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Winter 2015

**A Journal of National Security Studies
United States Naval War College**





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From the Editors

The editors of /luce.nt/ are honored to bring you the Winter 2015 issue of the Naval War College's student run journal. As editors of a student run journal, we are proud that we can provide our readers with a broad range of material.

In this issue, we share United States Navy Lieutenant Commander Scott Keenan's award winning essay on a proposal for a Department of Homeland Security human intelligence program to counter Fourth Generation of Warfare emergent threats to the United States.

Mr. French, a Research Associate in the Naval War College's Department of Strategic Research, provides an essay that examines how Pakistan's decision to field tactical nuclear weapons in hopes of deterring aggression may be counterproductive.

Two of our essays provide a window into the once isolated country of Burma. One essay discusses how U.S. engagement and investment in Burma's energy security will advance stability in Asia while the other chronicles Burma's tumultuous transition to a Democracy.

As the United States begins dialogue with the government of Cuba, we are extremely proud to publish Major Kevin Stepp's, United States Marine Corps, essay on "An Embargo Free Cuba" which he argues will contribute to a more secure Latin America.

United States Navy Lieutenant Commander Pete Zubof provides a thought provoking essay on 3-D Printing and the implications such technology could have on national security.

/luce.nt/ editor Mr. Kelly, poetically and humorously at times, provides an emotional narrative of the funeral of a veteran, his father.

We hope you enjoy this edition of /luce.nt/ as much as we do. Please feel free to share your comments via [e-mail](#) or through the [/luce.nt/ Facebook](#) page.

From the Editors

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Homeland Threats in the Fourth Generation of Warfare and the Case for a Department of Homeland Security Human Intelligence Program

Lieutenant Commander Scott Keenan
United States Navy

All planning, particularly strategic planning must pay attention to the character of contemporary warfare.”—Clausewitz, On War

Enduring effects of the Peace of Westphalia included the rise of a European sovereign nation-state system and the origins of contemporary international order¹. It was the genesis of the western civilization’s nation-state, national sovereignty and the eventual norms of international law which rested on the equilibrium in the geopolitical national balance of power². It also led to the growth of military technology and provided nation-states the ability to “advance policy by other means”³ and to the eventual development of operational art. This martial

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evolution has been described as “generational.”⁴ The First Generation of Warfare (1GW)—massed linear forces; Second (2GW)—indirect use of firepower/artillery, Third (3GW)—maneuver warfare/*Blitzkrieg*; and the Fourth (4GW)—described as an advanced transnational and/or non-state insurgency using all available elements of power to defeat nation-states. The 4GW concept manipulated the nation-state reliance on the Clausewitz Trinity paradigm of balance between a nation-state’s people, government and military to achieve their objectives.⁵ This is the contemporary method of warfare favored by transnational Islamist groups, criminal organizations and drug trafficking organizations.

The intent of this essay is to address the concept of 4GW and the associated threats to the U.S. Homeland and to offer a proposal for an intelligence platform, based on Human Derived Information (HDI), to counter these emergent threats. In order to examine and analyze this threat, I will first define what 4GW actually means and provide examples of asymmetric tactics and how these tactics evolved into 4GW. This essay will specifically examine violent Islamic Jihad organizations, transnational criminal organizations (TCO), and transnational drug trafficking organizations (DTO), and will offer a brief look at the global ground gained by 4GW practitioners in the Middle East, African and the Americas. I will conclude with an HDI-driven proposal, based on an existing initiative, to counter these emergent threats in the U.S. Homeland. This existing initiative can be restructured to counter the decentralized strengths of 4GW, while not creating another onerous level of bureaucracy or risk infringement on U.S. civil rights.

Defining the 4GW Threat: The Blurred Lines between Crime and Terrorism

To begin, what is 4GW and how is it different from previous experiences of the U.S. with the tactics of asymmetric warfare? The use of asymmetric tactics in warfare is nothing new and the significance of 4GW is not necessarily the tactics used but rather the notion that warfare is no longer advancing policy between nation-states⁶. Non-state actors are also achieving the strategic effects once reserved only for nation-states and these non-state actors are not interested in negotiating policy. Essentially, 4GW, practiced by an emerging trifecta of transnational threats of Islamic extremists, TCOs and DTOs, is a devolution of warfare back to a pre-Westphalian state of affairs⁷. Accordingly, regional security affairs must now consider the possibility of viewing non-state actors and the alliances between the three as potential principals in regional security considerations. These groups include the Islamic State of Iraq and Levant (ISIS) advancing the strategic objective of an Islamic Caliphate as well as Latin American-based TCOs and DTOs, systemically advancing criminal enterprise and in the process turning nation-states into “narco-states”.

Non-state 4GW practitioners understand Western strategic and cultural principles, including the importance of manipulating the Clausewitzian Trinity⁸. Western military doctrine and even sensitive intelligence methods are available on the Internet and are commonly circulated in extremist literature, such as *Inspire*, an internet-based “how to” Al Qaeda publication. These non-state actors, particularly Islamic extremists, are aware of Clausewitz, Mao and Sun Tzu and, after 12 years of war with the US, it is reasonable to conclude Islamic extremists have learned US military and political doctrine to anticipate countermeasure in a multitude of likely scenarios. Specifically, Islamic extremists seem to understand US political considerations when planning military operations towards maintaining the Clausewitzian paradigm of balance between People, Military and Government.⁹ They seek to manipulate that paradigm towards a non-Trinitarian model of 4GW, effectively countering the strengths of nation-states and their center of gravity (COG).¹⁰ For example, Al Qaeda affiliates identified U.S. COGs as the economy and population¹¹. They pursued attacking the economic aspect with the 9/11 attacks and the wars in Iraq and Afghanistan have affected American public opinion. In addition, Internet radicalization of American citizens, including former U.S. Army Major Nidal Hassan illustrates the emerging threat of Homegrown Violent Extremism (HVE)¹².

“Evolved insurgency”¹³ has been used to describe 4GW, but it is much more complex and comprehensive than that. Prior to the advent of 4GW, the 20th century world witnessed the political and military tactics of insurgency inspired by tacticians such as Mao Zedong, who coined the term “People’s War” and challenged the notion of the Clausewitz Trinity. Practitioners of 4GW employ Mao’s principles of “People’s War” and use them to alter the nation-state concept. From an extremist Salafist Islamic standpoint, there is no interest in a hypothetical “Al Qaedastan” peacefully coexisting in the community of nations; rather, extremist Salafists are interested in a pan-Salafist Caliphate without regard for national borders. This objective is currently being realized in the Levant and Middle East, where Salafists from all over the world, fighting together, control the Al Anbar region of Iraq to portions of Syria—effectively controlling the ground from the western suburbs of Baghdad to the shores of the Mediterranean. Meanwhile, Mexican and Central American DTOs and TCOs have systemically corrupted governments throughout Latin American including Mexico, Honduras and El Salvador, creating a regional instability that has even made its way into the US.¹⁴

The theory of generational warfare and specifically 4GW was first submitted by John Lind, with his 1989 Marine Corps Gazette article “The Changing Face of War: Into the Fourth Generation.” It evaluated the history and qualitative development of military and national capabilities into contemporary operational art¹⁵. As a distinct warfare theory, 4GW has been disregarded by some scholars, including Dr. Antulio J. Echevarria II of the U.S. Army’s Strategic Studies Institute, who believe it detracts from developing theories more helpful in understanding of how the enemy thinks and acts. In his 2005 paper “Fourth Generation Warfare and Other Myths”, Echevarria wrote:

There is no reason to reinvent the wheel with regard to insurgencies—super or otherwise—and their various kin. A great deal of very good work has already been done, especially lately, on that topic, to include the effects that globalization and information technologies have had, are having, and are likely to have, on such movements. We do not need another label, as well as an incoherent supporting logic, to obscure what many have already made clear. The fact that 4GW theorists are not aware of this work, or at least do not acknowledge it, should give us pause indeed. They have not kept up with the scholarship on unconventional wars, nor with changes in the historical interpretations of conventional wars. Their logic is too narrowly focused and irredeemably flawed. In any case, the wheel they have been reinventing will never turn.

Six years after Echevarria’s paper was submitted, the so-called “Arab Spring” and subsequent nation-state implosions throughout the Middle East and Africa seemed to contradict the author’s conclusions. These implosions were galvanized through grassroots political activism and the use of social media’s Twitter and Facebook¹⁶ and “citizen journalists” provided updates to the world through YouTube. Many believe the Arab Spring was good example of the non-Trinitarian concept of 4GW war, first espoused by Lind. Since the 2011 beginning of the Arab Spring, Libya has devolved into chaos; the Government of Syria, aided by the Government of Iran and Hezbollah, are trying to survive an international confederation of militant Salafists led by Al Qaeda-affiliate ISIS (formerly Al Qaeda in Iraq), which now dominates the Al Anbar region of Iraq—spanning from the western suburbs of Baghdad through to Syria.¹⁷

Moreover, Abu 'Ubeid al Qurashi, a former aide to Usama bin Laden, wrote an essay titled “Fourth Generation Wars” for the now defunct online magazine *Al Ansar: For The Struggle Against the Crusader War*. Qurashi opined that 4GW theory was taken seriously by Al Qaeda leadership and believed that wars in the fourth generation were already taking place and had shown that “the superiority of the theoretically weaker party had already been proven.” He showed a familiarity with the concepts of Mao Zedong and Karl von Clausewitz and the importance of popular support in meeting

strategic goals, using the 2000 Palestinian Intifada as example. Qurashi's essay also included the following excerpt:

The time has come for the Islamic movements facing a general crusader offensive to internalize the rules of fourth-generation warfare. They must consolidate appropriate strategic thought, and make appropriate military preparations. They must increase interest in Da'wa [proselytizing], and recruit the peoples' public and political support. In addition to the religious obligation, this has become an integral part of the means to triumph in fourth-generation warfare. Old strategists, such as [von] Clausewitz and Mao Zedong, have already indicated this. Perhaps the best example is the phenomenon of the intifada, which wiped out the Zionist military's mighty superiority over the Muslim Palestinian people.

It is interesting to note that copies of Lind's 1989 article "The Changing Face of War: Into the Fourth Generation of Warfare" were found by U.S. forces in the caves of Tora Bora subsequent to the 2002 escape of Al Qaeda's leadership to Pakistan.¹⁸ The discovery of his article in the possession of Al Qaeda leadership suggests the highest levels of Al Qaeda had indeed studied the theory and makes one wonder why 4GW should not be considered relevant (according to Echevarria) to begin with.

4GW in the U.S. Homeland

The advent of 4GW is a global threat not limited purely to Islamic extremists. There is no longer a clear division between Islamic extremism, TCOs and DTOs. According to Michael Braun, a former assistant administrator and chief of operations with the U.S. Drug Enforcement Administration, Hizb'Allah "uses the same criminal weapons smugglers, document traffickers and transportation experts as the drug cartels to enter the U.S. from the southern border." And according to 2009 testimony to the House Armed Services Committee, Admiral James G. Stavridis, then-commander of U.S. Southern Command, testified that the nexus "between illicit drug trafficking, including routes, profits, and corruptive influence and Islamic radical terrorism" are growing threats to the U.S.¹⁹

Since Echevarria's paper, areas of Honduras, El Salvador and Mexico have fallen into chaos due to increasing transnational criminal influences; particularly the cash-flush DTO insurgency. Since 2006, fighting between DTOs and the Government of Mexico has killed over 60,000 people, leading some to wonder if Mexico is falling into failed state status²⁰ Indeed, the Mexican border city of Ciudad Juarez, directly facing El Paso, Texas is considered more dangerous than Baghdad and some consider it the world's most dangerous city²¹. Stray bullets from Juarez-based violence routinely fall on the U.S. side of the border. Additionally, U.S. Border Patrol agents have been shot at and even detained by individuals wearing Mexican Army uniforms, driving Humvees and who have possibly been coopted by DTOs to guard drug shipments into the US²². This presents a deeply troubling and significant development in 4GW, where the tail is now wagging the dog on the southern border of the U.S with no short term changes in sight.

Connect the Dots—Address the Threat Comprehensively

By increasing information dominance through additional intelligence capabilities, 4GW can be countered within the U.S. Homeland. There is a need for a domestic, field-based intelligence organization, based on current federal and Intelligence Community (IC) doctrine. However, this organization, while centrally managed, would be flexible enough to allow employees maximum operational initiative. The U.S. Coast Guard (USCG), according to this author, is currently the closest

organization to meet this paradigm. The USCG regularly handles both Department of Homeland Security (DHS) and Department of Defense (DOD) missions. The development of a non-law enforcement (LE) equivalent, within the US, that can provide the same type of flexibility between homeland security (HS) and homeland defense (HD) overt intelligence collection would provide information dominance within the U.S. Homeland.

This enterprise can be developed with infrastructure already fielded through the DHS-State and Local Fusion Center (SLFC) Network initiative. Regional fusion centers have shared criminal intelligence amongst state and local Law Enforcement Organizations (LEOs) for years. This intelligence includes LE relationships with recent immigrant populations, with possible access to TCOs, such as MS-13 and/or DTOs operating in the U.S. Homeland, including Los Zetas and the Sinaloa Cartel²³. The post 9/11 DHS effort to leverage intelligence from fusion centers towards a common operating picture with the IC was an excellent suggestion. And the LE and the U.S. Intelligence Community (IC) have made great strides in sharing information and collaboration. However, while the DHS-SLFC collaboration has been online for almost ten years, it has not matured to where it should be by now. During 2006 congressional testimony, then-DHS Undersecretary for Intelligence and Analysis (I&A) Charles E. Allen provided his goals for the DHS and its mission with the SLFC Network included:

- Improved information flow from State and Local entities to DHS
- Improved situational awareness at the Federal level
- Improved access to Local officials
- Consultation on State and Local issues
- Access to non-traditional information sources
- Clearly defined information gathering requirements
- Improved intelligence analysis and production capabilities
- Improved intelligence/information sharing and dissemination capabilities
- Improved prevention, protection, response and recovery capabilities.²⁴

Access to non-traditional information sources is a fundamental strategy for countering 4GW in the U.S. Homeland and formally developing this aspect of DHS-SLFC through formal policy, both internally and interagency, can easily take this organization from its current status to a new level of IC relevance. However, to change the DHS-SLFC status quo will require a significant investment of time, resources and creativity for this unique opportunity to be successful. This is a politically sensitive undertaking, one in which both civil liberties and operational authorities need to be clearly understood.

The routinely interwoven intersection of transnational crime and intelligence are fundamental towards meeting mission objectives. Good judgment and experience are both key in operating within the domestic environment. Indeed, not understanding the DHS I&A mission has already caused embarrassing missteps with this SLFC engagement.²⁵ In 2007, DHS was named by Congress as the lead federal partner to the SLFC Network, deploying intelligence personnel throughout the country to partner with SLFC staff. The concept made sense and on a surface level is similar to this essay's proposal²⁶.

A proposed solution is an organizational reassessment of the DHS and SLFC engagement strategy, including a top-to-bottom organizational review and comprehensive net assessment of what is devoted to the DHS-SLFC engagement and how to best leverage those existing resources. This review should be directly led by career intelligence officers, with extensive experience in Human Intelligence (HUMINT) collection, as well as career LE officers. Both of whom would serve as Subject Matter Experts

(SME), providing both HUMINT and LE doctrinal aspects of the Intelligence-Operations paradigm of operational success. This SME review would also be used in the formulation of policies and internal instructions, specifically intended enact Executive Order (EO) 12333 and Intelligence Community Directive (ICD) 304, which provide DHS the overall Executive level and IC authorities. Properly codified, these documents can provide a well regulated, trained and flexible organization that can be value added to the IC.

The result of this work would be a DHS Human Derived Information (HDI) enterprise. An enterprise grounded with a clear mission that will be undertaken only with clear organizational doctrine, Director of National Intelligence recognized training curricula and extensive training in civil liberties and other DHS specific requirements. Codifying the elements of organizational structure will fully leverage the unique placement and responsibilities of DHS HDI personnel providing intelligence collection support to national decision-makers within the Homeland. DHS I&A can do its part to fully leverage its role as the lead federal partner to the SLFC network by strategically adapting its approach to the threat. The HDI enterprise can fill the gap between established SLFC-based jurisdictions and “connect the dots” to HS, HD and IC requirements, providing information dominance on emerging threats to the Homeland with a resilience-based approach to the complexity of 4GW.

The proposed HDI concept, in a way, is analogous to Eschevaria’s 4GW criticism. The DHS HDI is a concept already taken by other federal organizations, such as the FBI and ICE/HSI. They have done it longer, have a clear mission and have numerous success stories. However, while it is true that these agencies do excellent investigative and national security work, they are criminal investigators. DHS HDI would be focused purely on transnational and foreign intelligence *collection*. This would be a truly unique organization, complementing both the HD and HS missions. Additionally, it would not be an investigative organization nor would it have any type of LE authorities. Moreover, just as Eschevarria’s paper did not foresee the dramatic global changes due to 4GW, naysayers for this type of organization may not foresee the overall complexity of emergent 4GW transnational threats and the need to for vigilance. Transnational terrorism, drug enforcement, influence operations, cyber threats, gang activity and human trafficking are all present within the SLFC operating environment.

DHS as the lead federal partner of the SLFC network has an obligation to develop this program to meet the standards set for forth by Mr. Allen—to “connect the dots” and prevent 4GW from further degrading the security of the U.S. This enterprise will be properly developed through strong leadership and well-developed doctrine, reflecting a strategic adaptation to the current Homeland operating environment and carefully balancing the collection mission with the foundation of what they are guarding to begin with: the freedoms and civil liberties of the U.S., the same freedom and liberties manipulated by 4GW practitioners.

The difficult aspects of this proposal are cultural. Bureaucracies are known as many things but institutional creativity, flexibility and forward-leaning are not usually associated with them. Historically, DOD senior leadership has been accused of planning for the last war, rather than critically thinking about the next. That paradigm is likely also true for non-DOD agencies. However, that “next” war or campaign is already being fought—sometimes in the shadows and sometimes with obscene levels of asymmetric violence—and what is currently in place could do much more with no more effort than what is already being expended.

¹ Lind, William. “The Changing Face of War: Into the Fourth Generation” Marine Corps Gazette (1989)

² Ibid.

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- ³ (von) Clausewitz, Carl. "On War" Princeton University Press, 1984.
- ⁴ Lind, William. "The Changing Face of War: Into the Fourth Generation" Marine Corps Gazette (1989)
- ⁵ Eschevarria II, Antulio. "Fourth Generation Warfare and other Myths", U.S. Army Strategic Studies Institute, 2005
- ⁶ (von) Clausewitz, Carl. "On War" Princeton University Press, 1984.
- ⁷ Lind, William. "The Changing Face of War: Into the Fourth Generation" Marine Corps Gazette (1989)
- ⁸ Lind, William. "Understanding Fourth Generation War" Anti.war.com (2004)
- ⁹ (von) Clausewitz, Carl. "On War" Princeton University Press, 1984.
- ¹⁰ Lind, William. "The Changing Face of War: Into the Fourth Generation" Marine Corps Gazette (1989).
- ¹¹ Bin Laden, Osama. "Osama Issues New Call to Arms" The Guardian, 2002.
- ¹² Hunter, Heinke
- ¹³ Eschevarria II, Antulio. "Fourth Generation Warfare and other Myths", U.S. Army Strategic Studies Institute, 2005
- ¹⁴ Seelke, Claire Ribando. "Gangs in Central America" Congressional Research Service (2014)
- ¹⁵ Lind, William. "The Changing Face of War: Into the Fourth Generation" Marine Corps Gazette (1989)
- ¹⁶ O'Donnell, Catherine. "New Study Quantifies Use of Social Media in the Arab Spring" www.Washington.edu (2011)
- ¹⁷ Smith, Wright. "Al Qaeda in Anbar: Why Iraq's Sunni-Shia Conflict isn't Over" Harvard University Institute of Politics (2014)
- ¹⁸ Lind, William. "Understanding Fourth Generation War" Anti.war.com (2004)
- ¹⁹ Conery, Ben. "Hezbollah uses Mexican Drug Routes into the US" Washington Times, 2009.
- ²⁰ Starr, Penny. "Congressman Warns Mexico More Dangerous than Iraq, Could Become Failed State" CNSNews.com (2009)
- ²¹ Ibid.
- ²² Seper, Jerry. "Border Patrol Agent held at Gunpoint" Washington Times (2008)
- ²³ Chokshi, Niraj. "Where 7 Mexican Drug Cartels are Active Within the U.S." GovBeat Blog, <http://www.WashingtonPost.com>, 2014.
- ²⁴ Levin, Carl & Coburn, Tom. "Federal Support For and Involvement in State and Local Fusion Centers." Majority and Minority Staff Report, United States Senate, Permanent Subcommittee on Investigations, Washington, DC, 2012.
- ²⁵ Ibid.
- ²⁶ Ibid.

