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North Korea, ASEAN, and Denuclearization

MARTIN J. COOL

This paper explores the history of relations between North Korea and Southeast Asian nations then seeks to find a synthesis between ASEAN's preference for engagement and the United States' policy of isolation given the unique problem set that North Korean denuclearization presents.

The countries of Southeast Asia are currently experiencing a familiar tactic North Korea uses when it finds itself isolated on the world stage: the charm offensive. In August 2014, the North Korean official news agency announced that Foreign Minister Ri Su Yong would lead a delegation traveling to the capitals of five Southeast Asian countries: Laos, Vietnam, Myanmar, Indonesia, and Singapore. The trip would also include a visit to the Association of Southeast Asian Nations (ASEAN) Regional Forum (ARF) in Myanmar's capital of Naypyitaw. Although no official explanation for the travel was given, it is reasonable to assume strengthening economic contacts between North Korea and Southeast Asian countries was of paramount importance. As renewed U.N. sanctions in 2013 over its nuclear weapons program restrict North Korea's already limited economic and political relations, Pyongyang must look to increase its interactions with the handful of countries it still has relatively positive ties with if it will escape its isolated position on the world stage.¹

As one of the principal supporters of the sanctions, the United States has sought to use isolation as a tool to achieve its objectives vis-à-vis North Korea, namely denuclearization and political reform. North Korea's attempt to break out of this isolation would seemingly put U.S. policy and that of many Southeast Asian governments on opposite tracks. This divergence raises an interesting predicament as to how consistently U.S. strategy should align with that of the countries of Southeast Asia and its principal regional grouping, ASEAN, and whether different tactics might in fact be mutually reinforcing rather than contradicting.

In analyzing the situation, this paper will offer policy recommendations for how the United States can encourage ASEAN to play a constructive role in denuclearization and North Korean reform. The structure of the argument will begin first by identifying specific U.S. interests with regards to North Korea, namely denuclearization and political reform, then explaining why they are vital to the United States. Next, a historical analysis will explore both bilateral relations between the countries of Southeast Asia and North Korea as well as how ASEAN traditionally approached the issue of denuclearization, what mechanisms have been applied to achieve its stated goals, and what level of influence ASEAN has had on North Korean denuclearization over the past decade. The next section will consider ASEAN's adopted methods against the North Korea problem through the theoretical lens of the three major schools in international relations: realism, liberalism, and constructivism. It is hoped that this theoretical

¹ Zachary Keck, "Why North Korea Is Courting ASEAN," *The Diplomat*, August 5, 2014, Accessed on November 3, 2014 from <http://thediplomat.com/2014/08/why-north-korea-is-courting-asean/>

survey will provide insight into the practical discussion of policy recommendations. In keeping with this theme, a consideration of the regional and international environment as viewed from the perspective of the North Korean regime will be provided. Given these constraints, the final section will examine how Washington can encourage ASEAN to assume a complementary role in pursuing the objectives of denuclearization and reform in alignment with the current U.S. policy of isolating North Korea.

U.S. Security Interests in East Asia

U.S. interests in North Korea and interests in the wider East Asian region are tightly interlinked. Prevention of hostilities on the still-divided Korean peninsula has been an enduring security interest since an armistice was signed to halt the Korean War in 1953. Today, a spike in tensions between North and South Korea has the potential to disrupt the 40 years of general stability that has characterized East Asia broadly. China, as a strategic partner of North Korea, and the United States, the security guarantor of South Korea, would be hard pressed to peacefully settle a major dispute in the event of war on the peninsula. Although not as bifurcated as during the Cold War, a definitive split between those supporting China and those supporting the United States could occur in the region if tensions reached such a fevered pitch. Preventing this situation and guaranteeing wider regional stability, therefore, is a key American interest in East Asia and has received additional emphasis from the Obama administration since the announced Asian pivot in 2010-11.

