into Victory* (London: Cassell, 1961), 236.

4. M.R. Roberts, *Golden Arrow: The Story of the 7th Indian Division* (East Sussex: Naval & Military Press, 1951), 84; and Geoffrey C. Evans, *The Desert and the Jungle* (London: Kimber, 1959), 152–53. American light planes also flew out wounded from the 114th Brigade perimeter.

5. N.N. Madan, *The Arakan Operations, 1942–45* (New Delhi: Government of India, 1954), 118–19; see also Henry Probert, *Forgotten Air Force: The Royal Air Force in the War against Japan, 1941–45* (Lincoln, NE: Potomac, 1995).

6. Kirby, *The War Against Japan*, 320–25; and IV Corps Q War Diary, April 1944, UK National Archives.

7. Kirby, *The War Against Japan*, 320–25; IV Corps Q War Diary, April 1944; and Antony Brett-James, *Ball of Fire: The Fifth Indian Division in the Second World War* (Aldershot: Gale & Polden, 1951), 322.

8. This message is in IV Corps Q War Diary, April 1944. Loup reported to Fourteenth Army on 11 and 18 April that IV Corps was desperately short of paper and office supplies to conduct business.

9. Kirby, *The War Against Japan*, 320–23; and Bisheshwar Prasad, *The Reconquest of Burma, Vol. I, June 1942–June 1944* (New Delhi: Pentagon Press, 1958, reprint 2014), 418–25.

10. Kirby, *The War Against Japan*, 322–23, 512–16; see also IV Corps Q War Diary, April 1944.

11. Kirby, *The War Against Japan*, 322–23, 512–16; see also IV Corps Q War Diary, April 1944, and Joe G. Taylor, *Air Supply in the Burma Campaigns* (Maxwell AFB, AL: USAF Historical Study No. 75, 1957), 65–90.

12. This report is in Prasad, *Reconquest of Burma, Vol. I*, 418–25. Emphasis is in the original.

13. IV Corps Q War Diary, May 1944.

14. Probert, *Forgotten Air Force*, 190–93. Flight times from the Imphal Plain to the battlefield were so short that it was not unheard of for a fighter-bomber to take off on a mission, strike the target, and immediately return to base to reload and go back again.

15. IV Corps Q War Diary, May 1944; 254th Tank Brigade War Diary, June 1944, UK National Archives; M. Attiqur Rahman, *Back to the Pavilion* (Oxford: Oxford University Press, 2005), 49; and A.J.F. Doulton, *The Fighting Cock: Being The History of 23d Indian Division, 1942–1947* (Sussex: Naval & Military Press, 2002), 138–44.

16. IV Corps Q War Diary, June 1944.

17. Lowell Thomas, *Back to Mandalay* (New York: Greystone, 1951), passim; see also Charlton Ogburn, *The Marauders* (New York: Harper, 1959), 14–15. The 1st Air Commando was officially known as the 5318th Provisional Air Unit until 25 March 1944, which the designation *1st Air Commando* became permanent.

18. Derek Tulloch, *Wingate in Peace and War* (London: Futura Publications, 1972), 193–94.

19. Tulloch, *Wingate in Peace and War*, 194–96. The landing zones were named for the major commercial streets in London (Piccadilly), New York (Broadway), and Calcutta (Chowringhee).

20. Wingate laid out the Stronghold concept in Special Force Commander's Training Note No. 8. It is quoted in full in Michael Calvert, *Prisoners of Hope* (London: Leo Cooper, 1971), 282–88.

21. Slim, *Defeat into Victory*, 225–28. See also Tulloch and Calvert, 21–24. The intelligence officer who took the photos was Lt Charles Russhon, US Army Air Forces, who later was technical advisor on the first James Bond films. He arranged, among other things, the filming of *Goldfinger* at Fort Knox.