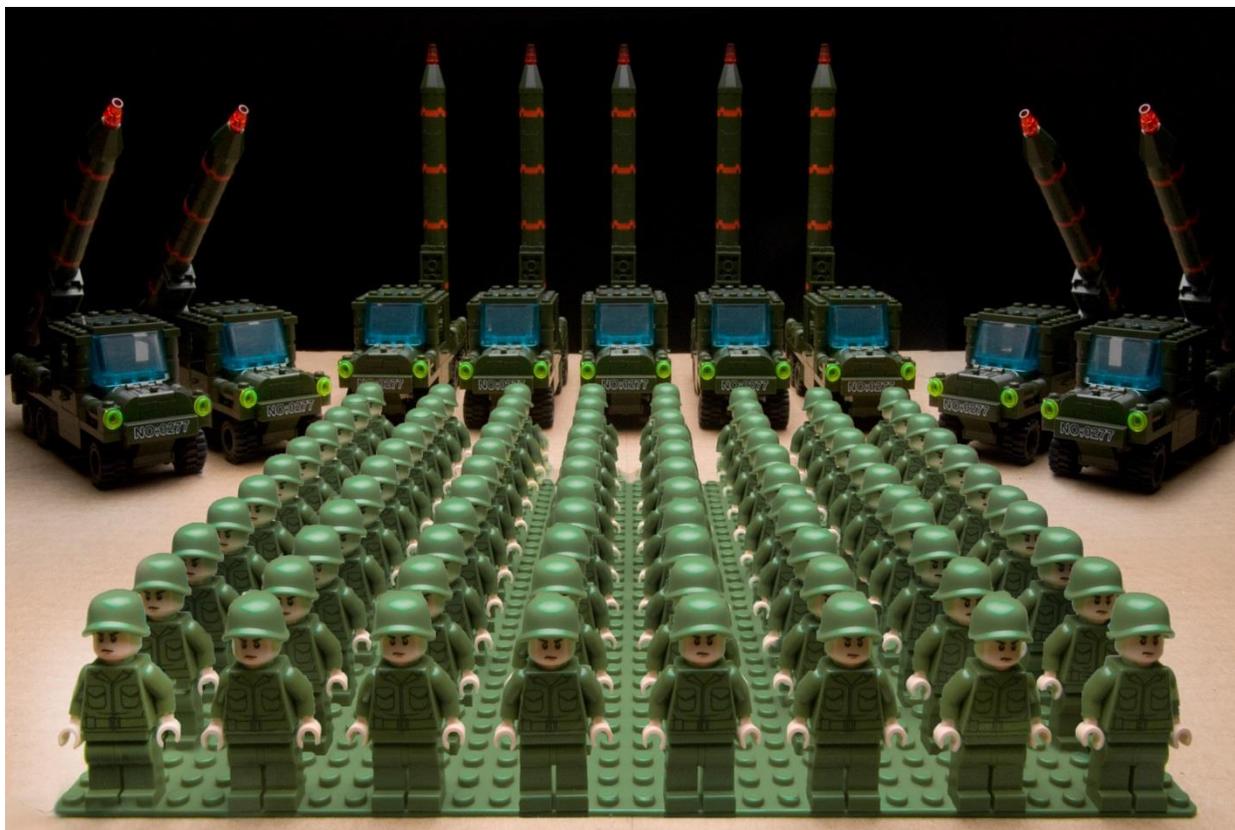


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Pakistan's Tactical Nuclear Weapons: Implications for Strategic Stability in South Asia

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In 1992, following the breakup of the Soviet Union, the United States removed its land and sea-based tactical nuclear weapons (TNWs) from Europe.¹ This decision was logical from a strategic standpoint, given the collapse of the United States' only peer military adversary, but it was also sound at the tactical level. The induction of precision-guided conventional munitions (PGMs) into the NATO arsenal beginning in the 1970s, coupled with the United States' promulgation in 1982 of AirLand Battle—a warfighting doctrine built around this new technology—had created a “Revolution in Military Affairs” that obviated the battlefield utility of TNWs. PGMs granted NATO a cheaper, more lethal, and more precise alternative to TNWs for destroying the armored formations that would form the spearhead of a hypothetical invasion from the East. PGMs also had the welcome benefit of imparting less escalatory danger to the battlefield.² This

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historical experience has gone unheeded, however, by the security establishment in Pakistan, which is fielding 60km-range nuclear ballistic missiles in the hopes of deterring aggression from its archenemy, India.

The incorporation of TNWs into the deterrence milieu of South Asia is uncertain to yield the security that Pakistan seeks and may instead prove counterproductive. This essay examines four factors in particular that make TNWs a suboptimal security tool in the Indo-Pakistani context. First, TNWs are unlikely to blunt an Indian land invasion, due in large part to their inefficacy against tanks; this limitation undercuts their tactical deterrence value. Second, the strategic deterrence value of TNWs is also dubious. Establishment sources in India are dismissive of TNWs; they argue that India's nuclear doctrinal policy of "massive retaliation" would dissuade Pakistan from the first use of nuclear weapons if the two sides went to war, as long as India's war objectives were limited in nature. Third, command and control (C2) of TNWs in a conflict zone is a complicated affair; centralized C2 can make the weapons tactically unresponsive, whereas pre-delegating launch authority to field commanders increases the risk of premature or unauthorized use. Fourth, TNWs will aggravate the already-heated arms race on the South Asian subcontinent, generating instability and financial costs down the line that Pakistan can ill afford.

This essay develops the argument against TNWs in six sections. The first section is background that examines the threat environment and deterrence rationale underpinning Pakistan's decision to field TNWs. Sections two through five unpack and analyze the drawbacks and risks associated with TNWs as outlined above, followed by a closing section that discusses prospects for Indo-Pakistani strategic stability. This paper ultimately concludes that stability in South Asia would be better served if Pakistan reversed course on TNWs and invested more heavily in conventional deterrence, with a focus on PGMs. The battlefield impracticality of TNWs undermines their deterrence value, and they are far too crisis destabilizing to merit deployment, especially in the nuclear powder keg of South Asia.

Strategic Drivers and Deterrence Rationale of Pakistan's TNWs

On April 19, 2011, Pakistan's Inter-Services Public Relations directorate (ISPR) issued a press release declaring that Pakistan had successfully flight-tested a new nuclear delivery system. Identified as the *Hatf-IX/Nasr*, the system is a solid-fuelled, 60km-range ballistic missile designed for launch from a road-mobile, four-tube platform.³ The press release gave no clue regarding the potential explosive yield of a *Nasr* warhead, but analysts in various Track II forums have speculated it might be in the range of 2-4 kilotons. For comparison, the yield of the atomic bomb dropped on Hiroshima was 15 kilotons.

The impetus for Pakistan's TNW gambit can be traced back to April 2004, when the Indian Chief of Army Staff revealed a controversial new war doctrine known as "Cold Start."⁴ Cold Start envisions a short-duration conventional war, limited in scope, to punish the Pakistani military for its support of jihadi outfits that have victimized India over the years.⁵ Operationally, Cold Start would entail incursions by up to eight Indian Army divisions (known as Integrated Battle Groups, or IBGs) across the international border, 72-96 hours after the order to mobilize is handed down.⁶ In concert with close air support, the IBGs would proceed to make "shallow territorial gains, 50-80 kilometers deep that could be used in post-conflict negotiations to extract concessions from Islamabad."⁷ New Delhi believes keeping the ground penetration limited will avoid triggering Pakistan's nuclear redlines.⁸

The deterrence logic behind the introduction of *Nasr* was that Pakistan could not credibly deter India's limited war doctrine with a stockpile of strategic, high-yield nuclear weapons. Pakistan believes that lower-yield weapons such as *Nasr* pose a more proportionate (and therefore credible) threat

against localized, shallow border incursions by IBGs, thereby achieving what the Pakistani military refers to as “full-spectrum deterrence.”⁹ Pakistan’s security establishment believes that TNWs will strike fear into the hearts of India’s political masters and military brass, thereby either dissuading an Indian blitzkrieg in the first place or achieving intra-war deterrence by threatening TNW strikes on attacking IBGs, forcing India to severely reconsider the scope and intensity of a Cold Start campaign.¹⁰

In short, the Pakistani security establishment is confident that TNWs are a boon for deterrence stability, and this sentiment is well represented in public statements by prominent officials. Following a *Nasr* flight test in May 2012, Lt. Gen. Khalid Kidwai, then-Director General of Pakistan’s Strategic Plans Division (SPD), hailed *Nasr* as a “weapon of peace.”¹¹ Air Cdre. Adil Sultan, Director of the SPD’s Arms Control and Disarmament Affairs wing, echoes Kidwai in a recent essay: “The development of short-range missiles does not necessarily mean that Pakistan would use these weapons for fighting a nuclear war. The sole purpose of these remains deterrence of aggression.”¹² Sultan goes on to posit that Pakistan’s TNWs have “neutralized” the Cold Start doctrine.¹³ Despite these optimistic forecasts, however, TNWs have significant drawbacks that undermine their perceived security benefits.

Tactical Limitations against Indian Forces

The Pakistani deterrence calculus outlined above stems—at least in part—from the belief that TNWs would tactically checkmate an Indian invasion. Writes Zafar Jaspal, prominent Pakistani academic and defense commentator, “...Pakistani defensive formations would be capable of using [tactical] nuclear strikes to annihilate the adversary’s advancing rapid cavalry/armored thrust in the Southern desert theatre or taking advantage of the short distance from the border to takeover Lahore.”¹⁴ This bold statement is premised on three key assumptions: (1) TNWs are effective against armored units, (2) Pakistan is able to readily locate and target said units, and (3) Indian forces are ill-prepared to fight through a nuclear warzone. Closer inquiry, however, reveals each of these assumptions to be problematic.

Regarding the first assumption, technical analysis suggests that TNWs are relatively ineffective when it comes to destroying heavily armored vehicles such as main battle tanks (MBTs), particularly if the tanks are spaced in a dispersed fashion. This muddles the deterrence value that TNWs bring to bear against India’s Cold Start doctrine, because MBTs would form the spearhead of a Cold Start attack. Of note, India has over 800 fourth-generation T-90S MBTs in inventory and more on the way, in addition to a sizeable stock of 1,950 third-generation T-72M1s.¹⁵

According to researchers A. H. Nayyar and Zia Mian, through a combination of blast damage and prompt radiation, upwards of 80-100 TNWs of 15 kiloton (KT) yield would be needed to disable an invading force of 1,000 MBTs spaced over 300 meters apart.¹⁶ Accordingly, a single 15 KT weapon, if delivered accurately, would be expected to disable between 10 and 12.5 MBTs with the above spacing.¹⁷ Any tanks that managed to survive direct blast damage would likely see their crews incapacitated by radiation exposure. It is important to reemphasize here that most estimates place Pakistani TNW yield in the 2-4 KT range, meaning far larger numbers of weapons would be needed to approximate a 1,000-tank destruction threshold.

David Smith, a former U.S. defense attaché to Pakistan, cites additional reasons that TNWs would prove indecisive against armor. For one, India’s armored battalions would be in a constant state of maneuver if pressing an assault. The security protocols and launch authorization procedures of TNWs would delay targeting and engagement and make it challenging for Pakistan to land a precise hit.¹⁸ Furthermore, even if one assumes that Pakistan could somehow destroy India’s forward combat forces

with TNWs (a task that would require far more TNWs than Pakistan is capable of producing in a reasonable timeframe, considering Pakistan's fissile material production constraints), India's follow-on forces and reserves are expected to outlast Pakistan's in a prolonged war.¹⁹

As for the second assumption (that Pakistan can readily locate India's maneuvering tank forces), Pakistan's capacity for real time awareness of enemy troop movements in areas of open terrain is limited.²⁰ Pakistan would therefore have difficulty targeting Indian tanks rolling across the deserts of Sindh province, but things would be easier in Pakistani Punjab, where the riverine terrain with its numerous canals and bridges would slow Indian ingress. The increased ground friction would grant Pakistani surveillance assets (e.g., fixed-wing piloted aircraft and drones) more time for spotting and relaying targeting data to *Nasr* platforms. This is the most likely region that Pakistan could employ TNWs to any substantial effect. But the Punjab is also densely populated, and any use of a nuclear weapon in the vicinity would incur significant friendly civilian casualties, particularly through fallout. To whatever extent that Indian decision-makers doubt Pakistan's willingness to irradiate its own high-value heartland, the deterrence value of Pakistan's TNWs decreases in kind.

Regarding the third assumption (that India is unable or unwilling to fight through a nuclear exchange), India has taken visible steps to prepare its forces for such a contingency. Indian tanks and their crews are equipped to operate in a nuclear warzone, and the Indian military has conducted numerous field exercises to train its units in nuclear, chemical, and biological countermeasures.²¹ Indeed, as one Indian corps commander publicly commented in 2006, "We firmly believe that there is room for a swift strike even in case of nuclear attack."²² Through procurement, training, and public statements, New Delhi is attempting to signal that weapons of mass destruction will not deter India from achieving its military aims. These signals, combined with the inefficacy of TNWs against heavily armored MBTs and Pakistan's limited capability for real-time battlespace awareness, raise considerable doubts as to whether the Indian military will be deterred by TNWs in the midst of a crisis or conflict.

India's "Massive Retaliation" Nuclear Doctrine

Based on the above analysis, TNWs appear to be an uncertain insurance policy against Cold Start, at least in tactical military terms. But what of the strategic deterrence value of TNWs? Could they deter India's civilian leadership from authorizing an invasion into Pakistan? Deterrence is ultimately a mind game, so the possibility cannot be ruled out. Yet many influential Indian strategists remain convinced that the limited, localized conventional war envisioned under Cold Start can be fought and won against Pakistan without triggering a TNW salvo. These strategists point to India's nuclear doctrine, which promises "no first use" but warns that a nuclear attack launched at Indian forces, no matter how small the yield or location of the blast, will invite massive nuclear retaliation "designed to inflict unacceptable damage."²³ The idea is that the specter of massive retaliation makes TNWs too risky a tool for blunting a Cold Start invasion.

Many in Pakistan, however, doubt that massive retaliation is a credible threat against a tactical nuclear strike, condemning it as the nuclear "Samson" option.²⁴ Would India truly be willing to subject New Delhi and other major cities to Pakistan's second strike, simply to punish Islamabad for a defensive TNW salvo on its own territory? It is valid to question whether massive retaliation is credible in this case, given the devastation that India would suffer from Pakistan's surviving nuclear forces. Yet two considerations bear mention here that may increase the possibility that New Delhi would honor its doctrine, if tested.

First, the doctrine's publicly declared nature could create a commitment trap in the event that Pakistan employed TNWs. If India failed to retaliate massively, New Delhi's credibility to deter nuclear coercion would be in tatters. Thus the likelihood that India can afford to do nothing in response to a TNW strike appears tenuous. Even Pakistani analysts agree that TNW employment would elicit some degree of nuclear retaliation from India and escalate out of hand. According to SPD official Col. Zahir Kazmi, "There is nothing tactical about these weapons, as their use would have strategic fallouts. . . . There will be no winners in a nuclear war."²⁵

The second consideration is India's burgeoning ballistic missile shield. Insofar as India believes that its missile shield will blunt Pakistan's second strike, New Delhi could be more likely to honor its promise to retaliate massively. Advanced military technologies such as missile defenses have the unfortunate tendency to fuel bravado and hubris, emotions that can prompt excessive risk-taking during a political crisis or military confrontation. The Indian Defence Research and Development Organisation's sensational boast that the missile shield has a 99.8 percent interception rate could exacerbate this dynamic.²⁶ Indian civilian leaders and military brass, blinded by their pride in this technological feat, may calculate that the dangers of initiating Cold Start and massively retaliating against any Pakistani TNW strike are within acceptable risk parameters.²⁷

The considerations examined above may provide some insight into the thinking of Indian strategists who hail massive retaliation as a credible shield against TNWs. In their view, the Pakistani employment of TNWs against a limited Indian incursion in the flavor of Cold Start is so certain to trigger massive retaliation that the notion of Pakistani first use seems disproportionate, incredible, and improbable. As Indian Lt. Gen. (Retd.) A. M. Vohra contends, "[Limited conventional war is] not likely to lead to a nuclear weapons exchange due to the devastation this would cause, which could lead to the annihilation of both [India and Pakistan]."²⁸ Brig. (Retd.) Gurmeet Kanwal, former director of Centre for Land Warfare Studies in New Delhi, similarly argues, "The army leadership believes that . . . the Pakistanis . . . are unlikely to act irrationally and use tactical nuclear weapons to checkmate an Indian offensive, knowing fully well that a massive Indian nuclear countervalue and counterforce response will mean the end of Pakistan as a viable nation-state."²⁹

Kanwal has argued that this deterrence assessment also has buy-in among India's political leadership.³⁰ And today, with the hawkish Bharatiya Janata Party (BJP) in power, headed by Prime Minister Narendra Modi, the notion that a limited conventional war can be successfully waged against Pakistan may have many more subscribers in the halls of South Block.³¹ It is also widely believed that the BJP would be more willing to authorize kinetic military options against Pakistan during a major crisis than the previous National Congress led government, which spurned reprisal in the wake of the 2008 Mumbai attacks. As Indian Home Minister Rajnath Singh ominously hinted in October of last year, "Pakistan should think twice before indulging in any [provocation] as the government is being headed by Narendra Modi."³² In a period of acute tensions on the subcontinent, brought on perhaps by a major terrorist attack perpetrated by Pakistani militants on an Indian city, the prospect that cooler heads will prevail and deterrence will hold appears slimmer under the current BJP administration.

If this analysis is correct, and New Delhi believes it has the space to prosecute Cold Start regardless of Pakistan's stock of TNWs, how then can Islamabad reestablish deterrence stability? Islamabad knows well that it has dissuaded Indian aggression in the past without TNWs, relying instead on a mix of conventional means and strategic-level nuclear deterrence. In December 2001, following a terrorist attack by Pakistani militants on the Indian parliament building in New Delhi, India mobilized its three strike corps toward the international border with Pakistan, seemingly in preparation for war. Pakistan, however, taking advantage of its shorter interior lines of communication, was able to mobilize

and fortify its own forces before the bulk of India's lumbering strike corps reached the international border three weeks later. A million-man standoff ensued.³³ By this time, a combination of international pressure and Pakistan's military readiness convinced India's leadership that cross-border hostilities were no longer a feasible option. Deterrence held, despite the fact that Pakistani troops were outnumbered by Indian forces by a ratio of 1.0 to 1.15.³⁴ The case of the 2001-02 crisis suggests that Pakistan is more likely to deter India if it can mobilize and fortify its ground forces faster than India can ready its own strike forces for invasion.