Denuclearization is the overriding U.S. objective when it comes to dealing with North Korea. In July 2014, Special Representative for North Korea Policy Glyn Davies testified before the House Foreign Affairs Subcommittee on Asia and the Pacific in which he reiterated U.S. interest in seeking the “complete, verifiable, and irreversible denuclearization of North Korea.”² Indeed, preventing North Korea from obtaining a viable nuclear weapon is an overwhelming U.S. priority because of longstanding fears that (1) North Korea might use such weapons to threaten other American interests in the region, (2) North Korea could transfer weapons or technological know-how to other anti-American states or groups, and (3) because new nuclear states weaken the norm against nuclear proliferation and incentivizes other regional states to pursue nuclear weapons.³ U.S. policy in seeking denuclearization has been a combination of strong political, economic, and security ties with the Republic of Korea (ROK) government in Seoul, while simultaneously isolating the Democratic People’s Republic of Korea (DPRK), negotiating a halt to its nuclear weapons program, and encouraging political reform in Pyongyang.

² “U.S. Policy Towards North Korea,” *U.S. Department of State* website, Testimony from Glyn Davies Special Representative for North Korea Policy, Statement before the Subcommittee on Asia and the Pacific of the House Committee on Foreign Affairs, Washington, DC, on July 30, 2014, <http://www.state.gov/p/eap/rls/rm/2014/07/229936.htm>.

³ Avery Goldstein, “DPRK Briefing Book: The North Korean Nuclear Challenge and American Interests,” *Nautilus Institute*, October 31, 2003, <http://nautilus.org/publications/books/dprkbb/terrorism/dprk-briefing-book-the-north-korean-nuclear-challenge-and-american-interests/>.

North Korea and Southeast Asian Relations

Political, economic, and military ties between North Korea and the countries of Southeast Asia are relatively strong compared to its relations outside the region. However, North Korea does not enjoy robust enough ties with any country in Southeast Asia, or with the region as a whole, to offset its level of isolation. Nevertheless, a survey of North Korean efforts to improve its economic situation and alleviate its over reliance on Beijing shows that many countries in Southeast Asia present opportunities for renewed engagement if Pyongyang is sincere about its intentions for economic reform.

North Korea's longtime relations with former pariah state Myanmar have been well documented. Since their nadir in 1983 when North Korean agents attempted to assassinate the sitting President of South Korea on his visit to Rangoon, the Myanmar-North Korea relationship has steadily grown along military and political lines over the past 30 years. In 2008, a Burmese official reportedly leaked a memorandum of understanding between the two governments that formalized their flourishing military cooperation.⁴ In 2012, however, the Myanmar government took tentative steps towards reform that forced Western governments to reconsider their policies of isolating Myanmar from the international community. One such step included a pledge by President U Thein Sein to South Korean leader Lee Myung-bak that Myanmar would no longer buy weapons from North Korea.⁵ Myanmar's opening to the West has hit road bumps at times, including the U.S. Department of Treasury's blacklisting of a Burmese military official for engaging in illicit arms trade with North Korea. Nevertheless, the shift in Myanmar policy reveals just how thorough the isolation of Pyongyang had reached by summer 2014.⁶ The future of relations between these once stalwart allies will largely depend on the pace and scope of reform, or lack thereof, the leadership in each country is willing to make.

North Korea has also traditionally maintained close economic and political relations with Southeast Asia's most populous and politically consequential state, Indonesia. As a prominent member within ASEAN with a particularly persuasive voice in the region, Jakarta was the principal lobbying supporter for North Korea's inclusion in the ARF, the annual ministerial-level security meetings some analysts consider to be one of the more substantive of ASEAN's coordination meetings. That effort succeeded in summer 2000 when North Korea's foreign minister attended for the first time. In 2013, Indonesian Foreign Minister Marty Natalegawa visited Pyongyang in hopes of improving bilateral ties further.⁷ In a prepared statement for the trip, Marty announced that bilateral trade had grown more than 45% in recent years.⁸ According to trade data from 2012, Indonesia was the second largest importer of North Korean goods in the

⁴ Aung Zaw, "Burma and North Korea, Brothers in Arms," *The Wall Street Journal*, July 10, 2009, <http://online.wsj.com/news/articles/SB124716393095019071>.