22. Slim, *Defeat into Victory*, 225–26.

23. Calvert, *Prisoners of Hope*, 27–33. Tulloch, *Wingate in Peace and War*, 207–08, has statistics on glider operations of the night 5–6 March.
24. Brett-James, *Ball of Fire*, 299–301; and statistics come from Appendix F of the IV Corps Quartermaster War Diary, March 1944. The numbers include 1,550 men, 16 jeeps, and 11 motor-carriers flown in via 113 sorties as advance units on 14 March; the majority of the lift was 20–26 March. Heavy transport and equipment was left behind, to come by road and rail later as best they could. The 5th Indian Division was relieved in the Arakan by 25th and 26th Indian Divisions.
25. Brett-James, *Ball of Fire*, 299–301. One pilot asked his passengers where they wanted to go; another asked for the name of the field they had just left. A third panicked when his load of mules started kicking, and he shot them all.
26. Slim, *Defeat into Victory*, 305. For more on the defense of Kohima, see Christopher L. Kolakowski, “Is That the End or Do We Go On: The Battle of Kohima, 1944,” *Army History* 111 (Spring 2019): 6–19.
27. For an overview of these operations, see Christopher L. Kolakowski, “The Coming of Modern War: The Coalition War in North Burma, 1944,” *Army History* 107 (Spring 2018): 6–27.
28. Calvert, *Prisoners of Hope*, 16–17; Thomas, *Back to Mandalay*, 155; see also a memo from Captain H.L. Greengus to Brigadier General Frank Merrill dated 17 May 1944, Stilwell Papers, Hoover Institution.
29. Calvert, *Prisoners of Hope*, 16–17; Thomas, *Back to Mandalay*, 155; see also Greengus memo.
30. See a report from Major D.A. Yeti in Haydon Boatner Papers, Hoover Institution.
31. Robert F. Dorr, *The First Helicopter Rescue: Where the Special Operations Combat Rescue Mission Began*, Defense Media Network, 15 January 2015, <https://www.defensemедianetwork.com/>.
32. Bernard Fergusson, *The Wild Green Earth* (London: Collins, 1952), 222, 232.
33. Slim, *Defeat into Victory*, 543, 546.
34. For more detailed discussion of these points, see Slim, *Defeat into Victory*, 543–46.
35. Stilwell’s letter to Gen Hap Arnold is in Stilwell Papers, Hoover Institution.

Space Entanglements

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

DR. J. WESLEY HUTTO

Abstract

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

Background on India–Pakistan Rivalry

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

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



(Altered to show new jurisdictions, by Fowler&fowler Wikimedia, 14 November 2019, <https://commons.wikimedia.org/>.)

Figure 1. Kashmir. A map of the disputed region created by the US Central Intelligence Agency and hosted by the University of Texas-Austin Perry-Castañeda Library Map Collection.

A 1965 failed Pakistani-led uprising led to direct confrontation between the armies in Kashmir, as well as the largest tank battle since World War II.³ The war ended in a stalemate and a return of Indian and Pakistani forces to the preconflict LAC. Pakistani efforts to put down a 1971 revolt in East Pakistan required a troop buildup in the state that then resulted in a third war between the two rivals. India's role in this war was crucial in stripping Pakistan of its eastern holdings, and with them more than half its population, capturing one-third of its army and

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

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

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

An Explosive Crisis⁸

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

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

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

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

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

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

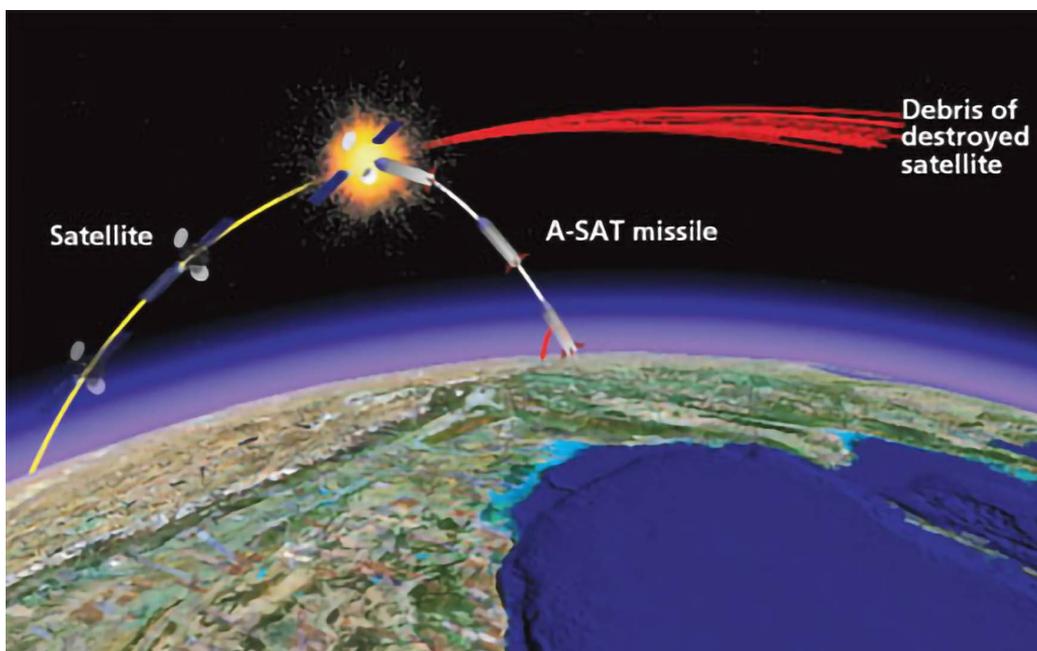
Alignments in Space

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

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

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

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



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

Figure 2. Depiction of the 2019 Indian ASAT test

Antisatellite Assets and a US–China Security Dilemma

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

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

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

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

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

Task for the Classroom

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

Lines of Inquiry to Guide Reading and Discussion²⁴

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

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2. Steven A. Hoffman, *India and the China Crisis* (Berkeley: University of California Press, 1990).
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