Pakistan can also give India greater pause by bolstering its conventional armaments. Indeed, Indian military officials have noted that the conventional balance with Pakistan is a core element of the bilateral deterrence equation. In the wake of the 2001-02 crisis, Indian Vice Adm. (Retd.) Premvir Das wrote, "We do not enjoy the type of asymmetry in military power against our adversary that we need to have. Without decisive superiority, it is just not feasible to undertake punitive measures of any real value."³⁵ By implication, the Pakistani military should make a concerted effort to shore up its conventional defenses, with a focus on PGMs. Compared with TNWs, PGMs are a more accurate and decisive option against the armored battalions that would form the spearhead of a Cold Start assault. The acquisition of sufficient numbers of PGMs will help ensure that the conventional balance of forces in South Asia remains manageable, complementing deterrence stability in the process.

Command and Control Challenges

Command and control of TNWs is a complicated affair, which is no surprise because the phrase "tactical nuclear weapon" is inherently dichotomous. The word "tactical" connotes that TNWs are frontline warfighting tools for military commanders, but the word "nuclear" makes them political instruments of deterrence. Equally binary are the C2 articulation models that Pakistan can employ to govern its TNWs during wartime. One model is to maintain centralized control over the weapons at all times by the highest political command body, the National Command Authority (NCA).³⁶ The other approach is to pre-delegate launch authority to field commanders. Both models entail significant risks.

If Pakistan opts to assert centralized C2 over its TNWs, it risks making them tactically unresponsive and ineffective. In the time it would take for (1) the *Nasr* battery to request permission to fire at a target of opportunity (for instance a massed Indian army formation), (2) the NCA to arrive at the grueling decision to authorize nuclear use, and (3) for launch codes to be transmitted back to the battery operators, the window of tactical opportunity could easily have passed. Further delays and complications can be expected if India has attrited Pakistan's C2 network through communications jamming and kinetic strikes against C2 nodes. Centralized C2 therefore risks making TNW batteries ineffectual at best or sitting ducks at worst in a dynamic combat environment. This could handicap the deterrence value of the batteries and spur preemption by the Indian military – particularly the air force.

Alternatively, Pakistan may opt during a crisis or conflict to decentralize C2 of its tactical nuclear forces, pre-delegating launch authority to commanders in the field. The drawbacks of this C2 articulation model, however, are worse. Although pre-delegation mitigates the problem of tactical responsiveness and nominally enhances the deterrence value of the weapons (though failing to address the inefficacy of TNWs against armor and India's signaled willingness to fight through), it does so at the price of political control over the decision to go nuclear, increasing the potential for unintended escalation.

Imagine a situation where a Pakistani *Nasr* battery commander with pre-delegated launch authority is surrounded or comes under direct attack by the adversary. At this moment, the commander

will be faced with the unenviable decision to “use or lose” his nuclear assets. The potential for this dangerous scenario coming to pass is significant if deterrence breaks down and India initiates Cold Start. The *Nasr*, for example, has just a 60km range, so the launch platforms would need to be deployed relatively close to the international border in order to hold invading Indian tank battalions at risk. Yet this proximity increases the potential for a direct encounter with Indian ground forces, particularly in the deserts of southern Pakistan where the terrain is highly suited for tank mobility. Furthermore, if India's surveillance assets are able to detect the launchers, Indian Brig. (Retd.) Gurmeet Kanwal argues they will be preempted at range by Indian army units (e.g., missile launchers) or destroyed via airstrikes.³⁷ If Pakistani field commanders find themselves in danger of losing their frontline nuclear forces to the adversary, nuclear escalation will be a distinct possibility. Unauthorized use is also possible, evoking Henry Kissinger's cautionary tale of the “mad major” who acts in contravention to employment guidelines.³⁸

Pakistan is well aware that a decentralized C2 modality—or the mere forward presence of TNWs in a battlefield environment—could increase the potential for a nuclear conflagration. But according to Maj. Gen. (Retd.) Qasim Qureshi, former director of the Operations and Plans branch at SPD, the escalation risks of TNWs are not a bug but a feature of Pakistan's deterrence posture. Qureshi states, “The chances that something goes wrong resulting in a nuclear exchange cannot be ruled out. It is precisely this danger and uncertainty that from Pakistan's point of view will ensure stability of deterrence in the conventional domain.”³⁹ Perhaps Qureshi's deterrence computation will hold true, paralyzing India's political masters with uncertainty and trepidation when the next crisis brings India and Pakistan to the brink of conflict. Then again, for reasons already explained—namely the tactical limitations of TNWs against Indian armor, coupled with India's belief that its nuclear doctrine would dissuade Pakistani TNW use in the first place—New Delhi may judge that a limited conventional war against Pakistan is a practicable option.

Implications for the Indo-Pakistani Arms Race

When Pakistan conducted its first flight test of the *Nasr* in April 2011, India responded in kind just three months later with a test of the 150km-range *Prahaar*. According to an Indian government press release, *Prahaar* is a “battlefield tactical missile” that, like the *Nasr*, is solid-fueled and designed for launch from a road-mobile, multi-tube platform. The press release also stated that *Prahaar* is “capable of carrying different types of warheads,” a coded way of saying that it is a dual capable missile that can carry either a conventional or nuclear payload.⁴⁰

The tit-for-tat case of *Nasr* and *Prahaar* is a microcosm of the security dilemma and resultant arms race that consumes India and Pakistan. In the context of an arms race, a novel system or unique capability developed by one side creates an incentive for the other side to (1) match it, if not create something better, (2) seek the means to nullify whatever advantage the adversary gained, or (3) some combination of the two. Regrettably, these dynamics are in full swing on the South Asian subcontinent and appear to be magnified in the nuclear domain. Since the 1998 nuclear tests in which India and Pakistan became *de facto* nuclear weapons states, India has fielded nine nuclear delivery systems, and Pakistan has followed suit with eight of its own.⁴¹ Both countries have several more systems in the pipeline, including submarine-launched missiles. India, meanwhile, is developing an indigenous ballistic missile shield to blunt its vulnerability to nuclear strikes, and Pakistan is reportedly developing penetration aids to counter it, in the form of maneuverable reentry vehicles (MaRVs) and multiple independently-targetable reentry vehicles (MIRVs) for its 2,500km-range Shaheen-II ballistic missiles.⁴²

With regard to *Nasr*, India's most obvious riposte would be to develop its own TNWs, potentially with *Prahaar*. One problem with this course of action, however, is that TNWs appear to be incompatible with Indian nuclear doctrine, which pledges "no first use" but stipulates that an enemy nuclear attack on Indian forces would prompt massive nuclear retaliation, a volley of high yield strategic nuclear weapons against Pakistani cities and military installations. In an "all or nothing" nuclear doctrine such as India's, there appears to be little rationale for TNWs given their comparatively low yield. Thus, if India moves forward with developing TNWs, it may be accompanied by a doctrinal revision from "massive retaliation" to something more akin to "flexible response."⁴³

If New Delhi declines to develop its own TNWs in response to *Nasr*, there are conventional avenues through which India can counter the system. India will almost certainly seek to expand its means to detect, target, and conventionally destroy forward deployed Pakistani missile launchers. Indeed, there is evidence that India is already augmenting its capabilities in these areas. According to analysis by IHS Jane's, the Indian Air Force is "seeking an unspecified number of 'state-of-the-art' long-endurance [unmanned combat air vehicles] with a high operational ceiling and equipped with precision weapons and satellite datalinks."⁴⁴ By augmenting its real time battlefield awareness through drone overflights, India can increase its probability of spotting deployed *Nasr* batteries. The drones can then feed targeting data to India's manned aircraft, or they can interdict the Pakistani missile launchers with their own armaments. India can also choose to outrange the 60km *Nasr* with its own conventional missile launchers, for example the 9A52 *Smerch*, (70km firing range), or the *Pinaka*, (120km firing range, in development).⁴⁵ Of course, as the *Scud* hunters of the Persian Gulf War would attest, detecting missile launchers in a combat zone is not the easiest of tasks. However, *Nasr*'s limited range means it would likely be deployed close to the international border during conflict, greatly reducing the area that Indian reconnaissance operators must search. Furthermore, the enhanced security footprint that one might expect of a nuclear asset could make target detection and discrimination a simpler task.

In the final analysis, Pakistan's development of TNWs will intensify the arms race in South Asia, dimming the long-term outlook for strategic stability. As India augments its means to counter *Nasr*, be it through nuclear, doctrinal, or conventional methods, Pakistan will be pressed to respond with novel capabilities of its own. Yet in its quest to achieve "full-spectrum deterrence," Pakistan could impose unmanageable expenses on its defense budget and risk pauperizing itself. TNWs come at a significant financial cost. Associated expenses include enhancements to uranium extraction methods, new plutonium processing infrastructure, weapons research and development, secure storage and maintenance of warheads, specialized training for weapons handlers, warhead safety and surety measures, a robust C2 network, doctrine development, and in the case of *Nasr*, the cost of the road-mobile launch platform. These expenses are difficult to quantify precisely, but PGMs appear the economical alternative as many of the abovementioned expense categories do not apply, and the munitions themselves can be purchased relatively cheaply. In fiscal year 2014, for instance, the cost of a U.S. TOW 2 missile was \$58,600.⁴⁶ It also bears mention that, since 2001, Pakistan has obtained 2,007 TOW missiles at zero expense through the U.S. Foreign Military Financing program, which provides grants to partner nations for the procurement of defense articles.⁴⁷

Pakistan need not exclusively look to the United States for PGMs, however. Pakistan operates a Chinese anti-tank system similar to the TOW—the HJ-8 *Red Arrow*—and may be able to purchase or locally produce more at a bargain, leveraging a bilateral partnership that Pakistani Prime Minister Nawaz Sharif has called "higher than the Himalayas" and "deeper than the deepest sea in the world."⁴⁸ In any case, TNWs impose opportunity costs on Pakistan, as the funds and resources allocated for their development cannot be utilized for conventional weapons procurement.

Conclusions

TNWs are a double-edged addition to the security landscape in South Asia. They are exacerbating an expensive and destabilizing arms race, and their deterrence value against India's limited war doctrine is problematic because they are ineffective against MBTs and may even goad preemption when deployed during a crisis or conflict. In addition, there is a widely held conviction in New Delhi that India has the space to fight and win a limited conventional war under the nuclear overhang, premised on the belief that the threat of massive retaliation would deter Pakistan from firing its TNWs. Although Pakistan can mitigate these deterrence problems somewhat by pre-delegating launch authority to field commanders, doing so creates a serious risk of premature or even unauthorized use.

In light of these complications, Pakistani strategists should take a step back from TNWs and recall the core premise of Cold Start—India's belief that it can challenge and overcome Pakistan's conventional defenses in a short-duration conflict. Indeed, Cold Start's existence implies that India has grown unconvinced by Pakistan's conventional deterrent in the years since the 2001-02 military crisis unfolded. Islamabad can do more to deter India, and with much less risk, by bolstering its conventional forces through the acquisition of PGMs, such as TOW missiles. Such was the lesson learned by NATO during the Cold War, with the epiphany that PGMs (and an accompanying AirLand battle concept) could do more to stop—and by implication, deter—the flow of Soviet armor across the Fulda Gap than TNWs, while also reducing the potential for escalation into total thermonuclear war.⁴⁹

Unfortunately, however, strategic stability in South Asia is elusive at the current juncture because Pakistan is developing TNWs, India is pursuing conventional countermeasures and ballistic missile defenses, both countries are pursuing a sea-based deterrent, and jihadist outfits threaten to disrupt the peace. The continuation of these trend lines bodes poorly for long term peace and stability. Regardless of the way forward on the broader stability debate, however, the drawbacks of TNWs are substantial and merit review by Pakistan. TNWs are at best a wildcard in the Indo-Pakistani deterrence equation, and their appearance on the battlefield could escalate a localized conventional skirmish into an internecine nuclear exchange.

¹ Tactical nuclear weapons (also referred to as sub-strategic nuclear weapons) are nuclear weapons meant for use against battlefield military targets. In terms of explosive yield, the generally agreed-upon consensus for what can be labeled a "tactical" nuclear weapon is wide-ranging – as low as 0.1 kilotons (KT), 10-15 KT as a median estimate, and 1 megaton at the maximum. One KT has the explosive power of approximately 1,000 tons of TNT. See Brian Alexander and Alistair Millar, eds., *Tactical Nuclear Weapons: Emergent Threats in an Evolving Security Environment* (Washington, DC: Brassey's, 2003), 5.

² David O. Smith, *The U.S. Experience with Tactical Nuclear Weapons: Lessons for South Asia* (Washington, DC: Stimson Center, 2013), 19-21, http://www.stimson.org/images/uploads/research-pdfs/David_Smith_Tactical_Nuclear_Weapons.pdf.

³ Pakistan Inter-Services Public Relations Directorate, "PR94/2011-ISPR," news release, April 19, 2011, https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721.

⁴ Walter C. Ladwig, III, "An Overview and Assessment of the Indian Army's Cold Start Strategy" (conference paper prepared for "Cold Start: India's New Strategic Doctrine and its Implications," held at the U.S. Naval Postgraduate School, Monterey, CA, May 2008), 6, <http://users.ox.ac.uk/~mert1769/Ladwig,%20Cold%20Start%20NPS%20Paper.pdf>.

⁵ The catalyst that prompted India to develop Cold Start was the 2001 terrorist attack against the Indian parliament building in New Delhi, perpetrated by Pakistan-based terrorist groups Jaish-e-Mohammed and Lashkar-e-Taiba. Following the attack, India initiated Operation *Parakram*, wherein India's three strike corps was ordered to assemble along the international border. The mobilization process was extremely slow, however, taking approximately three weeks. By then, Pakistan's military was well dug-in, the international community had intervened to defuse the situation, and India's political leadership lost its will to retaliate. This failure prompted India to set in motion a doctrine and force structure review process to decrease mobilization times; the outcome of this process was the Cold Start doctrine.

⁶ Ladwig, "An Overview and Assessment of the Indian Army's Cold Start Strategy," 9.

⁷ *Ibid.*, 7.

⁸ Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, No. 3 (Winter 2007/08): 164. Of note, it is widely believed that the likely "trigger" that would prompt India to execute Cold Start is another major terrorist attack, like Mumbai 2008, that Indian intelligence links to the Pakistani government.

⁹ Pakistan Inter-Services Public Relations Directorate, "PR210/2014-ISPR," news release, September 26, 2014, https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=2661.

¹⁰ The fact that Pakistan timed the April 2011 *Nasr* test to coincide roughly with the seven-year anniversary of Cold Start's pronouncement is unlikely to be a coincidence.

¹¹ Zahir Kazmi, "Weapons of Peace," *The Express Tribune* (Pakistan), June 26, 2012, <http://tribune.com.pk/story/399425/weapons-of-peace/>. The Strategic Plans Division is Pakistan's nuclear policy and planning wing. It serves as the secretariat of Pakistan's National Command Authority.

¹² Adil Sultan, "Pakistan's Emerging Nuclear Posture: Impact of Drivers and Technology on Nuclear Doctrine," *Strategic Studies*, Institute of Strategic Studies, Islamabad, 31 & 32, nos. 4 & 1 (Winter/Spring 2012): 162, http://issi.org.pk/wp-content/uploads/2014/06/1340000409_86108059.pdf.

¹³ *Ibid.*, 164.

¹⁴ Zafar Jaspal, *Tactical Nuclear Weapon: Deterrence Stability between India and Pakistan* (Monterey, CA: Naval Postgraduate School, 2012), 9, http://www.nps.edu/academics/centers/ccc/pascc/publications/2012/2012_002_jaspal.pdf.

¹⁵ International Institute for Strategic Studies, *The Military Balance 2014* (London: Routledge, 2014), 242.

¹⁶ A. H. Nayyar and Zia Mian, *The Limited Military Utility of Pakistan's Battlefield Use of Nuclear Weapons in Response to Large Scale Indian Conventional Attack*, Pakistan Security Research Unit report no. 61 (Bradford, United Kingdom: University of Bradford, 2010), 7-9, <http://www.princeton.edu/sgs/faculty-staff/zia-mian/Limited-Military-Utility-of-Pakistans.pdf>.

¹⁷ There are three components to a nuclear blast that factor into this calculation: (1) blast kill, (2) heat kill, and (3) radiation kill. Blast kill refers to the damage done by the shockwave emitted from the detonation of a nuclear warhead. Depending on the weapon strength, only armored vehicles in close proximity to the detonation site of the TNWs would be destroyed. Pakistan would require 100 TNWs at 15 KT each to destroy 1,000 tanks spaced over 300 meters apart through blast kill alone. Heat kill refers to the effects of the fireball, and heavy armor is unlikely to suffer significant damage given the fact that the heat surge is temporary and easily distributed and dissipated over an armored vehicle. For most MBTs, this would result in an estimated vehicle temperature increase of two to three degrees centigrade. Radiation kill refers to the prompt radiation emitted from the detonation of a nuclear warhead, plus the ensuing fallout. Prompt radiation has the greatest propensity for achieving mission-kill on armored targets, because it can penetrate armor and incapacitate the human operators. Again, however, wide unit spacing can mitigate the radiological damage dealt by TNWs. Nayyar and Mian conclude that "it would require the use of over 80 nuclear weapons of 15 KT yield each to disable or kill the crews in a force of 1,000 tanks [spaced over 300 meters apart]." See Nayyar and Mian, *The Limited Military Utility of Pakistan's Battlefield Use of Nuclear Weapons*, 7-9.

¹⁸ David O. Smith, *The Past as Prologue: A Cautionary Tale of the U.S. Experience with Tactical Nuclear Weapons* (Monterey, CA: Naval Postgraduate School, 2012), 9, <https://www.hsdl.org/?view&did=709867>.

¹⁹ Smith, *The U.S. Experience with Tactical Nuclear Weapons*, 27.