⁵ Zaw Win Than, "U Thein Sein makes pledge on North Korea military ties," *Myanmar Times*, May 21, 2012, <http://www.mmmtimes.com/index.php/national-news/793-u-thein-sein-makes-pledge-on-north-korea-military-ties.html>.

⁶ Ankit Panda, "Can Myanmar and North Korea Say Goodbye?" *The Diplomat*, November 13, 2013, <http://thediplomat.com/2013/11/can-myanmar-and-north-korea-say-goodbye/>.

⁷ Keck, "Why North Korea Is Courting ASEAN."

⁸ Zachary Keck, "Why is Indonesia Courting North Korea?" *The Diplomat*, <http://thediplomat.com/2013/11/why-is-indonesia-courting-north-korea/>.

world, albeit second to China by a substantial margin.⁹ Though the visit was meant to highlight new economic opportunities due to North Korea's recently announced special economic zones, Indonesia has often expressed its belief that only through maintaining close bilateral ties can one expect to influence North Korean behavior in a positive direction.¹⁰

Economic ties are also relatively strong between North Korea and Singapore, one of Pyongyang's largest trading partners. The two countries have also maintained close political relations since 1975. High-level exchanges are a mainstay of the relationship, and North Korea has at times expressed interest in modeling its economic structure after Singapore's.¹¹ Thailand also has relatively high levels of trade with North Korea. According to data from 2012, Thailand ranked sixth in the world in export destinations for North Korean goods and seventh highest on the list of countries from which North Korea imports goods.¹² Laos and North Korea have maintained robust political ties after first establishing diplomatic relations in 1974. Recent engagement has included a 2011 visit to North Korea by Lao President and General Secretary of the People's Revolutionary Party, Choummaly Sayasone. During the visit, the Lao president met with both Kim Jong-il and current DPRK leader Kim Jong-un. In 2012, former North Korean military chief Ri Yong-ho and chairman of the Presidium of the Supreme People's Assembly Kim Yong-nam also visited Laos.¹³

Calls for Denuclearization

ASEAN's preferred approach to North Korean denuclearization has been consistent with its policy of peaceful settlement of conflicts through what has been described as the "ASEAN way." Using "consultation" and "collaboration," ASEAN member states seek to resolve conflicts by utilizing dialogue and informal negotiations while spurning binding legal mechanisms for enforcement. In the opinion of ASEAN supporters, both scholars and the states themselves, the ASEAN way is possible for several reasons. One reason is that member countries have a common interest in harmonious relations and a stable international order. This common interest is undergirded by shared norms and values.¹⁴ Between ASEAN and North Korea, this common interest was agreed upon in theory in 2008 when North Korea acceded to ASEAN's Treaty of Amity and Cooperation (TAC). The TAC is meant to be a method by which signatory states institutionalize the ASEAN Way and are able to regulate behavior and state interactions through dispute resolution.¹⁵

ASEAN's stated goals largely align with those of the United States when it comes to North Korean denuclearization and reform. However, ASEAN's strategy has differed in that it has consisted almost entirely of official statements, press releases, and ministerial meetings in which ASEAN expresses its desire for a peaceful resolution to the problem. Consistent with the

⁹ "Learn More About Trade in North Korea", *Observatory of Economic Complexity*, <http://atlas.media.mit.edu/profile/country/prk/>.

¹⁰ Keck, "Why is Indonesia Courting North Korea?"

¹¹ Keck, "Why North Korea Is Courting ASEAN."

¹² "Learn More About Trade in North Korea", *Observatory of Economic Complexity*.

¹³ Keck, "Why is Indonesia Courting North Korea?"

¹⁴ Donald E. Weatherbee, *International Relations in Southeast Asia: The Struggle for Autonomy* (Lanham, MD: Rowman & Littlefield Publishers, 2005), 128.