- ²⁰ Michael Krepon, "Pakistan's Nuclear Strategy and Deterrence Stability," in *Deterrence Stability and Escalation Control in South Asia*, eds. Michael Krepon and Julia Thompson (Washington, DC: Stimson Center, 2013), 51-2, http://www.stimson.org/images/uploads/research-pdfs/Deterrence_Stability_Dec_2013_web.pdf.
- ²¹ Rajaram Nagappa, Arun Vishwanathan, and Aditi Malhotra, *Hatf-IX/Nasr – Pakistan's Tactical Nuclear Weapon: Implications for Indo-Pak Deterrence*, report no. R17-2013 (Bangalore, India: National Institute of Advanced Studies, 2013), 27, http://issp.in/wp-content/uploads/2013/07/R17-2013_NASR_Final.pdf; Nayyar and Mian, *The Limited Military Utility of Pakistan's Battlefield Use of Nuclear Weapons*, 4; Exercises in which the Indian military has tested its ability to operate in a nuclear environment include 1986 *Brasstacks*, 2001 *Poorna Vijay*, 2006 *Sanghe Shakti*, and 2012 *Shoor Veer*.
- ²² "Indian Army Tests Its New Cold Start Doctrine," *Hindustan Times* (New Delhi), May 19, 2006, <http://www.highbeam.com/doc/1P3-1039246601.html>.
- ²³ Michael Krepon, "Massive Retaliation," *Arms Control Wonk* (blog), entry posted April 1, 2014, <http://krepon.armscontrolwonk.com/archive/4099/massive-retaliation-2>.
- ²⁴ Zahir Kazmi, "Nothing Tactical about Nuclear Weapons," *The Express Tribune* (Pakistan), May 17, 2014, <http://tribune.com.pk/story/709277/nothing-tactical-about-nuclear-weapons/>.
- ²⁵ *Ibid.*
- ²⁶ "Experts Question Indian Missile Defense Capabilities," Nuclear Threat Initiative, last modified May 14, 2012, <http://www.nti.org/gsn/article/experts-question-indian-missile-defense-capabilities/>.
- ²⁷ Rachel Oswald, "Lethal Asymmetric Technology Will Be More Widespread by 2030: Report," Nuclear Threat Initiative, last modified December 11, 2012, <http://www.nti.org/gsn/article/lethal-asymmetrical-technology-will-be-more-widespread-2030-report/>.
- ²⁸ Gurmeet Kanwal, "Military Dimensions of the 2002 India-Pakistan Standoff: Planning and Preparations for Land Operations," in *The India-Pakistan Military Standoff: Crisis and Escalation in South Asia*, ed. Zachary S. Davis (New York: Palgrave Macmillan, 2011), 75.
- ²⁹ *Ibid.*, 77.
- ³⁰ *Ibid.*
- ³¹ South Block is the part of the Secretariat Building in New Delhi that houses the Prime Minister's Office, the Ministry of External Affairs, and the Ministry of Defence.
- ³² Nitin Gokhale, "India Warns Pakistan It's Not Afraid of Escalating Fire: Sources," NDTV, last modified October 8, 2014, <http://www.ndtv.com/article/cheat-sheet/india-warns-pakistan-it-s-not-afraid-of-escalating-fire-sources-603382>.
- ³³ Zachary S. Davis, introduction to *The India-Pakistan Military Standoff: Crisis and Escalation in South Asia* (New York: Palgrave Macmillan, 2011), 3.
- ³⁴ Kanwal, "Military Dimensions of the 2002 India-Pakistan Standoff," in *The India-Pakistan Military Standoff*, 89.
- ³⁵ *Ibid.*
- ³⁶ The Pakistani NCA is composed of the Prime Minister, the Cabinet, and the Joint Chiefs of Staff.
- ³⁷ Gurmeet Kanwal, "Command and Control in the Context of TNWs," in *Pakistan's Tactical Nuclear Weapons: Conflict Redux*, eds. Gurmeet Kanwal and Monika Chansoria (New Delhi: KW Publishers, 2014), 131.
- ³⁸ Kanwal, "Military Dimensions of the 2002 India-Pakistan Standoff," in *The India-Pakistan Military Standoff*, 75.
- ³⁹ Smith, *The U.S. Experience with Tactical Nuclear Weapons*, 33.
- ⁴⁰ Press Information Bureau, Government of India, "DRDO Launches 'PRAHAAR' - Surface to Surface Tactical Missile," news release, July 21, 2011, <http://pib.nic.in/newsite/erelease.aspx?relid=73407>.
- ⁴¹ Michael Krepon and Julia Thompson, introduction to *Deterrence Stability and Escalation Control in South Asia* (Washington, DC: Stimson Center, 2013), 14, http://www.stimson.org/images/uploads/research-pdfs/Deterrence_Stability_Dec_2013_web.pdf.
- ⁴² Usman Ansari, "Pakistan Seeks to Counter Indian ABM Defenses," *Defense News*, March 21, 2011, <http://www.defensenews.com/article/20110321/DEFBEAT06/103210303/Pakistan-Seeks-Counter-Indian-ABM-Defenses>; Syed Shoaib Hasan, "Pakistan's Growing Nuclear Programme," BBC News, last modified December 1, 2010, <http://www.bbc.co.uk/news/world-south-asia-11888973>.

⁴³ One way for India to make this doctrinal transition, according to analyst Manpreet Sethi, would be to replace the promise of “massive retaliation” against a nuclear provocateur with a promise to inflict “unacceptable damage” – a far more nuanced statement with a broader range of interpretation. This new semantic formulation would still commit India to meet a nuclear attack with nuclear force, but it would not require a merciless, all-out bombardment. See Manpreet Sethi, “India’s Response Options,” in *Pakistan’s Tactical Nuclear Weapons: Conflict Redux*, eds. Gurmeet Kanwal and Monika Chansoria (New Delhi: KW Publishers, 2014), 227-8.

⁴⁴ “Procurement: India,” *IHS Jane’s* (Sentinel Security Assessment – South Asia), last modified October 8, 2014.

⁴⁵ “BM-30 Smerch Multiple Launch Rocket System,” *Military Today*, <http://www.military-today.com/artillery/smerch.htm>; “Pinaka Multiple Launch Rocket System,” *Military Today*, http://www.military-today.com/artillery/pinaka_mlrs.htm. Of note, shorter range versions of Pinaka are currently operational.

⁴⁶ Joakin Kasper Oestergaard Balle, “Raytheon BGM-71 TOW,” *AeroWeb*, last modified December 15, 2014, <http://www.bga-aeroweb.com/Defense/BGM-71-TOW.html>.

⁴⁷ Congressional Research Service, *Major U.S. Arms Sales and Grants to Pakistan Since 2001*, by K. Alan Kronstadt, March 26, 2014, <https://www.hsdl.org/?view&did=751781>.

⁴⁸ Agence France-Presse, “China-Pakistan Friendship ‘Sweeter than Honey,’ Says Nawaz Sharif,” *The Telegraph* (United Kingdom), July 5, 2013, <http://www.telegraph.co.uk/news/worldnews/asia/pakistan/10161516/China-Pakistan-friendship-sweeter-than-honey-says-Nawaz-Sharif.html>.

⁴⁹ Smith, *The U.S. Experience with Tactical Nuclear Weapons*, 19-21.



Official White House Photo by Pete Souza

Fueling the Future: Furthering Theater Security with Burma's Energy Industry

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Introduction

Neighboring both India and China resides a significant supply of untapped oil and natural gas within a nation eager to redefine itself on the world stage. Strategically located, endowed with abundant natural resources and engaged in democratic reform, Burma represents an attractive and geopolitically relevant partner for the U.S. in the Asia-Pacific region. Conditions are converging, assuming the U.S. takes an active role in engagement and assistance, to cultivate a strategically beneficial relationship with this promising Asian partner. Plagued with a significant development gap and woefully inadequate energy infrastructure, Burma is in dire need of economic assistance and industrial development, especially within its energy sector. Burma turned to China, during decades of U.S. isolation, to exchange natural resource rights for economic and political support

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of its military junta regime. However, China's "extractive" approach to foreign investment in Burma has inflicted more harm than good on the Burmese population. With Burma's awakening to democratic ideals, Chinese anxiety over reliable energy supply and access place Burma at the epicenter of China's strategic interests.

In contrast, by shifting from isolationism to engagement with Burma, the U.S. now holds an opportunity to build a viable partnership while advancing security in region. Specifically, the U.S. should provide investment and technical assistance in Burma's energy industry to foster financial partnership and energy access in Asia while assisting Burma to strengthen its economy and improve its governance. Moreover, a strong Burmese economy, fortified by growth in its energy sector, will produce domestic security and stability, an outcome congruent with the U.S. strategy of furthering peace while countering China's hegemony in the region.

Burma's Energy Sector: Challenges and Opportunities

Burma is endowed with substantial natural resources including "extractable" oil and natural gas. A recent geology-based assessment of undiscovered technically recoverable oil, natural gas and gas liquids, conducted by the U.S. Geological Survey (USGS) in Burma, estimated "mean volumes of 2.3 billion barrels of oil, 79.6 trillion cubic feet of gas, and 2.1 billion barrels of natural gas liquids" are present in the Central Burma Basin, the Irrawaddy-Andaman and the Indo-Burman Geologic Provinces (fig. 1).¹ While not the largest deposits in the world, these provinces certainly represent significant resource reserves.

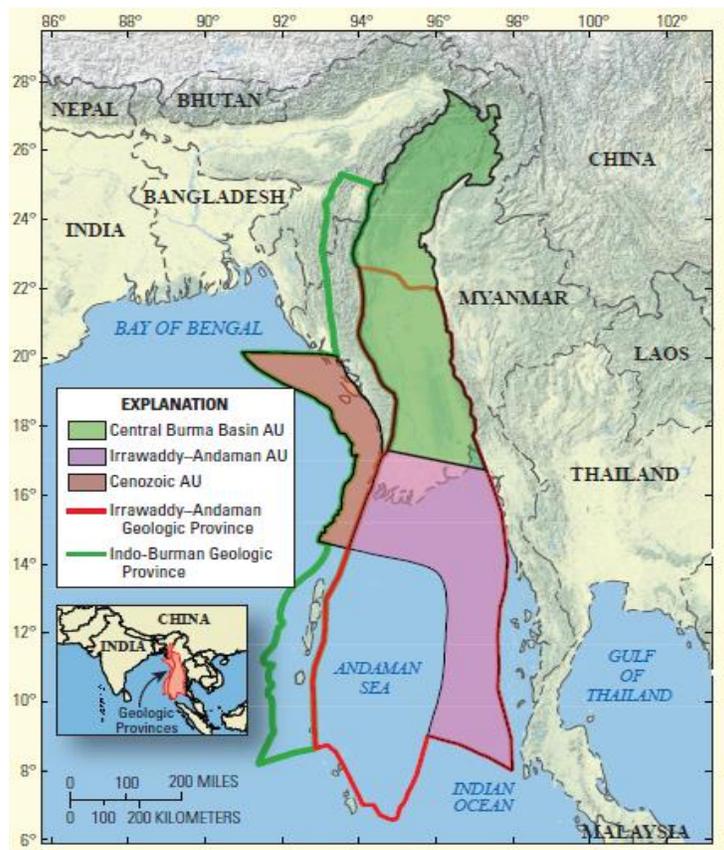


Figure 1.

Extractive Energy Assessment of Geologic Provinces in Burma, U.S. Geological Survey, 2012

Due to Middle East market volatility, cross-regional transportation challenges and exponential growth in energy demand, the presence of both on and offshore untapped oil and gas reserves in Burma is of compelling interest to Burma and her neighbors alike. According to U.S. State Department projections, “if Asia continues its current trajectory, the region will likely account for nearly one-half of the expected growth in the world oil demand between 2008 and 2030.”² To meet insatiable energy requirements, Burma’s closest neighbors of India, China and Thailand are all net importers of oil and natural gas.³ Interestingly, although Burma’s domestic crude oil production increased 38% in the last decade, underdeveloped production and refining capacity results in Burma importing crude oil as well to meet its own growing annual domestic demand.⁴ Within its natural gas industry, Burma is on the positive side of the import/export equation, exporting 300 billion cubic feet of natural gas last year primarily to Thailand and China.⁵ However, there is still significant demand for greater supply of natural gas within the Asian region – a market opportunity Burma may miss without foreign assistance. The irony is although Burma is blessed with ample natural resources, it must seek energy supply from outside its borders while significant economic potential lays idle in the ground. Why the imbalance?

Attributable to the previous Junta regime’s corrupt governance and resulting Western economic sanctions, a significant “development gap” now exists between Burma and other nations in the Asian region. For example, the richest country in the Association of Southeast Asian Nations (ASEAN) is Singapore with a per capita annual income 45 times higher than Burma (ASEAN’s poorest country.) The United Nations Human Development Report placed Singapore in the “very high human development” category, while Burma shares the same “low human development” rating as some sub-Saharan African countries.⁶ Contributing to the poor human development rating, Burma’s electricity sector fails to provide power to over 51% of its population and suffers from severe power outages due to antiquated power plants and dismal electrical transmission infrastructure.⁷ Consequently, the U.S. Energy Information Administration (EIA) reports “traditional biomass and waste (typically consisting of wood, charcoal, manure, and crop residues) is widely utilized and accounts for about two-thirds of Burma’s primary energy consumption,” which illustrates Burma’s uphill climb to modernize its energy industry and provide reliable power to meet its domestic demand.⁸ As is true of any economic union, Asia is only as strong as its weakest nation. As such, ASEAN prioritized “narrowing of the development gap” for Burma as a key agenda item in its recent Initiative for ASEAN Integration.⁹

Acutely aware of the need for growth, Burma is attempting to address its energy sector challenges. The EIA describes these efforts as “investment in more hydroelectric, natural gas, and coal-fired electric capacity” and infrastructure to improve the reliability and management of energy delivery.¹⁰ However, Burma also realizes external assistance is needed and thus is seeking to attract foreign direct investment (FDI) and technical expertise to bolster the industry. Defined by the World Bank, FDI is investment to acquire a lasting management interest in an enterprise operating within an economy other than that of the investor. As an example of Burma’s interest in boosting industry capacity, production-sharing contracts for numerous blocks within deepwater and shallow-water oil and natural gas fields were recently awarded to both foreign and domestic energy companies.¹¹ Although recent trends in FDI appear to indicate progress, not all forms of FDI portend beneficial results for a developing nation in need of support, as evidenced by China’s energy intervention to date in Burma.

China’s FDI in Burma: An Example of “What Not to Do”

China’s appetite for energy in recent years is nothing less than voracious. As a result of the burdensome weight of the world’s largest (and growing) population combined with rapid economic growth, Suisheng Zhao describes China as contending with “energy-gobbling industries which devour

electricity and fuels...and automobiles and modern apartment buildings that consume growing quantities of gasoline and heating oil.”¹² China’s economy is dependent on an infrastructure capable of bearing the weight, which must be fed by reliable and readily available sources of energy. Although China’s world-wide ranking is 4th for oil production and 7th for natural gas, it is incapable of producing even half of the 11 million barrels per day (bbl/d) of oil or 5 trillion cubic feet of gas it consumes annually, thus falling just behind the U.S. as the world’s second-largest net importer of oil.¹³ Compounding the issue is the fact China’s largest oil fields are mature, meaning production has peaked creating more difficulties for sustaining oil flow and forcing China to focus on offshore reserves and oil imports.¹⁴

Historically, Chinese foreign investment in Burma has blatantly aligned with its energy interests. Between 2009-2011, over 66% of Chinese FDI in Burma was made in hydrocarbons projects and overall energy related investment accounts for at least 9 billion USD of the cumulative 14 billion USD China has invested since 1990.¹⁵ In return for this significant investment, among other things, China “secured leases to vast gas reserves estimated to be from 10.1 to 17.5 trillion cubic feet” as well as constructed twin crude oil and gas pipelines running from the Burmese port of Kyaukphyu to Kunming in southwestern China.¹⁶ These pipelines hold strategic value to China, as they represent an alternate routing for oil and natural gas, enabling as much as 440,000 bbl/d to bypass the Strait of Malacca and flow directly from the resource rich region of the Andaman Sea.¹⁷ The period of 2008-2011 saw the largest jump in Chinese FDI, which in retrospect corresponds with the twilight of Burma’s junta regime. Since late 2011, coincident to Burma’s recent democratic reform, Chinese FDI dropped precipitously in Burma, from 4 billion USD annually between 2008-2011 to only 190 million USD in 2012.¹⁸ China’s FDI in Burma generated positive strategic outcomes for Chinese energy security, and by extension national security; but did Burma really benefit by the influx of Chinese assistance?

In general, FDI can play a positive role in assisting a developing nation to grow its industry and achieve a stronger economy; but when, how, where and why one nation invests in another affects the outcome, either positive or negative, for the “supported” nation. According to McGillivray’s review of the ASEAN development gap, “critics argue that policies to attract FDI can distort domestic incentives and displace domestic investment, crowding out employment and the activities of domestic firms.”¹⁹ Under the junta regime, precious little of the sizeable Chinese oil and gas proceeds were spent on domestic infrastructure or human development programs, resulting in the Burmese people never seeing the benefit of the extensive revenue that accumulated in the junta’s coffers.²⁰ Randall, during his review of China’s energy security ambitions on Burma’s domestic affairs, observed “it’s ironic that ninety percent of the people in Arakan and Chin, regions of Burma with some of the largest natural gas deposits in the country, use candles for light and firewood as their primary source of cooking fuel.”²¹ As is typical of autocratic regimes, most proceeds from the trade of natural resources for cash are allocated towards military spending in an effort to sustain the regime’s control over its population and ensure its ability to retain power. Until late 2011, the situation in Burma was no different. Although an exact accounting of the Burmese junta’s spending is difficult to acquire, Randall notes “economists estimate that nearly 60% of the state budget was allocated towards military expenditures,” which was then used against ethnic groups to force compliance with state wishes and resulting in “poverty as the overwhelming life experience for most people.”²²

Another example of poor FDI implementation is evident with China’s nearly six billion USD investment to build the twin trans-Burmese pipelines. A potential windfall for Burmese employment and domestic economy, this project instead represented a domestic policy and human rights catastrophe. As is common Chinese practice, China refused to hire indigenous Burmese labor,

preferring instead to import Chinese workers to operate the critical project.²³ Instead of offering strong pushback against this policy, the Burmese regime turned a blind eye to protect its investment with China.²⁴ Worse yet, in a summary of various NGO and press reports, Randall confirms “during the construction of the pipeline the junta committed a range of human rights violations, from beatings, forced labor and rape to unlawful imprisonment and forced eviction.”²⁵ So did Burma really benefit by the influx of Chinese assistance?

Clearly, Burma’s junta utilized FDI to support itself at the expense of its population. When viewed in isolation, the Sino-Burmese example supports the opinion of FDI critics. However, China’s approach is an example of “what not to do” when considering FDI to support a developing partner-nation establish economic strength and security. How can the U.S. do it better?

U.S. FDI in Burma: “Getting it Right” To Advance Stability in Asia

In today’s globalized, industrialized and energy-hungry world economy, a nation’s energy sector serves as a key leverage point against which the force of direct investment can offer promising results to cultivate the economic strength of a partner-nation. However, as previously cautioned in the Sino-Burma example of misapplied FDI, the principal issue to clarify prior to wielding this economic instrument of power is the intended purpose of FDI and the desired end-state as a result of such investment. U.S. foreign policy objectives reflect a desired end-state of peace and stability for the Asia-Pacific region. Sensitive to historical context within its area of responsibility, U.S. Pacific Command (PACOM) understands the propensity for protracted insurgency when poor governance and unresolved grievances are left to fester. Thus, in support of U.S. national objectives, PACOM’s Theater Campaign Plan provides security cooperation planning guidance outlining the importance of assisting partner-nations to build domestic capacity and capability, thereby fortifying positive governance, prosperity and security.²⁶ But why is building partner capacity so important?

When a nation builds its domestic industrial capacity, it spurs economic development, which then generates revenue for the nation. Guided by its interests, an increase in revenue enables a nation to make, if it so chooses, “good governance” investments by improving security, infrastructure, health-care, education, and so forth. Economist and author Charles Wheelen writes “to grow and prosper, a country needs laws, law enforcement, courts, basic infrastructure, a government capable of collecting taxes – and a healthy respect among the citizenship for each of these things.”²⁷ Prudent investment back into the nation, for the benefit of the population, leads to public perception of government competency and legitimacy. Thus, the government is perceived as upholding the responsibilities expected by the population, thereby fostering cooperation and respect between the governed and the government. The trick, of course, is for the government to realize investment in “good governance” is truly in its best interest, which is where U.S. engagement may play an effective role. For the U.S., the goal of assisting a partner to build domestic industrial capacity and strengthen its economy goes beyond any possible financial benefit; it reflects U.S. democratic values to enhance a partner’s legitimacy and positive influence with its own population, especially a population battered by decades of human rights abuse and disenfranchisement as is the case in Burma.²⁸ So with the importance of this “end” in mind, what are the “ways” and “means” available to achieve the objective?

From a foreign policy perspective, “ways” in which the U.S. can engage Burma align primarily into three political approaches – Ostracism, Business-as-Usual, and Principled Engagement.²⁹ As the name implies, Ostracism in foreign policy equates to denying recognition of (and deliberately avoiding interaction with) the country being politically isolated. Conversely, Business-as-Usual can be

characterized as one country's indifference to the current and/or past actions of another, thereby deliberately avoiding confrontation to facilitate a relationship deemed beneficial to the country that, in essence, is turning a blind eye.³⁰ Striving to build a middle-ground by interweaving the promotion of human rights with development assistance, Principled Engagement seeks to address a reprieve of past injustice while extending an offer of support dependent on observed and sustained reorientation towards human dignity, international law and transparent governance.³¹ Rejecting a Business-as-Usual approach due to mass atrocities committed by the military junta, and likewise concluding decades of Ostracism failed to produce positive results, U.S. foreign policy now embraces Principled Engagement as the preferred path forward.³² Since one policy extreme is clearly incongruent with American humanitarian values while the other extreme is counter to the U.S. goal of mutual cooperation and partnership in the region, the middle ground of Principled Engagement now appears the best "way" to approach Burma.

With the "ways" and "ends" understood, a review of the "means" available will complete the strategy equation and answer the question of how to build capacity and capability in Burma's energy industry. Of the myriad methods available for investment and technical assistance, the U.S. approach must not only boost Burma's energy output, but also bolster industry competency and enhance government credibility. Hence, the most promising "means" involves a combination of U.S. interagency initiatives in partnership with private investment. Fortunately, several promising initiatives already underway in Burma include utilization of the Overseas Private Investment Corporation (OPIC) to facilitate private U.S. investment and the Energy Governance and Capacity Initiative (EGCI) to offer U.S. technical expertise in natural resource extraction, as well as adherence to the Extractive Industries Transparency Initiative and Responsible Investment Reporting Requirements to enhance credibility and legitimacy.

Led by the U.S. State Department, the EGCI includes robust interagency participation to "provide a wide range of technical and capacity building assistance to the host governments of select countries...with world class hydrocarbon resource potential and expecting to receive sizable, near-term financial windfalls from the development of their oil and gas resources" and focuses on environmentally responsible management of extractive resources while encouraging "sound and transparent energy sector governance for the benefit of national economic development."³³ Describing specific support already underway in Burma's energy sector, the U.S. State Department notes "the United States is providing technical assistance for the implementation of international best practices in oil and gas management and oversight, financial accountability, and safety and environmental stewardship."³⁴ Assuming Burma implements the extractive resource technical expertise being offered by the U.S., transparency and accountability in the energy sector will increase, resulting in enhanced credibility for Burma's government, both domestically and internationally.

Many private investment vehicles exist to provide U.S. FDI to developing nations. One such vehicle is the OPIC. Nested under the U.S. State Department and known as the U.S. Government's development finance institution, OPIC "mobilizes private capital to help solve critical development challenges...and helps U.S. businesses gain footholds in emerging markets, catalyzing revenues, jobs and growth opportunities both at home and abroad."³⁵ The four avenues of support OPIC provides to its investors are project financing, guarantees, political risk insurance and support for private equity investment funds.³⁶ In May 2013, OPIC signed an Investment Incentive Agreement with Burma, representing a first step in OPIC's ability to "support U.S. businesses interested in investing in Burma" and contributing to the \$243M of approved foreign investment in Burma by U.S. companies to date.³⁷ As a direct reflection how Principled Engagement links financial support to human rights, U.S. policy now

requires private investors to adhere to the Burma Responsible Investment Reporting Requirements and report on such items as “labor rights, land rights, environmental stewardship, anti-corruption, risk and impact assessment and mitigation, and payments to the government.”³⁸ Moreover, OPIC offers a catalyst to connect private investors, backed by investment guaranties, to a lucrative energy market in desperate need of development, while remaining synchronized with U.S. policy aims of improving Burma’s legitimacy and governance.

Another “means” for building industry competency and government credibility was put in action when, in May 2013, Burma’s Minister of Energy Than Htay released a joint statement with U.S. Special Envoy Carlos Pascual on “Good Governance and Transparency in the Energy Sector,” wherein both nations committed to implement the Extractive Industries Transparency Initiative (EITI).³⁹ Attracting international participation by 31 compliant and 17 candidate countries, the main premise of EITI is the idea that natural resources belong to and should benefit a country’s citizens.⁴⁰ By implementing the “EITI Standard,” participants ensure “full disclosure of taxes and other payments made by oil, gas and mining companies to governments” to enable accountability of resources and thereby inform “public debate about how the country’s resource wealth should be managed.”⁴¹

Particularly for Burma, the landmark political decision to adhere to EITI standards reflects what appears to be a sincere attempt by President Thein Sein to reverse what is acknowledged as “challenges in the extractives sector, including lack of transparency, relationship to conflict, and concerns associated with land acquisition, labor rights and other human rights...”⁴² This type of voluntary political action suggests the recent U.S. approach of Principled Engagement, combined with the mechanisms for investment (OPIC) and technical assistance (EGCI), is encouraging Burma’s transformation from poor governance to good governance. By continuing this current strategy, the U.S. appears well postured to help build Burma’s energy capacity as well as its government credibility, thus strengthening Burma’s economy and prospects for security.

How a Strong Economy Leads to Security

Mentioned earlier, growth in domestic industrial capacity spurs economic development, generating increased revenue into government coffers which, if properly managed, can strengthen the economy and improve quality of life for the population via re-investment back into infrastructure, institutions and human services. A strong energy industry, however, can go even further to improve Burma’s economy without the direct involvement of the government. Oil and gas exploration and extraction are significantly more profitable when “downstream” refinement and distribution capacity exists; thus, energy companies are motivated to invest in further development. As energy companies earn higher incomes from development, their capital holdings increase facilitating more re-investment back into further energy sector development, as well as capital injection into the domestic economy writ large.

A reliable, pervasive and affordable energy distribution system fuels growth in all other sectors of the national economy. From the garment industry to telecommunications to health services to education, all areas of Burma’s economy quite literally gain better access to the fuel required to flourish. Additionally, because energy development requires skilled labor, Burma will not only see increased employment opportunity, but in conjunction with U.S. technical assistance and training, growth of skilled laborers and enrichment of human capital. Describing the importance of human capital to a developing nation’s economy, Wheelen points out “human capital is what makes individuals productive, and productivity is what determines standard of living...all countries that have had

persistent growth in income have also had large increases in the education and training of their labor forces.”⁴³ So as the economy flourishes, the standard of living within Burma’s society increases, resulting in a population motivated to maintain economic progress, market stability and security.

Ultimately, domestic security is derived from the stabilizing force of economic prosperity and open markets on both the population and government alike. Increased domestic investment, growth in consumer and investor confidence, improved education and health care, and even defense modernization are just a few examples of how economic strength can help reinforce Burma’s democratic reform. Good governance, transparent and credible management of resources and services, and honest institutions responsive to the population are the antidote for past grievances of abuse and disenfranchisement. Resolved grievances and increased prosperity dramatically lower the risk of domestic insurrection. Furthermore, a secure, stable, and energy exporting Burma adds to Asia’s regional security via a regional increase in energy supply, amplified trade, strengthened alliances within ASEAN and India, as well as offering a positive example of democratic ideals to its neighbors in the region.

Strategic Implications for China

Strategically, Burma represents an important avenue for access to the vast natural resources of the Bay of Bengal and the Indian Ocean. As Burma grows stronger politically and economically, it becomes less attracted to China’s façade of friendship in exchange for access to energy. Positive results from U.S. engagement and investment will further reinforce Burma’s pivot towards democratic reform, open markets and regional partnerships, resulting in a counterbalance to Chinese hegemonic aspirations.

China correctly views energy security as directly related to its national security. Zheng Bijian, a senior advisor to former Chinese President Hu Jintao, listed “the shortage of domestic energy resources as the first of three fundamental challenges to China’s peaceful rise in the twenty-first century.”⁴⁴ Complicating China’s supply challenge is an energy access problem, since over 85% of China’s oil imports traverse the strategic choke point of the Strait of Malacca.⁴⁵ The “Malacca Dilemma” refers to China’s vulnerability to a blockade of the strait in a notional future conflict which would “strangle the Chinese economy” by denying the flow of critical energy and food imports to its nation of over one billion people.⁴⁶ Disruptions in either energy supply or access contribute to what Bill Hayton describes as “intense paranoia” based on China’s heavy reliance on imported energy. As such, China is diversifying its energy supply, as well as developing alternative pathways to oil and natural gas, such as its investment in 900 miles of twin trans-Burmese oil and natural gas pipelines to partially bypass its “Malacca Dilemma.”

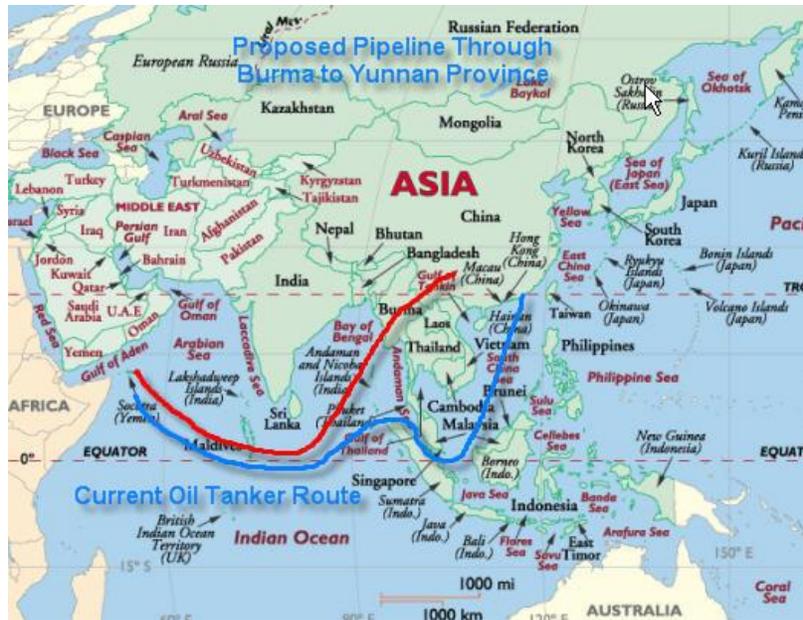


Figure 2.

China's "Malacca Dilemma" and Trans-Burmese Pipeline

China's paranoia appears well founded, especially due to a recent humiliating denial of access to hydroelectricity with Burma's suspension of China's \$3.6B USD Myitsone Dam hydropower project in 2011.⁴⁷ This previously uncharacteristic policy reversal by the Burmese government, along with its recent commitment to transparent FDI and Western policy norms, amplifies Chinese anxiety about future Burmese energy cooperation. As evidence, during recent bilateral talks Burma's online *Irrawaddy* journal reported China's new president Xi Jinping as saying, "the Sino-Burmese friendship should not 'be disturbed by external forces,' an unusually direct statement reflecting China's growing concern over Western influence in Burma."⁴⁸

However, the greater strategic concern for China is access to the Indian Ocean, and by extension, whether or not China can rely on the transport of energy resources across Burma's soil. India, the other elephant in the region, demands nearly as much energy as China and is on track to become the world's most populous nation by 2030.⁴⁹ With access to energy and key geographic terrain representing vital strategic factors, both giants will continue to compete for regional dominance and leverage as international power brokers, making the Indian Ocean the location where Robert Kaplan believes "global struggles will play out in the twenty-first century."⁵⁰ Hence, it behooves the U.S. to continue on its current path of positive Principled Engagement and partnership building with Burma as a strategic counter to China's rise in Asia.

Conclusion

Recent events in Burma place this nation, strategically shoehorned between two massive regional powers, at the crossroads of historic opportunity. Afflicted by oppressive governance for centuries, Burma endured imperialism, then colonialism, and then achieved "independence" only to suffer another half-century under the autocratic rule of a corrupt military regime. However, for the first time in Burma's history, a glimmer of true hope now exists to exchange oppression for democracy, as Burma appears to be moving towards an era of collective freedom and prosperity for its population.

Flanked by the world's largest democratic nation on one side and the world's largest communist nation on the other, Burma is finally tacking towards the West, at least ideologically. Now is an opportune moment for the world's strongest democratic republic to encourage a fledgling democracy to take flight.

The U.S., along with regional and international support, can inject both FDI and technical expertise into Burma's energy industry while holding Burma accountable to democratic values, human rights, and good governance. By doing so, the legitimacy of Burma's government can grow while the capacity and capability of Burma's energy industry expands, all to the benefit of Burma's population, economic strength, domestic stability and regional security. If done properly, U.S. engagement and investment can transition Burma from an "extractive" state to a "proactive and productive" state, providing the "fuel" to further security and peace in the region.

- ¹ C.J. Wandey, et al., *Assessment of Undiscovered Oil and Gas Resources of the Central Burma Basin and the Irrawaddy-Andaman and Indo-Burman Geologic Provinces, Myanmar*. U.S. Geological Survey Fact Sheet, 2012
- ² Robert Cekuta, "Asia's Rising Energy and Resource Nationalism: Implications for the United States, China and the Asia Pacific Region." Remarks delivered to the National Bureau of Asian Research Energy Security Conference. May 4, 2011
- ³ U.S. Energy Information Administration, "Independent Statistics & Analysis." February 14, 2013, <http://www.eia.gov/countries>.
- ⁴ U.S. Energy Information Administration, *Burma (Myanmar) Analysis Brief*, June 12, 2014, <http://www.eia.gov/countries/country-data.cfm?fips=BM>.
- ⁵ Ibid.
- ⁶ Mark McGillivray, *Narrowing the Development Gap in ASEAN: Drivers and Policy Options*. (New York, NY: Routledge, 2013), 2.
- ⁷ U.S. Energy Information Administration, *Burma (Myanmar) Analysis Brief*, June 12, 2014, <http://www.eia.gov/countries/country-data.cfm?fips=BM>.
- ⁸ Ibid.
- ⁹ Mark McGillivray, 1.
- ¹⁰ U.S. Energy Information Administration, *Burma (Myanmar) Analysis Brief*, June 12, 2014, <http://www.eia.gov/countries/country-data.cfm?fips=BM>.
- ¹¹ Ibid.
- ¹² Suisheng Zhao, "China's Global Search for Energy Security: cooperation and competition in Asia-Pacific," *Journal in Contemporary China* 17, no.55 (May 2008): 208–209.
- ¹³ U.S. Energy Information Administration, *China Analysis Brief*, February 4, 2014, <http://www.eia.gov/countries/country-data.cfm?fips=CH>.
- ¹⁴ Ibid.
- ¹⁵ Dimitri Randall, *The Impact of Sino-Indian Energy Security Ambitions on Burma's Domestic and Foreign Politics*, (Monterey, CA: Naval Postgraduate School, December, 2011), 7.
- ¹⁶ Ibid, 21.
- ¹⁷ U.S. Energy Information Administration, *Burma (Myanmar) Analysis Brief*. June 12, 2014, <http://www.eia.gov/countries/country-data.cfm?fips=BM>.
- ¹⁸ Yun Sun, "China and the Changing Myanmar," *Journal of Current Southeast Asian Affairs* 31, no. 4 (2012): 64.
- ¹⁹ Mark McGillivray, 52.
- ²⁰ Dimitri Randall, 9.
- ²¹ Ibid.
- ²² Ibid, 46.
- ²³ Adam Simpson, *Energy, Governance and Security in Thailand and Myanmar: A Critical Approach to Environmental Politics in the South* (Burlington, VT: Ashgate Publishing Company, 2014), 83.
- ²⁴ Dimitri Randall, 45.
- ²⁵ Ibid.

- ²⁶ U.S. Pacific Command, *Theater Campaign Plan 5000-20 Base Plan*. October 22, 2013, 41.
- ²⁷ Charles Wheelen, *Naked Economics: Undressing the Dismal Science* (New York, NY: W. W. Norton & Company, 2010), 296.
- ²⁸ U.S. Department of Defense. *Irregular Warfare*. Joint Operating Concept. Version 2.0. May 17, 2010, 5.
- ²⁹ David Kinley, "Development as a Vehicle for Principled Engagement on Human Rights: The Implications of 'New Aid'?" *Sydney Law School Research Paper*, No. 11/99 (2013): 1.
- ³⁰ *Ibid.*, 2.
- ³¹ *Ibid.*
- ³² W. Patrick Murphy, *Remarks as Prepared for Delivery on Human Rights in Burma*. U.S. Dept of State Congressional Testimony. February 28, 2013. <http://www.state.gov/p/eap/rls/rm/2013/02/205487.htm>
- ³³ U.S. Department of State, "The Energy Governance and Capacity Initiative." October 20, 2014, <http://www.state.gov/s/ciea/egci/>
- ³⁴ U.S. Department of State, "U.S. Assistance to Burma Fact Sheet." August 9, 2014, <http://www.state.gov/r/pa/prs/ps/2014/230463.htm>
- ³⁵ U.S. Department of State, "Overseas Private Investment Corporation." September 15, 2014, <http://www.opic.gov/>
- ³⁶ *Ibid.*
- ³⁷ U.S. Department of Commerce, *Doing Business in Burma: 2014 Country Commercial Guide for U.S. Companies*. U.S. Commercial Service. <http://photos.state.gov/libraries/burma/895/pdf/2014CCGBURMAFinal.pdf>
- ³⁸ U.S. Embassy in Rangoon. *Business and Human Rights in Burma*. <http://burma.usembassy.gov/business.html>
- ³⁹ U.S. Department of State, "Joint Statement on Good Governance and Transparency in the Energy Sector." May 20, 2013. <http://www.state.gov/r/pa/prs/ps/2013/05/209702.htm>
- ⁴⁰ Extractive Industries Transparency Initiative, "What is the EITI?" October 15, 2014, <https://eiti.org/eiti>
- ⁴¹ *Ibid.*
- ⁴² U.S. Department of State, "United States G8 Partnership with Myanmar on Extractives." June 14, 2013. <http://www.state.gov/e/enr/rls/ot/210632.htm>
- ⁴³ Charles Wheelen, 301.
- ⁴⁴ Suisheng Zhao, 208.
- ⁴⁵ Robert Kaplan, "Center Stage for the Twenty-first Century," *Foreign Affairs*, Vol. 88 Issue 2, (March/April 2009): 18.
- ⁴⁶ Bill Hayton, *To Lose Without Fighting? The US, China, Southeast Asia and the South China Sea*. Lecture given at the U.S. Naval War College, Newport, RI. October 17, 2014.
- ⁴⁷ Gwen Robinson, "Myanmar Cleans House—China's Worst Nightmare?" *Financial Times*, April 15, 2013. <http://blogs.ft.com/beyond-brics/2013/04/15/myanmar-cleans-house-chinas-worst-nightmare/>
- ⁴⁸ *Ibid.*
- ⁴⁹ Robert Kaplan, 18.
- ⁵⁰ *Ibid.*, 20.



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Burma in Transition: On the Path to Democracy

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Introduction

The world recently witnessed a radical transformation in the government of Burma.¹ Sweeping reforms have led the change from a military junta to a more democratic form of government. The regime ratified a new constitution in 2008, held national elections in 2010, and transitioned power to new President Thein Sein and the Hluttaw (parliament) in 2011. Since that time, evidence of a more liberal and democratic state has emerged, with transformations in censorship, economic policies, official recognition of opposition parties, and foreign recognition.