¹⁵ Weatherbee, *International Relations in Southeast Asia*..., 129.

ASEAN Way, official statements have the benefit of clearly and persistently expressing policies, preferred methods, and desired outcomes. Similar in theme and content, these statements generally employ language, such as “express” or “encourage”, that is non-binding. Lacking in ASEAN strategy are mechanisms for accountability, enumeration of standards of behavior, resultant consequences of failing to meet those standards, or binding commitments to a unified response.

Nevertheless, ASEAN has maintained a consistent position of support for North Korean denuclearization and a resumption of the Six Party Talks (SPT). The appendix at the bottom of this paper is a compilation of the ARF Chairman statements relevant to North Korea since it began issuing them in 1995. Similar themes are recurrent in each, including a call for the restart of the SPT, compliance with United Nations Security Council (UNSC) resolutions, and the creation of a “conducive environment” for denuclearization.¹⁶ Another ASEAN forum that occasionally deals with North Korea-related issues is the ASEAN Plus Three (APT) grouping. First created in 1997, the APT is comprised of all ten ASEAN member states plus China, Japan, and South Korea. The APT and a similar association, the East Asia Summit (EAS), were born in response to the economic crisis of 1997 that ASEAN members felt existing institutions inadequately addressed.¹⁷ Since 2003, the countries of Northeast Asia – China, Japan, and South Korea – have utilized the APT as an additional forum for addressing North Korean denuclearization. Although principally an economic coordination mechanism, APT has obvious security implications. For example, the grouping implicitly endorses regionalism in Northeast Asia by its very makeup, a first step towards building more robust security ties. Additionally, economic coordination can help to reduce political tensions,¹⁸ while the conspicuous absence of North Korean participation speaks to the current state of political ties in the region.

What are the benefits and shortcomings to ASEAN’s approach to security issues with regards to North Korea? Since everything ASEAN discusses must be agreed upon by all member states, lack of consensus can weaken actions taken by the combined region. ASEAN member states closely tied to Beijing may be unwilling to push for a statement or action that criticizes North Korea’s nuclear program beyond what would unsettle the status quo. However, while the lack of measures available to ASEAN to compel North Korea is a valid critique, it has not left ASEAN and related sub-committees without merit. The ARF and the APT allow ASEAN to be a forum that allows diplomatic interaction between member states that otherwise would not engage on any level.¹⁹ Additionally, forums like the ARF allow for clear messaging. As evidenced in the ARF Chairman’s statements, ASEAN expressed a clear message of denuclearization for North

¹⁶ “Chairman’s Statement of the 21st ASEAN Regional Forum Nay Pyi Taw, Myanmar, 10 August 2014”, *ASEAN.org*, 10 August 2014, <http://www.asean.org/images/documents/47thAMMandRelatedMeetings/Final%20Chairmans%20Statement%20of%20the%2021st%20ASEAN%20Regional%20Forum%20Nay%20Pyi%20Taw%2010%20August%202014.pdf>.

¹⁷ Amitav Acharya, *Constructing a Security Community in Southeast Asia: ASEAN and the Problem of Regional Order* (New York, NY: Routledge, 2009), 214-215.

¹⁸ Pang Zhongying, “The Six-Party Process, Regional Security Mechanism, and China-U.S. Cooperation: Toward a Regional Security Mechanism for a New Northeast Asia?”, *The Brookings Institution*, March 2009, http://www.brookings.edu/~media/research/files/papers/2009/3/northeast%20asia%20pang/03_northeast_asia_pang.pdf.

¹⁹ Georgeina Whelan, “Does the ARF Have a Role in ASEAN’s Pursuit of Regional Security in the Next Decade?” *Australian Defence College*, October 2012, http://www.defence.gov.au/adcc/docs/Publications2012/10_CDSS%20SAP.pdf.

Korea. This messaging is important for all parties involved as it reduces uncertainty and sets a baseline for discussions. In the context of thinking about combined policies for denuclearization between the United States and ASEAN, it means Washington can hold ASEAN accountable for faithfully taking actions consistent with its words.