The question remains, given Burma's history and wording of its constitution, whether the recent trend of democratization will continue. While there has been rapid and real progress towards a more open democracy, there is the possibility that the Tatmadaw (Burma's military forces) could assume control of the government and revert to a junta or even a dictatorship. The reforms initiated by Thein Sein and the parliament, however, are embedded enough that a rapid reversion is unlikely, and the

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trend of democratization in Burma will continue at a slow pace through the 2015 elections. The transformation instituted by Thein Sein, the commitment that the Hluttaw has shown to parliamentary leadership, the legitimacy gained by pro-democracy forces, and the retreat from outright political involvement of Tatmadaw have established a baseline of democracy that will be hard to undo, although the influence of hard line conservatives and the power of the military in government will slow the pace of changes.

Background

The reforms that the government recently introduced are not the result of a rapid swing toward liberalization but instead are the product of a decades-long methodical process initiated from the top down. Rather than considering progression of Burma's governance as changes made since the parliamentary elections of 2010 or even the adoption of the constitution in 2008, the reforms must be taken in historical context of a long process. Burma's military leaders have been part of the process since the beginning and have recognized and publicly noted the need for change for several decades. As early as 1987, General Ne Win, then head of state and military leader, recognized that the socialist-based singly party dominance of state was a failure and introduced the idea of restoring the multiparty political system. In his July 1988 resignation speech as Chairman of the Burma Socialist Programme Party, he acknowledged that a transition to a market based economy was essential for success.²

This realization led to political transformation in the 1990s when General Than Shwe, who had taken power in 1993, recognized that transformation was necessary in order to improve the quality of life and participation in the global market; he laid the foundations for constitutional reform. The document "Roadmap to Disciplined-Flourishing Democracy" expressed the idea to reconfigure the state and expand the economy, included plans for governmental reforms, and initiated the process that led to change.³ From 1993 to 1996, a constituent assembly called the National Convention (NC) convened to draw up a new constitution but talks stalled. Eventually, Than Shwe revived the process: announcing a seven-stage "road map to democracy," he reconvened the NC and held a constitutional referendum in 2008.⁴

The NC finally concluded its deliberations in 2007, and in May 2008, a referendum was held for the draft constitution. The referendum was largely criticized, with reports of massive abuse and blatant fraud including ballot stuffing, removal of no-votes, and disenfranchisement of large sections of the population.⁵ Nonetheless, the ratification of the constitution led to the 2010 general elections for parliament. Because of their objection to voter registration laws and the military's nullification of 1990 election results, members of the pro-democracy National League for Democracy (NLD) and its dynamic leader and Nobel laureate Aung San Suu Kyi, boycotted the elections.⁶ The result was that the Union Solidarity and Development Party (USDP), which was backed by the Tatmadaw and dominated by ex-military personnel, won the majority of the parliament seats. Combined with the 25 percent of the parliamentary seats assigned to serving military personnel of the Tatmadaw by the 2008 constitution, the military maintained an overwhelming representation in parliament.

While many observers at the time labeled the elections an attempt to maintain military dictatorship disguised as a move toward democratization, the moves were in effect just a few steps in the process from junta to democracy as part of a measured process.⁷ The political reforms, delineated in the "roadmap to disciplined democracy," was a recognition by the leading generals that they could not rule the country indefinitely in the status quo and was a combined result of sanctions from the West, the rise of pro-democracy groups, and criticism from the international community.⁸ The extended

reform process and the extent of the involvement of multiple military leaders show that the Tatmadaw has been invested and involved in the process from the beginning, so that the risks of the hard liners reversing the process are small.⁹ Although critics cite lack of constitutional democratic principles and election fraud in denouncing the liberalization of the government, a decades long, methodically slow paced transition from the top down is apparent.

The President

The first president elected by the Hluttaw was Thein Sein, the former premier under General Than Shwe. The president has shown, through his words and actions, an enduring commitment to reform and democratization of the Burmese government. The previous military regime clearly does not persist in the new administration, and the speed and depth of the reforms articulated by the President have surprised many.¹⁰ Contrasting Sein's reforms with the military junta, the President's administration acted as a government rather than the "high command" of a military leader, thus shedding the label of a dictatorship.¹¹ The President has acted on several specific reforms, including ending censorship before publication.¹² President Sein also reversed years of persecution by releasing prisoners and granting amnesty for over 200 political detainees.¹³ And he has even taken action on minority relations by initiating cease-fire agreements with several armed ethnic rebellions.¹⁴ The scope of these changes displays a dedication to reform not easily retracted.

Notably, President Sein has vocalized his commitment to reforms in open addresses to the population, and his office releases statements and actions on the President's website, available for review and analysis.¹⁵ In three different speeches over the span of 18 months, the President discussed advancing reforms through political debate while maintaining peace and national sovereignty. He committed to narrowing the gap between the desire for change and the capability of the government to affect changes rapidly by linking social and economic reforms to political reform.¹⁶ The President also acknowledged the debate on constitutional reform and pronounced his commitment to resolving the deliberation through political debate and inclusionary negotiation while maintaining democratic standards.¹⁷ He again reiterated his dedication to a peaceful transition to democracy, while acknowledging differing opinions on the method of implementing those reforms and continuing to focus on initiating negotiations for peace with armed ethnic groups.¹⁸ Although the content of the speeches can be considered mere rhetoric, the fact that the President publicly and consistently announces his commitment to reforms leaves little opportunity for him, or the administration in general, to backtrack.

Another example of President Sein's commitment to political reform is his shuffling of his cabinet to align the ministers with his views. In his first year of presidency, Sein had the limited support of only four to six ministers out of 29.¹⁹ In late August and early September 2012, President Sein reorganized his cabinet to include ministers that matched his reformist agenda and forced hard line conservative former generals to retire or be demoted.²⁰ In addition, Sein promoted four like-minded cabinet members to "super minister" posts, elevating their status and providing more credence to the liberalization process. The motivation for the reorganization, intended to promote competent and trusted agents that are invested in the reform process, was to both advise him in decision making and to ensure reformation policies are implemented, sending a strong signal that the entire administration is engaged in the reform process.²¹ By solidifying his support at the cabinet level, President Sein buoys his capability to advance the reform process from the top down and increases the likelihood that the process will continue.

The President is not only discussing reform, he is also enacting it, as evidenced by the government's rejection of the Myitsone Dam project. Initially a \$3.6 billion project financed by China, the dam was widely criticized for its concessions to China and the failure to use local workers. President Sein acceded to popular demands by suspending the project, indicating that both professional recommendations and public petitions swayed his decision. This open admission of succumbing to popular will is without precedent in Burma and is a clear signal that Burma is actively pursuing an independent foreign policy and that Thein Sein is open to recommendations from both professional advisors and public opinion.²²

The sum of these actions is strong evidence of an enduring commitment to continued democratization of the Burmese government. Thein Sein has set an example of open government with like-minded cabinet ministers, creating a reformist environment with dedication to establishing peaceful negotiation of conflict that accepts public opinion. In initiating this process, Sein can be compared to other transformative leaders such as F.W. de Klerk, Mikhail Gorbachev, and B.J. Habibie, providing a historical analogy of the changes taking place now in Burma. While the historical leaders were reform-minded, they were not originally committed to full democratic upheaval. In each case, however, the process gained momentum and became unstoppable once those leaders cracked open the door to reform.²³ Thein Sein has nudged that door open, which will lead to a similar unstoppable change in Burma.

The Parliament

The President is not the only government branch embracing democratic principles. The Hluttaw has shown an increased involvement in government processes that are inarguably democratic in nature, contrary to the fears of many observers that it would be an ineffective body, able to exercise few powers, and merely act as puppets of the military regime. The 2008 constitution dictates that active military officers appointed by the Defense Services comprise 25 percent of the Parliament.²⁴ With the USDP holding a large majority of the seats and comprised of prior military members, the military bloc influences a considerable portion of the Parliament, and many expected it to be an unproductive body limited to agreeing to policy set by military leaders behind the scenes. Those fears have largely been set aside as the legislature's propensity to cross-examine ministers and bureaucrats, discuss substantial legislation at length, and criticize some executive decisions has drawn respect.²⁵

The first example of parliament engaging in the democratization of the Burmese government is the number of reform based bills it has passed. The Hluttaw has considered and passed several key pieces of legislature during its nascent existence. Numerous examples of legislative initiatives in support of political reform include an International Labor Organization endorsed labor law allowing workers to form labor unions and protecting freedom of association; other legislation to define, prohibit, and criminalize forced labor in Burma; and a new law in December 2011 to protect the rights of citizens to peacefully assemble.²⁶ Parliament passed the Peaceful Assembly and Peaceful Procession Law that defined procedures for applying for a permit to hold a demonstration, leading to 200 farmers staging a demonstration, the first such legal protest to be held in the country since 1962.²⁷ Other topics addressed in legislation during 2013 include the national budget, customer protection, the media, farmers' rights, and rules of assembly.²⁸ These bills represent substantial topics of good governance and their passing by a majority of the parliament shows the solidification of the democratic process.

Contrary to the concerns of ineptitude expressed by some, the Hluttaw has also acted as a check on the other branches of government. Though inexperienced, the members of parliament appear to be

taking their role seriously, and the national legislature has shown that it is not a rubber-stamping authority.²⁹ Parliament is not acting as a subordinate to the government, with the speakers of both houses indicating that there is a desire for the Hluttaw to increase its role in the balance of government as a check on the executive branch.³⁰ One example of the parliament's efforts to inject itself into the political process is the efforts of the speaker of the lower house to force reform. In an unprecedented attack, Shwe Mann, who previously served as a general in the Tatmadaw, demanded more input into the government's peace initiative with armed ethnic minorities. Claiming that the process was failing, Mann implied that the former general running the process had worked outside the legal authority. It was the first time that the house speaker, who had recently assumed chairmanship of the USDP from Thein Sein, had openly criticized the administration and a former army colleague.³¹

Though frictions in the operations of government may seem concerning, these tensions should be taken in context. Clearly the balance of power has shifted from a one-ruler regime of military generals to a more participatory form of government. One of the roles of the legislative branch in a democracy is to provide a check and balance for the executive, and the recent conflict in the government suggests that democracy is beginning to manifest itself.³² The very existence of competition indicates a dramatic transition from the autocratic rule of Than Shwe and helps guarantee pluralism.³³ Shifting and balancing of power amongst government branches and voting blocs helps inhibit the syndication of power in one individual, thus preventing a return to an authoritarian regime.

Another example of democracy taking root in the Parliament is the shifting alliances amongst its members. Given the close relationship between the USDP and military appointee MPs, there was the expectation of that bloc voting in concert, though there is evidence to the contrary. In one case, the legislature voted to impeach the judiciary in a fight over constitutional authority of committees; lower house representatives of both the USDP and the NLD supported the impeachment, while the unelected military members voted against the proceedings.³⁴ Although many observing the government transition expected the military bloc to vote against pro-democracy motions in alliance with the USDP, Tatmadaw delegates supported a motion that the president grant amnesty to prisoners.³⁵ In fact, after some initial mistrust, relationships between the elected representatives and military appointees are improving.³⁶ The willingness of the political parties and appointees to vote across party lines shows democracy in process.

One of the challenges facing the Hluttaw is constitutional reform. Article 436 requires 75 percent of the legislature to approve an amendment to the constitution.³⁷ In conjunction with Articles 109 and 141, which stipulate that both the lower and upper houses of the Hluttaw be composed of 25 percent of appointed military members of the Defense Services, there is the potential for the military to continue to dominate the legislative process by effectively vetoing constitutional amendments.³⁸ Aung Sun Suu Kyi and the NLD are in the process of lobbying for reform of Article 436 and have gathered 5 million signatures in a petition to press the legislature to amend that requirement.³⁹ While a limiting factor on the continuance of reformation, the constitution is still a relatively young document, and both the executive and legislative branches maintain the public position of working towards a political resolution. Given the history of the legislature to shift allegiances, there is reason for confidence that the Hluttaw will negotiate a compromise acceptable to both the pro-democracy NLD and the military members.

Perhaps the development most significant to the pro-democracy movement was the decision by the Hluttaw to amend the political party registration and election laws. These amendments made it possible for the NLD to formally register with the election commission while running Suu Kyi in the by-

elections, and legally legitimized the most popular—and pro-democracy—political party in the country.⁴⁰ The opportunity for the NLD to compete in general elections may perhaps lead to the most sweeping changes in Burma's government since independence, and the decision of parliament to allow that indicates how far Burma has come in its move towards democracy. The NLD swept elections when it last participated in 1990 and the Tatmadaw subsequently invalidated the results and tightened its grip on the regime. Yet in 2012 the government permitted the party to run again, assuring a move towards democratization that is unlikely to be reversed.

Aung San Suu Kyi

Aung San Suu Kyi, daughter of Aung San, the founder of the modern Burmese army and liberator of Burma from the British Empire, is the leader of the pro-democracy movement NLD. Winner of the Nobel Peace prize and also known as "The Lady," she represents the forces in the vanguard for a democratic Burma. She was released from house arrest by Thein Sein in 2010, after fifteen years of confinement. The 2012 decision by the Hluttaw to allow the NLD to register as a political party paved the way for legitimate participation of a well-supported opposition in the governance of the country.

By gaining legitimacy in the Burmese political process, Suu Kyi and the NLD have strengthened the proposition that the democratic process will continue. Evidence of this continuation rests in the 2012 by-elections, the first in which the NLD was allowed to participate since 1990. Although some irregularities were reported with the election process, the success of the electoral process was an important step in the democratization and reconciliation process and has been called one of the most dramatic examples of the reform process underway in Burma.⁴¹ In the elections, the NLD won 43 of the 44 seats it contested, enabling Aung San Suu Kyi to enter parliament and assume a leading role in legislative committees.⁴² Not only did the NLD win almost all of its contests, losing only to the Shan Nationalities Democratic Party, the USDP won only one seat of 45 contested. In addition, as an indication of more democratic involvement in the process, the participation rate was higher than in the past with 16 other parties participating.⁴³ The overwhelming support of the NLD, and rejection of the USDP, indicate the transparency of the process and impedes any attempts to reverse electoral reforms in the future.

The election of Suu Kyi has provided her the platform to perform as a politician and not just the leader of a movement. The Parliament elected her as chair of the newly formed lower house Committee for Rule of Law and Peace and Stability, and she has cultivated a good working relationship with Shwe Mann.⁴⁴ Her efforts in discussing legislative issues have led to President Thein Sein and his cabinet reaching out to her, providing her an audience with the executive branch. Her connections with the President and the Speaker generate more influence for the pro-democracy movement, and Suu Kyi has used that voice to call for the rule of law and the emergence of a free and fair judiciary.⁴⁵ In addition, her relationship with both Thein Sein and Shwe Mann has suppressed a vocal opposition, allowing liberals in the government to work together to advance the democratic agenda.⁴⁶ This lack of an ardent opponent has provided space for the pro-democracy movement to expand and flourish. As Aung San Suu Kyi and the NLD continue to participate in the government as legitimate and legal forces, the capability of hard liner opposition to renounce democracy reform fades.

The Military

Prior to 2011, Burma was run by the senior general of the military. As a top-down transformation, a successful and peaceful democratic transition requires the cooperation of the

Tatmadaw. On March 30, 2011, General Than Shwe formally turned over political power to President Thein Sein and military power to Min Aung Hlaing, Commander-in-Chief of the Tatmadaw.⁴⁷ Shwe's abdication of power was yet another step in Burma's long process toward democracy. The separation of political and military power increases the likelihood that the process will continue.

In 2008, there was a widely held belief that the junta was rigging the constitution to maintain its power by designing portions of the government free from civilian oversight. In fact, the military's power has faded because the government has created a separate political realm not under the authority of the government and the military has lost the monopoly on all public authority. Furthermore, since 2011 the armed forces have receded from daily involvement in governance.⁴⁸ Beyond a simple reduction in power, current and former members of the military institutions are actually liberalizing. Elements of the armed forces and the USDP in Parliament have taken liberal positions on some political and social issues, such as pro-worker labor laws and the release of political prisoners, displaying populist lines and motions that are contrary to the positions of the former regime.⁴⁹

One reason for the reduction in the military's visibility in governing is the leader's continued low profile. Senior General Min Aung Hlaing has limited his public appearances to military functions and has told the few diplomats that he has met that he wants to narrow the duties of the military to a more professional set, including defending the national constitution and territory, and step away from the former roles of administration and governance.⁵⁰ Without a military leader clearly engaged in politics and governance, the opportunities for democracy to flourish increase because of the lack of pressure for the former junta to maintain its power base.

While the military has stepped back, it still maintains a significant amount of constitutional control. Article 40(c) of the 2008 constitution provides the Commander-in-Chief of the Defense Services, in a state of emergency, the right to assume state sovereign power.⁵¹ This provision gives the Tatmadaw unlimited power in any event that could result in the disintegration of the state. The ambiguity of this provision and the sweeping powers it provides could lend itself to a military takeover of the government while claiming a "legitimate" right, regardless of outside interpretation of the situation. Clearly this article represents a potential risk to increasing democratic reforms, for if the military perceives a threat to its power base and all the economic trappings accompanying that, it can suspend the government and assume control.

However, the military, which views itself as the only organization capable of maintaining security in the country, has a strong interest in the reformation of the government. While it is willing to consult with opposition forces on reforms and continue to participate in an inclusive constitutional process, the military will ensure it maintains an important factor in the transition.⁵² By participating in liberalization of the government, the military leaders guarantee influence in the pace and structure of the reforms. This allows them to maintain the connections and power they have enjoyed for years and decreases the likelihood of a violent overthrow of the government as witnessed in the Arab Spring of 2011. Indeed, the transition to democracy could not have proceeded so far, so fast, without tacit approval, if not outright participation of, the military. Its continued participation in the process shows that retrenchment is unlikely.

Recommendations

Despite astonishing reforms across the political spectrum and throughout many parts of the government, several challenges lay ahead for Burma on the path to continued democratization. Burma

is a fragile state, transforming from an authoritarian regime, and is faced with key transitional tasks such as resolution of ethnic conflict and holding elections.⁵³ It is, however, showing clear willingness to change, improve its economic outlook, resolve internal differences, and join the international community, while lacking some capacity to make that transition on its own. It is this type of problem in which United States assistance, through capacity building measures designed to strengthen the police, civil service, rule of law, and institutions of government, is both appropriate and likely to be successful.⁵⁴

The U.S. should apply assistance across the spectrum of its instruments of national power. While diplomacy should be the focus of most support, military and economic influence can be applied as well. The U.S. has already suspended many economic sanctions as a good faith measure for the efforts of the Burmese government to implement reforms, with promising results in continued release of political prisoners and more open elections. Continued support for direct foreign investment will help Burma build its physical infrastructure while opening markets to U.S. companies and investors.

The U.S. should foster military-to-military relationships as well. The Burmese military has already taken steps in this direction, as Burma was invited to observe the 2013 Cobra Gold exercise. Burma's limited participation in this Thailand-led regional multi-national exercise represents a significant step for the military and will provide benefits across the ranks as well as increase exposure to regional powers.⁵⁵ One of the significant challenges facing the military is continued ethnic instability. While President Sein has promised national reconciliation, signed cease-fire agreements with most major ethnic groups, and begun political dialogues with those groups, the U.S. military has significant experience in dealing with counterinsurgency and can provide training and advice on how to engage the rebels without alienating the local populations.⁵⁶

Finally, the U.S. can apply diplomacy to support the political infrastructure of the Burmese fledgling democracy. The bellwether for continued entrenchment of democracy in the governance of Burma will be the national elections scheduled for 2015. They will be the first since the transition from the military regime in 2011 and the first opportunity for the NLD to participate in national parliamentary elections. This is an excellent opportunity for the U.S. to promote free and fair elections in order to keep the transformation on track, while engaging with the NLD—should it win a majority of seats—on the fundamentals of campaigning and inclusive politics. At the same time, the U.S. must be aware of the risks of high paced transition. Moving too fast without acceptance of the military elite could provoke an attempted reversion to authoritarianism, and given the advancements made so far, any reversal may result in violent opposition. Similarly, there is risk if the NLD wins overwhelmingly in the 2015 elections, propelling it to power that either it is not ready to handle or that the military elite is unwilling to accept. The best pace will be one which results in progress that satisfies the moderates from both the military regime and the pro-democracy movement, yet does not threaten the hard liners from either side. In any case, Burma remains a strategic opportunity that should be engaged by the U.S.

Conclusion

Burma has made a remarkable transition in the recent past towards democracy but that transition did not start at the adoption of a new constitution in 2008. The roots of that change began decades ago with the recognition that the transformation was necessary in order to improve the population's quality of life and to compete in the global market. Since the handover of power to President Thein Sein and the establishment of the Hluttaw, the government has implemented multiple concrete reforms. Freedom of speech, economic reform, and the release of prisoners are just a few examples. The president has consistently voiced his goal to continue the transformation to democracy

through negotiation and peace, and the legislature has engaged in productive governance. The military regime's choice to refrain from politics and focus on security solidifies its acceptance of the establishment of democracy. The legal inclusion of the pro-democracy NLD and its dynamic leader, Aung San Suu Kyi, in the political process is a major advancement. The road is long, however, and Burma still has many steps to complete. Ethnic instability remains a hurdle, as democracy cannot take root without representation of all citizens. The country requires further economic reform, constitutional amendments, and capacity building in political institutions.

The 2015 elections will be a telling guidepost for Burma's journey. The ability to conduct free and open elections, with a peaceful transition of power to the winning party, will be the clearest sign yet that democracy has taken root in Burma. Karl Jackson, Ph.D. and C.V. Starr Distinguished Professor of Southeast Asia Studies at the Johns Hopkins University School of Advanced International Studies, unequivocally stated that Burma will not revert: "There is a uniformity of opinion within the country, regardless of whether you're talking to released political prisoners, members of the government, or people in the lobby of the hotel, there's a unanimity of opinion that things have changed, there is no going back, and that the military regime is over."⁵⁷ Given the reforms already implemented and the continued unambiguous efforts of the President, the Parliament, and the pro-democracy movement toward transformation, there is little doubt that the democratization trend in Burma will continue.

¹ The government officially changed the name of the country to the "Republic of the Union of Myanmar" in 1989, but the United States continues to use the term "Burma," so that name will be used here. Quotes from some publications will occasionally use "Myanmar," but the two terms are interchangeable.

² Taylor, "Myanmar's 'Pivot,'" 394.

³ Aung-Thwin, "Myanmar in 2013," 218.

⁴ Jones, "Explaining Myanmar's Regimes Transition," 782.

⁵ Rogers, *Burma: A Nation at the Crossroads*, 208-209.

⁶ Holliday, *Burma Redux*, 83.

⁷ Jones, "Explaining Myanmar's Regimes Transition," 781.

⁸ Hlaing, "Understanding Recent Political Changes in Myanmar," 203.

⁹ Aung-Thwin, "Myanmar in 2013," 218.

¹⁰ U.S. Congress, *U.S. Policy on Burma*, 26.

¹¹ Callahan, "The Generals Loosen Their Grip," 122.

¹² "Myanmar - A Burmese Spring."

¹³ Thuzar, "Myanmar: No Turning Back," 207.

¹⁴ U.S. Congress, *U.S. Policy on Burma*, 26.

¹⁵ Taylor, "Myanmar in 2012."

¹⁶ Sein, "President U Thein Sein's New Year radio message."

¹⁷ Sein, "President U Thein Sein met leaders."

¹⁸ Sein, "President U Thein Sein delivered speech."

¹⁹ Callahan, "The Generals Loosen Their Grip," 125.

²⁰ Randolph, "Bumps in the Road."

²¹ International Crisis Group, "Myanmar: Storm Clouds on the Horizon," 12.

²² Thuzar, "Myanmar: No Turning Back," 208.

²³ Rogers, *Burma: A Nation at the Crossroads*, 222.

²⁴ Republic of the Union of Myanmar, *Constitution*, 39, 51.

²⁵ Robinson, "The Contenders."

²⁶ U.S. Congress, *U.S. Policy on Burma*, 8.

²⁷ International Crisis Group, "Myanmar: Storm Clouds on the Horizon," 8.

²⁸ Aung-Thwin, "Myanmar in 2013," 207.

²⁹ Thuzar, "Myanmar: No Turning Back," 213.

³⁰ U.S. Congress, *U.S. Policy on Burma*, 23.



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- ³¹Robinson, "The Contenders."
³²Ibid.
³³Randolph, "Bumps in the Road."
³⁴International Crisis Group, "Myanmar: Storm Clouds on the Horizon," 10.
³⁵Hlaing, "Understanding Recent Political Changes in Myanmar," 207.
³⁶Thuzar, "Myanmar: No Turning Back," 213.
³⁷Republic of the Union of Myanmar, *Constitution*, 173.
³⁸Ibid., 39, 51.
³⁹Mooney, "Burma: With Suu Kyi Blocked."
⁴⁰Hlaing, "Understanding Recent Political Changes in Myanmar," 207.
⁴¹U.S. Congress, *U.S. Policy on Burma*, 7-8.
⁴²Jones, "Explaining Myanmar's Regimes Transition," 781.
⁴³U.S. Congress, *U.S. Policy on Burma*, 7-8.
⁴⁴International Crisis Group, "Myanmar: Storm Clouds on the Horizon," 8.
⁴⁵Thuzar, "Myanmar: No Turning Back," 210.
⁴⁶Hlaing, "Understanding Recent Political Changes in Myanmar," 214.
⁴⁷Holliday, *Burma Redux*, 86.
⁴⁸Callahan, "The Generals Loosen Their Grip," 127.
⁴⁹Robinson, "The Contenders."
⁵⁰Callahan, "The Generals Loosen Their Grip," 128.
⁵¹Republic of the Union of Myanmar, *Constitution*, 10.
⁵²Clapp, "Burma's Long Road to Democracy," 5.
⁵³Menkhaus, "State Fragility," 92.
⁵⁴Ibid., 96.
⁵⁵Schearf, "Burma Observers Participate."
⁵⁶Hlaing, "Understanding Recent Political Changes in Myanmar," 207-208.
⁵⁷U.S. Congress, *U.S. Policy on Burma*, 35.



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An Embargo Free Cuba: A Regional Security Partner

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Despite the United States' decades-long foreign policy to economically isolate Cuba, Cuba has maintained considerable partnerships and influence across the Latin American region. In a political environment where the United States has reopened diplomatic and economic relationships with Cuba, Latin America's regional security environment should be reexamined in the context of an embargo free Cuba. Cuba's partnerships and influence with many nations in the region frequently intersects with the United States' security objectives in Latin America. A shortsighted focus on the present challenges of the United States' and Cuba's relationship distracts from the potential opportunity created by an embargo free Cuba. Moreover, a policy to economically isolate Cuba puts at risk opportunities for the United States to draw close partners in a region that may be drifting away from the United States' security objectives. A trade embargo free Cuba will contribute to a

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more secure Latin American region by transitioning Cuba into a stable partner aligned with several of the United States' theater security objectives.

Cuba's ties to the United States' partners in the region could risk theater security objectives that seek to promote regional security and stability through partners. Mexico and Colombia are two Latin American nations that maintain strong bilateral relationships with the United States while simultaneously maintaining partnerships with Cuba. A joint United States-Mexico partnership augments the security posture on the United States' southern approach by its conduct of security cooperation and law enforcement activities.¹ For more than five decades, and in direct support of the Colombian government's fight against the Revolution Armed Forces of Colombia (FARC), the United States has directed diplomatic, military, and economic resources toward Colombia's internal security posture.² In August 2014, Cuba's capital city of Havana was selected to host peace talks between the FARC and the Colombian government.³ And, most recently in September 2014, Mexico's Foreign Secretary visited Cuba to strengthen existing ties with the island nation calling Cuba a "corner-stone of Mexico's foreign policy toward Latin America and the Caribbean."⁴ Cuba's relationships with Mexico and Colombia could weaken the United States' existing strong partnership with these two nations. Cuba's influence with many other Latin American nations could erode, and may already be eroding, the United States' influence, particularly in pursuit of regional security objectives. The cost of decreased influence for the United States may be its partners selectively supporting the United States' initiatives in the region, or at worst, having to choose between Cuba's and the United States' respective security objectives if they are at conflict. Failing to engage Cuba as a diplomatic partner in the region fails to leverage the influence Cuba holds with many of the United States' partners. In the United States Southern Command's (SOUTHCOM) resource constrained and economy-of-force theater, the United States' security objectives depended on strong, committed, and enduring partnerships. Rather than risk the United States' security objectives, Cuba's influence with many of the United States' Latin American partners must be leveraged to bolster commitments from partner nations. Transitioning Cuba into a regional partner aligned with the United States will further strengthen the United States' partnership in Latin America.

Reopening trade relations with Cuba will achieve one of the United States' security objectives to build partner capacity by supporting Cuba's economic development. Prior to the passing of the 1961 Foreign Assistance Act authorizing a trade embargo on Cuba, the Cuban economy was almost solely dependent on its robust commercial relationship with the United States.⁵ In the decades since the embargo, Cuba has sought to reestablish economic ties to replace this lost commercial activity. Brazil's capital investment in Cuba's Mariel Harbor, an international shipping port, is indicative of Cuba's pursuit of economic development and the region's willingness to support Cuba.⁶ Through economic development, unconstrained by the United States, Cuba will be a better resourced nation and will develop greater capacity to respond to security threats in the Caribbean and Central American region.

Robert Zoellick, a former trade representative of the United States and currently the 11th President of the World Bank Group, believes there is a strong link between a nation's economic strength and the ability to respond to security threats.⁷ Economic development will build Cuba's capacity to access, manage, and control resources which will strengthen its response to local and regional security threats. Since 2010, due to internal economic policy changes, Cuba has experienced a three-fold increase in self-employment opportunities.⁸ However, these growing private sector opportunities are challenged by the lack of available capital to support private development.⁹ The increased free exchange of goods and influx of foreign investment will bolster Cuba's on-going privatization. Additionally, as Cuba continues to develop its economic strength, a nation more capable of responding to and supporting cooperative responses to local, territorial, and regional security threats will result.

Cuba's economic development would have a near immediate effect on the regional security environment in the form of decreased human trafficking and illicit migration off the coast of Florida. SOUTHCOM ranks human trafficking as one of its predominant security challenges, which are steadily increasing in the Caribbean, particularly for those routes leading through the Caribbean to Florida.¹⁰ An unconstrained and more economically stable Cuba would provide its people with economic alternatives and greater opportunities for improved social welfare. With a primary mission of protecting the southern approach to the United States, SOUTHCOM should have much interest in an embargo free Cuba. The potential to decreased human trafficking and illicit migration in the Caribbean should be viewed as an opportunity for an embargo free Cuba to improve the region's security posture.

Cuba's new capacity will also augment the region's security posture as Cuba begins to actively contribute to cooperative maritime security activities. Cuba's hosting of the peace talks between the FARC and the Colombian government demonstrates both Cuba's interest in the internal security of its partner nations and its desire to contribute toward greater regional security in Latin America. Cuba, though a state with a depressed economy, is an active and engaged participant in both the regional and global community. In advance of the United States, Cuba sent 160 medical workers to Sierra Leone in response to the Ebola crisis in West Africa.¹¹ An embargo-free Cuba will be poised to participate in regional security activities across the Caribbean and Central America to an even greater degree. For example, security and defense activities like Operation UNIFIED RESOLVE saw 68% of maritime interdictions supported or directly performed by partner nations.¹² Though Cuba did not participate in Operation UNIFIED RESOLVE, declining budgets, specifically directed toward an economy-of-force theater like SOUTHCOM, necessitate reliance on partnering and cooperative activities. Cuba could provide resources and forces to augment the security activities occurring in the region.

A joint United States-Cuba initiative, where the Cuban Border Guard actively patrols its territorial waters to preserve life and to prevent illicit migration attempts by Cuban citizens has resulted in consistent yearly increases in maritime interdiction rates.¹³ This type of cooperation between the United States Coast Guard and Cuban Border Guard demonstrates the potential for an embargo free Cuba to participate and increase the space of ongoing cooperative maritime security activities. Cuba's support of internal security in Central America and its interest in containing a crisis in West Africa demonstrate its concern in maintaining a secure region and may signal its willingness to augment the posture of larger cooperative security activities.

However, upon initial consideration of lifting the trade embargo, it may appear that the opportunity of greater regional security is odds with national security strategic interests. The challenges associated with lifting the trade embargo on Cuba are not minor and may describe an environment where the United States must maintain unilateral containment of Cuba until reforms are made from within. Cuba's government, led by the Fidel family, has perpetuated decades of human rights violations.¹⁴ Also, it could be argued that Cuba's decades of anti-American sentiments have perpetuated the perception to many nations in Latin America that the United States is an interventionist. Peter Hakim, with the University of Calgary Centre for Military Strategic Studies, proposed that the present course of the United States' relations with Latin American nations could result in an eventual drifting of diplomatic and economic engagement away from the United States' interests.¹⁵ Cuba's influence with United States' partners could prove to be a tipping point either to support a drift of Latin American nations away from the United States or to develop into stronger and sustained relationships with the United States.

The Cuba of the 1960s and 1970s is not the Cuba of today; Cuba is a country in transition. The Cuban government is already demonstrating a softening in its long held authoritarian domestic and

foreign policy. Gary Maybarduk, an independent consultant in the Association for the Study of the Cuban Economy, noted that Cuba's transition to support greater human security and welfare is demonstrated by Cuba recently signing two international human rights treaties.¹⁶ One of these treaties guarantees the right of self-determination to peacefully assemble, and to exercise additional civil and political freedom; the other guarantees fair wages, the right to work, and additional social and economic freedoms.¹⁷ Maybarduk also noted that as an embargo free Cuba engages in the greater global economy, Cuba will be subjected to increased international pressure to conform to international norms.¹⁸

Reopening diplomatic relationships starts a new dialogue between the island nation and the United States. This rapprochement assumes that as the United States offers the incremental reopening of ties Cuba will respond with internal policies that embrace a greater degree of human rights, security, and welfare for the Cuban people and for foreigners who engage with the Cuban people. Increased engagement and the rapprochement of diplomatic relations pose a risk. A recent statement by Fidel Castro promoted cooperation in the interest of creating solutions with the United States yet maintains his characteristic distrust of the United States' policy.¹⁹ Cuba may maintain a stalwart commitment to its governmental policies and make no changes to its internal security and economic policies. To effectively transition Cuba in to a regional security partner, Cuba will ultimately have to respond through incremental changes to its domestic environment. Cuba's response to the United States and to increased international pressure at the reopening of ties will weigh as heavily on the outcome of transitioning Cuba into a regional partner as will the United States' upcoming executive and legislative actions.

General Kelly noted in his posture statement that to enable capacity building, "Trust must be built . . . and sustained through regular contact."²⁰ Contact with Cuba is ongoing through a shift in the United States' executive policy and legislative actions that are gradually reopening diplomatic and economic relationships. In the interest of the United States' security objectives, Cuba's transition must be managed to avoid disengagement by our partners in the region, and to do this the United States must be ready to engage Cuba as a partner. Amid the challenges, lifting the embargo will create an opportunity for the United States to develop Cuba into a partner and to leverage a new United States-Cuba relationship toward stronger partnerships with many other Latin American nations.

A softening and transitioning Cuba is opening the door for the development of a mutually beneficial relationship between Cuba and the United States. An embargo free and economically resourced Cuba will be more capable of contributing toward the regional security of Latin America. Lifting the embargo will develop Cuba's capacity through greater access to foreign economic activities that will contribute to and augment ongoing cooperative security activities. Uninhibited by the trade embargo, the United States can leverage its new relationship with Cuba to augment the security posture and to strengthen drifting partnerships. To neglect Cuba's influence in the region is shortsighted. It is also shortsighted to dismiss Cuba's potential to support the United States' regional security objectives because of the challenges of Cuba's failing socio-economic and domestic policy. Placing too great a focus on the challenges of the United States-Cuba relationship will risk gaining the opportunity to create a more stable partner and contributor toward a more regionally secure Latin America.

¹ U.S. Relations with Mexico, United States Department of State, last modified September 10, 2014, <http://www.state.gov/r/pa/ei/bgn/35749.htm>.

² U.S. Relations with Colombia, United States Department of State, last modified November 19, 2013, <http://www.state.gov/r/pa/ei/bgn/35754.htm>.

- ³ *The Economist*, "Colombia's Peace Process: The Moment of Truth," August 30, 2014, The Americas, <http://www.economist.com/news/americas/21614157-government-and-farc-grapple-victims-truth-justice-and-mechanics-ending>
- ⁴ *EFE Agency*, "Mexico Foreign Secretary Visit Cuba," last modified September 8, 2014, <http://latino.foxnews.com/latino/politics/2014/09/08/mexico-foreign-secretary-visits-cuba/>
- ⁵ Julia E. Sweig, *Cuba: What Everyone Needs to Know* (New York: Oxford University Press, 2012), 88, 89.
- ⁶ Julia E. Sweig and Michael Bustamante, "Cuba After Communism," *Foreign Affairs*, Vol 92, Issue 4, (July/August 2013), 8.
- ⁷ Robert Zoellick, "Who Won the Recession? The Currency of Power," *Foreign Policy*, November 2012, 9.
- ⁸ Mark P. Sullivan, "Cuba: U.S. Policy and Issues for the 113th Congress," *Congressional Research Service*, (Washington, D.C., 31 July 2014), 14.
- ⁹ *Ibid*, 14.
- ¹⁰ Posture Statement of General John F. Kelly, United States Marine Corps, Commander United States Southern Command: Before The 113th Congress House Armed Services Committee, 26 February 2014, 6.
- ¹¹ Maria Cheng, "Cuba Sending Dozens of Doctors to Fight Ebola," Associated Press, September 12, 2014, <http://abcnews.go.com/Health/wireStory/cuba-sending-hundreds-doctors-fight-ebola-25450654>
- ¹² Posture Statement of General John F. Kelly, United States Marine Corps, Commander United States Southern Command: Before The 113th Congress House Armed Services Committee, 26 February 2014, 43.
- ¹³ Mark P. Sullivan, "Cuba: U.S. Policy and Issues for the 113th Congress," *Congressional Research Service*, (Washington, D.C., 31 July 2014), 53-54.
- ¹⁴ Julia E. Sweig, *Cuba: What Everyone Needs to Know* (New York: Oxford University Press, 2012), 65, 147, 149.
- ¹⁵ Peter Hakim, "The Future of Inter-American Relations," *Calgary Papers in Military and Strategy Studies* (University of Miami, January 21, 2014), 3.
- ¹⁶ Gary H. Maybarduk. "Cuba and the U.S National Interest: Developing an American Strategy for the Cuban Transition", *Cuba in Transition* (Washington, D.C.: Association for the Study of the Cuban Economy, 2008), 29.
- ¹⁷ James C. McKinley Jr, "Cuba Signs 2 Human Rights Treaties," *The New York Times*, February 29, 2008, http://www.nytimes.com/2008/02/29/world/americas/29iht-cuba.4.10589148.html?_r=0
- ¹⁸ Gary H. Maybarduk. "Cuba and the U.S National Interest: Developing an American Strategy for the Cuban Transition", *Cuba in Transition* (Washington, D.C.: Association for the Study of the Cuban Economy, 2008), 29.
- ¹⁹ *The Associated Press*, "Fidel Castro speaks out on normalizing relations with the U.S.," January 28, 2015, <http://www.nydailynews.com/news/politics/fidel-castro-speaks-normalizing-realtions-article-1.2094622>
- ²⁰ Posture Statement of General John F. Kelly, United States Marine Corps, Commander United States Southern Command: Before The 113th Congress House Armed Services Committee, 26 February 2014, 20.