Survey of Theoretical Perspectives

How can the three major schools of thought within International Relations (realism, liberalism, and constructivism), help explain ASEAN's approach to North Korean denuclearization and perhaps provide insight into what policies to adopt in the future? Constructivism is helpful in that it defines a community as a social construct created by an accumulation of shared norms, culture, and knowledge about ways of acting that promote a shared identity.²⁰ This emphasis on identity is especially significant for ASEAN as a regional organization, especially in the way that ASEAN diplomats themselves view the region. For ASEAN, the lack of binding institutions or legal mechanisms for restricting states is unimportant to its ultimate success. More important is the mutual construction and recognition of a common identity conducive to harmonious relations.²¹ In its dealings with North Korea, the constructivist ideal is readily apparent. ASEAN statements contain clear expressions of a desired norm: zero nuclear weapons. In the eyes of ASEAN diplomats, North Korea's signing of the Treaty of Amity and Cooperation is a conditions-free link to the ASEAN identity that satisfies the criterion of mutual understanding and a desire for harmony. However, without institutional mechanisms that connect identity to action North Korea can continue its nuclear weapons program without a change in its relationship to ASEAN.

Regime theory, like constructivism, examines the role of norms, rules, and principles in shaping group behavior, but departs from constructivism in that it is firmly embedded in liberalism and that school's acceptance of state behavior rooted in national interest. A common identity is not the ultimate objective in regime theory, but rather specific expectations about which behaviors are acceptable among states and which are not. Unlike realism, however, regime theory holds that international regimes can significantly shape state behavior based on mutually understood obligations within the regime. Theoretically, ASEAN and the ASEAN way create commonly understood expectations of behavior, like peaceful resolution of conflict, that are helpful in maintaining regional stability.²² While ASEAN as a security regime has been credited with buffering the intensity of national interest clashes within ASEAN, examples of reducing the intensity of security dilemmas outside of ASEAN, including on the Korean peninsula, are more difficult to identify.²³ Indeed, an abiding commitment to the principal of noninterference in the internal affairs of other countries has significantly limited the steps ASEAN can take to resolve conflicts.

From the realist perspective, the concepts of national interest and relative power capabilities most clearly explain ASEAN's policy toward North Korea. These concepts attempt

²⁰ Weatherbee, *International Relations in Southeast Asia*..., 21.

²¹ Weatherbee, pg 21.

²² Weatherbee, *International Relations in Southeast Asia*..., 20-21.

²³ *Ibid.*, 127.

to show that ARF statements calling for denuclearization while simultaneously welcoming economic and political engagement with Pyongyang is not about creating a common identity or common rules of the road. Rather ASEAN policy outputs are best understood by locating the national interests of member states.²⁴ The state interests of the countries that constitute ASEAN are not significantly concerned with achieving North Korean denuclearization because North Korea does not represent a significant security threat, especially if the necessary actions would come at the expense of economic and political ties to Pyongyang and Beijing.

Given its emphasis on security interests, realism instead views ASEAN as a mode of international cooperation that allows members to pursue their narrowly defined interests within a regional organization. ASEAN statements calling on North Korean denuclearization are indicative of the level of alignment of state interest on this topic: enough to express a common interest in denuclearization, but not enough to take significant action. The other concept, relative power capabilities, speaks to the level of coercive power Southeast Asian countries possess. Even if ASEAN interests aligned for North Korean denuclearization to a significant degree, the realist emphasis on economic and military hard power means ASEAN would be unable to achieve its goal because it lacks the requisite military, political, and economic influence.

View from Pyongyang

Before considering what role U.S. policymakers should encourage ASEAN to play in bringing about North Korean denuclearization and reform, it is important to understand the historical and contextual factors that contribute to the intransigency of the North Korea problem. If working through ASEAN – even as a single component of U.S. policy – is to be used effectively, a vital part of the task will be to know what motivates and shapes North Korean perceptions. Without understanding why North Korea pursues nuclear weapons, it will be impossible to construct a coherent set of policies that can successfully convince North Korea to relinquish its nuclear weapons program.