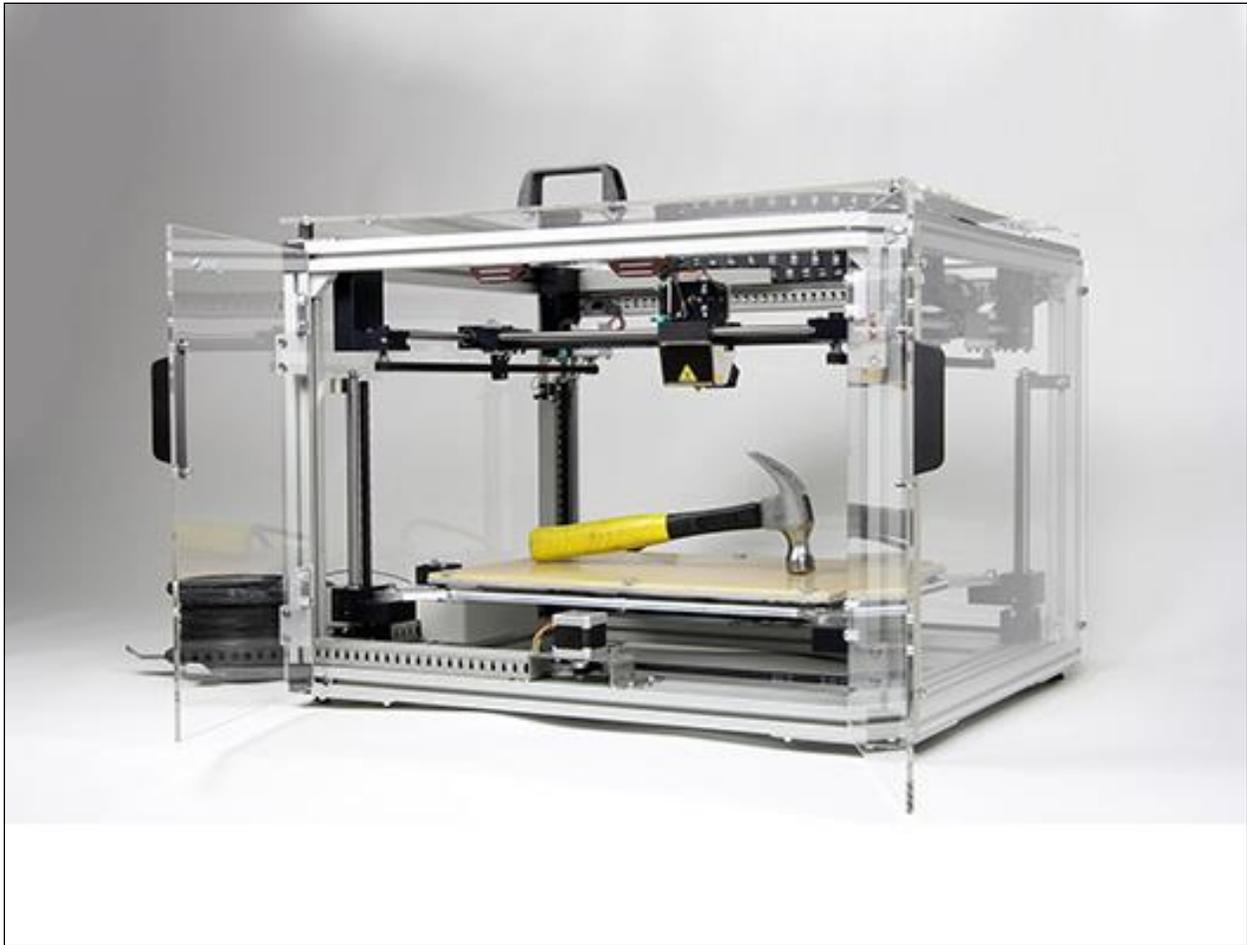


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3-D Printing: Implications for American Diplomacy

Lieutenant Commander Pete Zubof
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If you're a self-avowed geek like I am, you have a deep appreciation for science fiction inspired technology. For example, the Star Trek television series introduced the "transporter," a machine that allowed matter to be moved from one location to another instantaneously as a packet of energy. One relatively new piece of technology, the 3-D printer, does a reasonable job of emulating "transporter" technology in many aspects. While it doesn't literally "beam" matter from one location to another, 3-D printing technology does allow the assembly of an exact

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replica at another location using bulk raw materials. The potential exists, therefore, to bypass many logistical barriers currently impeding elements of our national security efforts overseas.

Every year, the American military spends millions of dollars and thousands of man hours ensuring its supplies, from bullets to spare parts, are available to troops in combat areas of operations (AORs). Increasingly, many of these AORs are geographically and politically isolated, delaying logistical efforts. Resupplying our military forces has become an affair often frustrated by the fickle political atmospheres within states these routes traverse. In the land-locked country of Afghanistan, for example, the military is heavily reliant upon travel routes that pass through the sovereign territory of neighboring states. Changes in the diplomatic climate, therefore, can result in these border states limiting access to these routes or closing them altogether.

Afghan supply routes enter the AOR through two primary geographic origins. The southern routes originate in Pakistan at the port city of Karachi. U.S. and NATO forces have historically relied upon these routes for up to 85 percent of their logistical requirements. Starting in 2009, however, multiple diplomatic disputes resulted in frequent and prolonged access denials by the Pakistani government. In response, a second supply network was set up via a northern ingress, originating in the Black Sea and passing through various former Soviet republics before finally arriving in Afghanistan. These northern routes enjoy an increased level of security and stability compared to the Pakistani routes. However, access is dependent upon Russian and other state governments' approval, certainly not a guarantee in the current political environment. Additionally, these routes are costly. A report in 2012 put the additional costs for utilizing northern routes at \$2.1 billion.¹

In an attempt to stabilize costs, U.S. diplomats negotiated a deal in July of 2012 to guarantee supply route access through Pakistan but at what cost? In 2009, the same year as the first Pakistani supply route embargoes were enacted, Congress approved the Enhanced Partnership for Pakistan Act (commonly known as the Kerry-Lugar-Berman bill, or KLB). It authorized a tripling of US economic and development-related assistance to Pakistan, or \$7.5 billion over five years to "improve Pakistan's governance, support its economic growth, and invest in its people." The KLB sets Pakistan up as the fourth highest recipient of U.S. foreign aid, behind only Israel, Iraq and Afghanistan itself.² This represents a huge investment in a state with marginal internal stability and transient diplomatic loyalties. In general, foreign aid is recognized as a tool of "soft" diplomatic power. Publically, foreign assistance to Pakistan goes, at least in part, to assist Pakistan security efforts in the region and fund Pakistan's own "war on terror." The US reality, however, is the soft power of aid dollars ensure that its supply routes to Afghanistan remain unrestricted—a \$7 billion bribe to keep supply routes open.

Some may question how 3-D printing could have an impact on this diplomatic situation. 3-D printing is not "true" transporter technology. That is to say, it does not completely solve the need to transport goods from one location to another. However, what it has potential to do is dramatically simplify logistical needs and reduce the number of individual shipments necessary to meet a given specific needs. Raw source materials, the building blocks that power 3-D printers, could be brought in by bulk shipment and stored in-country for extended periods, dramatically reducing the amount of

logistical traffic required at any given time. From that bulk material, everything from basic construction components to military hardware, and even ammunition, could be “printed” on site.³

3-D printing technology could also resupply isolated AORs or individual bases via alternative modes of transportation. Large, complex items, previously relegated to cumbersome and dangerous surface travel, could have their component bulk materials shipped in by air. However, the components themselves could be “printed” at the location; therefore, the larger complex item could be printed on site, bypassing the need for ground transportation altogether.

The U.S. military is already testing the waters of 3-D printing technology. Last spring, the USS ESSEX (LHD-2) became the first US warship to have a 3-D printer installed by the CNO’s Rapid Innovation Cell Print the Fleet project. The ship started out small, making disposable medical supplies (like syringes) and plastic models for flight deck control, but the potential is virtually limitless. The real challenge will be manufacturing parts that can live up to the rigorous safety and stress requirements for complex military uses, such as aviation.⁴

Unmanned aerial vehicle (UAV) technology may provide the perfect proof of concept for the military. UAVs, especially the small, man-portable type, have many of the same complexities of larger aircraft. Yet due to their small size and lack of human occupant, their manufacturing requirements are less rigorous, allowing for more experimentation. The University of Virginia recently used their own 3-D printer to create a proof of concept drone for MITRE Corporation, a DOD contractor. The result was encouraging: a remotely controlled aircraft capable of speeds up to forty-five miles per hour and with the ability to stay aloft for up to an hour. Even more important, the entire craft can be built in 31 hours via 3-D printer for a cost of about 800 dollars.⁵

As more and more technologies receive approval for military use, the feasibility for utilizing 3-D printing technology in combat zones increases. In the Afghanistan example, the reduced traffic flow and concentration on bulk delivery facilitated by 3-D printing would reduce transportation costs and allow consideration of alternate routes into the AOR. This may favor northern access routes, minimizing Pakistan’s influence on the logistical puzzle. The net result? Billions of dollars could be saved each year by reducing the U.S. need to use its soft power to ensure access to critical logistical infrastructure.

Diplomatically, 3-D printing technology allows for the possibility of a refocus of national efforts, both politically and economically. Every year, the United States pays foreign governments millions of dollars to ensure that critical logistical choke points remain open. Yet these same choke points are still subject to the whims of a foreign government, directly impacting the ability to project U.S. power abroad. As 3-D printing technology improves, so does our ability to flex logistical lines away from these compromised choke points. Perhaps one day, we can hope to bypass them altogether.

As a kid, I marveled at the technological possibilities that science fiction offered for our future. We are still searching for a way to make some of those possibilities into reality—I’ve got a spot reserved in my garage for a flying car. Yet some of the seemingly most far-fetched of science fiction technologies are starting to become reality, with very real implications for national security.

¹ Marcus Weisgerber. "Alternate Afghan Supply Route Tab: \$2.1 billion." *Military Times*. June 30, 2012. <http://www.militarytimes.com/article/20120630/NEWS/206300309/Alternate-Afghan-supply-route-tab-2-1-billion> (accessed November 19, 2014).

² Center for Global Development. "Aid to Pakistan by the Numbers." Center for Global Development. n.d. <http://www.cgdev.org/page/aid-pakistan-numbers> (accessed November 19, 2014).

³ Jon R. Drushal and Michael Llenza. "3-D Printing Revolution in Military Logistics." Atlantic Council. November 20, 2012. <http://www.atlanticcouncil.org/blogs/new-atlanticist/3d-printing-revolution-in-military-logistics> (accessed November 19, 2014).

⁴ Sydney J. Freedberg "Navy Warship is Taking 3D Printer to Sea; Don't Expect a Revolution." *Breaking Defense*. April 22, 2014. <http://breakingdefense.com/2014/04/navy-carrier-is-taking-3d-printer-to-sea-dont-expect-a-revolution/> (accessed January 15, 2015).

⁵ Jordan Golson. "A Military-Grade Drone That Can Be Printed Anywhere." *Wired*. September 9, 2014. <http://www.wired.com/2014/09/military-grade-drone-can-printed-anywhere/> (accessed January 15, 2015).



Photo courtesy Michael Kelly

Parting Ways

Michael Kelly

They spoke of him as if he were a stranger to me, as if I hadn't grown up with him, as if I hadn't known him. They shared stories of his youth, of their visits together, letters, phone conversations. All the while I felt more and more like a stranger. Like I didn't know the man I was about to bury. Like I didn't know my own father.

He had been dead a solid week and was laid out all primped and prepped in a too small coffin, in a too cold room, behind the chapel at the Heidelberg cemetery. I stared at his face. There was something odd about him. He looked peaceful enough, but something gnawed at the back of my mind.

Something wasn't quite right.

He had always tried to look his best. Slacks instead of jeans. Button-downs instead of t-shirts. Loafers instead of sneakers. Always clean shaven, and always neatly coifed. He had been handsome even though he was two inches and some dental work short of justifiable vanity. Sadly, embalming fluid and undertakers' tricks only did so much to keep the pall of death away from a corpse. Already his body,

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normally so solid and stout, was beginning to wither. His lips that in life were so full and always smiling were drawn tight against his teeth in a grimace. Two little dimples showed under his bottom lip where the undertaker had tied his mouth shut; heaven forbid his jaw snap open while one of the aunties gave his cheeks a final rub. And his eyes, extinguished, were closed tight and sunken in twilight pools. I reached out and gently patted down the patch of hair that stood out at a funny angle on the right side of his head while I studied his visage.

My father sold everything and hit the road soon after my mother's death a few years ago. At that point, he was still healthy. He lived out of a suitcase and began his mission of revisiting his life, which in many ways, had been one big road trip. He left home at sixteen and joined the Irish navy. From there he worked the coalmines of northern England and eventually ended up in the US Army where his adventures continued for, according to his DD-214, another thirty years, six months, and eight days. Along the way he picked up a German wife, four kids, the occasional dog and parakeet, and a nasty case of jungle rot. I never saw my father sadder than when he left the army and bought his retirement home, and I never saw him happier than when he sold it.

I hadn't planned on holding vigil at the side of my father's casket, but I couldn't let go of the feeling that something was amiss, and so I kept puzzling over him. Friends and relatives flowed into the room, collected like flotsam around his casket, and then were carried off with the next wave. They offered condolences and shared cherished memories. They would straighten his tie and tell me how red was his favorite color, or adjust the lapel on his suit and tell me how much he loved blue, or how fitting it was that he died in winter, his favorite season. They would smooth down his unruly hair and comment on how soft it still was. They would tell stories that started with "He always..." or "He never..." and all the while I nodded and thought, *Yes, I knew him too.*

Paddy, my father's youngest brother and my favorite uncle, wheezed his way up to the side of the casket. He was puffy, sweaty, and red-faced. I realized with a jolt that, even dead, my father looked better than Paddy. I told Paddy that I worried he would be next, that his heart would give out on him for all the smoking and drinking. I hoped my father's silent presence would help punctuate my concern. Paddy told me he never felt better. Three months later Paddy would fall off a ladder to his death while adjusting his satellite dish. His heart held, but the rung didn't.

Paddy was the only one who didn't try to trump my memories with his own. He gazed silently at my father, took in a deep breath, and then let out a noise like a kettle just before it comes to a full boil. Then he reached out and thumped my father heartily on the chest and laughed at some private joke. I half expected my father to groan in protest or deflate like a ruptured air mattress, but he remained still.

My aunties, Annette and Collette, showed up and jostled Paddy out of the way. Annette was a retired nun who used to go by Sister Francis. She still prayed a lot and after a couple of minutes of oohing and aahing over my father and fiddling with his hair, she launched into a nice blessing. Collette followed that up with a song that she swore was one of my father's favorites, although I couldn't remember ever hearing it in my life. By about the eleventh verse she had forgotten the words but, undaunted, she sang on, "I don't remember the words, I don't remember the words, but my dear brother loved this song, so I'll sing it for him all day long, oh I don't remember the words."

After a couple of more improvised verses, she was shushed by Annette who pulled out a rosary and insisted we position it in my father's hands as if he were praying. "Your dad always loved doing the rosary," she said. My father played the lottery with more vigor than he attended church, and saying the rosary wasn't something I ever remember him doing. They insisted. As supple as his skin was, his fingers

and hands proved less willing to flex. After a few minutes, we had the rosary beads wrapped around his hands, but then Annette and Collette fussed over how to position the cross. Paddy paced back and forth behind them rolling his eyes and doing his teakettle impersonation. In the end, they settled on wedging it between his fingers so that it looked like somebody had driven a crucifix-handled dagger into my father's belly. If anything, he looked deader.

Then my own sister, Bernadette, showed up. In a lull between visitors, she reached across the icy divide of my father's casket, took a hold of one of my hands, looked me in the eyes, and began to tell me, apologetically, how she was his favorite and how she was a daddy's girl and how she shared some sort of spirit connection with him. The whole exchange gave me the heebie-jeebies. And then she closed with, "I'm sure you'll miss him too."

It was time. I gave my father's hair one last tease and wet my fingers with some spit to get the unruly ends to stay down. But they didn't. The attendant secured the coffin lid. The Army honor guard secured the flag. We proceeded to the graveside. Taps were played. The flag was folded. Words were spoken. My father's casket was hoisted and lowered into a freshly dug pit. And a grateful nation buried another soldier it really didn't know.

I wasn't sure I knew the man whose body was in the coffin either. He had been reworked, retooled, reformed, and regurgitated into a person I wasn't sure I had ever met. Everyone there knew a different version of him, and it was as if we were each burying a different person. They had each brought their own successive memories, which they layered on top of him like remembrance stones on a grave, obscuring him from me. I had to sweep them away, battle them down, to get back to the father I knew. In the end, what was left of my father I carried inside me. What was in the coffin was only the shell of the man.

One by one, everyone filed past the grave and dropped dirt or flowers onto my father's casket. It was as I dropped my fistful of dirt that I realized what had been so odd. What hadn't been quite right. What bothered me as my father lay trussed in his coffin. It was a simple thing really, and I actually laughed out loud as it dawned on me. Something so minor that nobody else noticed. It was the reason why his hair stood out at odd angles, and it wasn't because of a bad haircut. My father was sent into eternity with his hair parted on the wrong side. He always parted his hair on the left, while the undertaker had parted it on the right. It was a little thing, really, but it was one more memory.

And it was wholly mine.

About the Contributors

Lieutenant Commander Scott Keenan currently serves with U.S Africa Command J2, Joint Reserve Intelligence Support Element (AFRICOM J2 JRISE). When called to active duty, LCDR Keenan has served in a variety of intelligence capacities in tactical, operational and strategic levels of operations, serving both conventional and unconventional forces in the Central Command and Pacific Command AOR.

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Lieutenant Colonel Jason Costello, USAF (BS USAF Academy, MMOAS Air Command and Staff College), is currently a student at the Naval War College. His previous assignments include F-15C instructor and demonstration pilot; deputy executive assistant to the J-3, JCS; F-22 instructor; wing chief of safety; squadron operations officer; and commander of the 325th Training Support Squadron (F-22) at Tyndall AFB, FL. His next assignment will be Deputy Commander, 609th Air and Space Operations Center (CAOC), Al Udeid AB, Qatar. Lieutenant Colonel Costello is a command pilot with over 2,100 flying hours in the T-37, T-38, F-15C/D, and F-22.

Commander David Faehnle graduated from the U.S. Naval Academy in 1995 with a BS in Aerospace Engineering. He earned his wings in 1997 and reported to NAS Oceana for initial qualification in the F-14. CDR Faehnle deployed on sea tours with VF-143 and VF-31, and served as an instructor at Strike Fighter Weapon School Atlantic. After leaving active duty and joining the reserves in 2006, he joined C7F Det 111, then returned to flying duty in 2007 with VFA-204 out of NAS JRB New Orleans, flying the FA-18 in the adversary role. CDR Faehnle reported to VFC-111 at NAS Key West as Executive Officer in 2012 and assumed command in 2013. He is currently working toward JPME II and a Master's degree in National Security and Strategic Studies at the Naval War College.

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