North Korea, perhaps more than most countries, is motivated by its beginnings as a nation and its formative experiences as a state. It is a Stalinist regime whose leader's legitimacy depends on direct blood lineage from founder Kim Il-sung and his philosophy of "self-reliance."²⁵ Therefore, DPRK objectives and strategy closely resemble those of a newly independent nation seeking acceptance on the world stage. In his essay on "Integrative Revolution," anthropologist and Southeast Asia expert Clifford Geertz wrote about the competing motivations for newly independent and modernizing societies. One motivation was the practical desire "for progress, for a rising standard of living, more effective political order, greater social justice".²⁶ By all accounts, North Korea is failing at this objective. However, that failure is mostly a Western perspective; the narrative is positive from the North Korean elite perspective. What is more compelling in developing U.S. policy then is the other motive Geertz

²⁴ Ibid., 20.

²⁵ For a comprehensive definition of *Juche* ideology, sometimes translated as "self-reliance", see Victor D. Cha, *The Impossible State: North Korea, Past and Future* (New York: Ecco., 2012) 37-46.

²⁶ Clifford Geertz, "The Integrative Revolution: Primordial Sentiments and Civil Politics in the New States" in *Old Societies and New States: The Quest for Modernity in Asia and Africa* (New York: Free Press of Glencoe, 1963), 105-157.

describes, and that is the desire “to be noticed: it is a search for an identity, and a demand that the identity be publicly acknowledged as having import, a social assertion of the self as ‘being somebody in the world’”.²⁷ One might think of this motivation as a nation’s desire to have “a seat at the table”, positive recognition of a society’s self-worth, and the validation of a state’s status as being equal to those of other states around the world. Given its existence on a divided peninsula alongside another government it has competed with for legitimacy both domestically and internationally, North Korea’s susceptibility to identity concerns is significant.

North Korean nuclear ambitions stem in part from a deep-seated desire to achieve “equal power” status on the international stage alongside other countries, but most importantly vis-à-vis the country state propaganda upholds as its greatest existential threat: the United States. The most cogent analysis of this theme is found in Victor Cha’s writings on North Korean motivations for acquiring nuclear weapons. Using empirical evidence combined with the “gut instincts” formed from sixteen years’ worth of negotiations with Pyongyang diplomats, Cha says that what North Korea wants is for the United States to accept it as a “nuclear power”.²⁸ Denuclearization, on the other hand, is tantamount to leaving North Korea defenseless. The goal of talks, in North Korea’s view, should be about “mutual” nuclear arms reductions, implying a level playing field between North Korea and the United States. Quoting North Korean negotiators, Cha says DPRK diplomats insisted talks should be “like (those) you used to have with the Soviet Union during the Cold War”²⁹, a clear attempt to portray the United States and the DPRK as equals on the world stage.

As Cha makes evident, this analysis does not discount the security aspects of North Korea’s desire for nuclear weapons. North Korean apologists and balance of power theorists alike have often asserted that North Korea’s nuclear program is revealing of insecurity in Pyongyang, both internally and internationally. Kim regime mouthpieces often validate these theories by spouting anti-America propaganda and calling for an end to U.S. hostility towards North Korea. There is some truth to this claim, writes Cha, which is why the United States has on countless occasions proclaimed it does not have a hostile policy towards North Korea. The United States has even gone so far as to provide a negative security assurance written in the Joint Statement in 2005 that said “The United States affirmed that it has no nuclear weapons on the Korean Peninsula and has no intention to attack or invade the DPRK with nuclear or conventional weapons.” The clause has been largely forgotten, however, as the North seemed not to appreciate the import of the phrase.³⁰ What North Korea wants instead is a “regime security assurance,” a protection against regime replacement if Pyongyang begins tentative economic reform that opens a flood of modernization and populist calls for political change.³¹ North Korea’s preferred end-state then is two-fold: acceptance on the world stage as a nuclear power equal to the United States, and a guaranteed-for-life role for the Kim regime as the head of the

²⁷ Geertz, “The Integrative Revolution...”.

²⁸ Victor D. Cha, “What Do They Really Want?: Obama’s North Korea Conundrum”, *The Washington Quarterly*, 32:4, (2009): 119-138, DOI: 10.1080/01636600903224837, <http://dx.doi.org/10.1080/01636600903224837>.

²⁹ Cha, “What Do They Really Want?...”, 123.

³⁰ Ibid., Cha recounts Russian diplomats at the meeting exclaiming that Soviet diplomats had sought such a statement throughout the Cold War without ever receiving one.

³¹ Cha, “What Do They Really Want?...”, 126.

North Korean ruling elite. Considering U.S.-North Korea negotiations with these perspectives in mind, it is not difficult to accept the intractable nature of the problem and the effective stalemate that has resulted.

Policy Recommendations

What role, if any, can ASEAN play in helping break the stalemate? For the purposes of analysis, this paper will keep the U.S. policy of politically and economically isolating Pyongyang as a given, but will evaluate options for how ASEAN can supplement that policy.

Option One: Comprehensive Engagement

North Korea's political and economic isolation has increased since 2008 to the degree that Pyongyang appears open once again to re-engage on a deeper level with its partners in Southeast Asia. As Indonesian diplomats have often argued, frequent interaction would give ASEAN and ASEAN-member states an opportunity to shape the perceptions and identity of North Korean leaders, alleviating their security concerns and assuring them a seat at the table. Specifically, some analysts have called for the creation through the ARF of a sub-group to the Inter-sessional Support Group Meeting on Confidence Building Measures and Preventive Diplomacy in order to institutionalize engagement further.³² Such an effort might help achieve the stabilization of political relations among the members of the SPT in order to restart the long moribund denuclearization talks. Ideally this group would meet twice a year and focus exclusively on nuclear issues in East Asia. Any policy of engagement would necessarily include the cooperation of the South Korean government as well. Increased opportunities for dialogue between East Asian states with the ASEAN chair hosting would perhaps pave the way for more substantive talks later.³³

However, while political engagement would meet the need for assuring North Korea of its place among East Asian nations, economic support would have the negative effect of propping up the regime without requiring steps towards denuclearization, political reform, or human rights improvements. As shown in the past, even incremental improvements in North Korea's economic situation allows it to reduce the amount of pressure outside countries are able to apply at future rounds of the SPT. Also, it is not clear as to why further political engagement, aside from that which already occurs through the ARF, would further reassure North Korea that it exists as a sovereign state.

Option Two: Comprehensive Isolation

For option two, ASEAN would pursue a strategy similar to what the United States employs: minimal economic activity and downgraded political interaction. Further economic and political disengagement between Southeast Asia and North Korea would leave Pyongyang with little

³² J. Berkshire Miller and Kei Koga, "Leveraging ASEAN's Role On North Korean Denuclearization," *Forbes online*, July 21, 2013, <http://www.forbes.com/sites/jonathanmiller/2013/07/23/leveraging-aseans-role-in-north-korean-denuclearization/>.

³³ Miller and Koga, "Leveraging ASEAN's Role On North Korean Denuclearization."

choice but to increase its lopsided dependence on Beijing largesse. Strict adherence to economic sanctions already in place would be combined with political isolation by, for example, increasing discussions of North Korean denuclearization at a variety of ASEAN forums in addition to the ARF. Another option would be to increase the emphasis placed on human rights violations in North Korea during ASEAN forums. This topic has been a particularly sensitive area for North Korea recently at the U.N. and appears to have caught the attention of the leadership in Pyongyang. While few doubt China's willingness to continue to prop up the Kim regime, especially economically, North Korean leaders may be reaching a level of one-sided dependence with which they are uncomfortable sustaining. Comprehensive isolation has the benefit of exploiting this relationship by driving Chinese-North Korean ties to a point that is too close for comfort for leaders in Pyongyang.

This option would be difficult, however, because the United States lacks the ability to sever ties between ASEAN and North Korea completely. ASEAN identity is built around political engagement, even with recalcitrant states such as North Korea. While U.S. pressure might result in marginally more condemnatory language over North Korean disregard for U.N. sanctions, rhetorical flare alone would not replace the binding resolutions needed to enforce strict observance of a policy of economic and political isolation of Pyongyang on the part of ASEAN states.

Option Three: Economic Isolation, Political Engagement

A third option calls for deepened economic isolation coupled with political engagement on the part of ASEAN. This policy combines two of the advantages of option 1 and 2: it satisfies North Korea's inherent desire to belong to the community of nations, but its economic isolation increases its unacceptable reliance on Beijing, with all of the concomitant restrictions on sovereignty such a relationship engenders. An encouraging sign of economic disengagement on the part of Southeast Asia occurred when Singapore chose to criminally charge one of its shipping companies that took part in the Chong Chon Gang incident.³⁴ The United States should press all Southeast Asian states to crack down on illicit trade with North Korea in accordance with U.N. sanctions and should discourage licit trade that is not tied to political and economic reform on the part of the Korean Workers Party.

What might such a proposal look like from the diplomatic perspective? One option would be for ASEAN to create a new, special working group dedicated exclusively to denuclearization and reform of North Korea. Such a grouping, still organized under the ARF, would be established as an alternative to the SPT but could still be supplemental in that they would pursue similar goals. Inclusive of the SPT countries and ASEAN member states, this option would provide several benefits: increased opportunities for dialogue, an alternative forum for discussions when the SPT fails to meet, and an elevation of the denuclearization problem within the stratification of ASEAN policy goals.³⁵ There are downsides to such a proposal, however. Such a broad gathering of participants would inevitably weaken any commitments to action. States unduly

³⁴ "Singapore charges company over North Korea arms shipment," *BBC News Online*, June 10, 2014, <http://www.bbc.com/news/world-latin-america-27778468>.

³⁵ Miller and Koga, "Leveraging ASEAN's Role On North Korean Denuclearization."

influenced by Chinese interests would most likely not sign onto any agreement with which Beijing disapproved. Nevertheless, the political engagement should be complemented by economic disengagement, meaning ASEAN-member states would be given the opportunity to encourage reform through dialogue without economically rewarding North Korean behavior. This would not be a panacea nor would it achieve rapid results. However, in dealing with North Korea, long-term solutions are sometimes all that are available.

Conclusion

The United States desires the complete and irreversible denuclearization of North Korea. Unfortunately, none of the proposals offered above present a quick, comprehensive solution to North Korean denuclearization and reform because ASEAN lacks the institutional strength to substantively alter the course of North Korea's nuclear weapons program. However, ASEAN diplomats should not react with an attitude of indifference and inevitability when it comes to dealing with North Korea. Nor should U.S. policymakers react with similar regret when thinking about how ASEAN can be utilized in seeking North Korean denuclearization. Instead, marginal solutions, such as the third option, can bring real benefit as a supplement to the U.S. policy of isolating North Korea. ASEAN statements from the ARF continue to provide a clear message on behalf of the nations of Southeast Asia: until North Korea scales back and permanently reverses its nuclear weapons program, it will not be fully integrated, both economically and politically, as a reliable partner in the East Asian community. Although this paper has not focused on the efficacy of current U.N. sanctions, evidence points to the conclusion that they may be pushing North Korea closer and closer to China and could eventually force a level of political and economic over reliance with which Pyongyang finds unsustainable due to reduced sovereignty. Further economic isolation brought on by the countries of Southeast Asia could be the tipping point. A combined political approach that gives North Korea clear steps for improving its position through verifiable denuclearization would give Pyongyang the outlet needed for dismantling its program.

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Appendix

Year	ASEAN Regional Forum Chairman's Statement on North Korea
1994	<p>There remains a residue of unresolved territorial and other disputes that could be sources of tension or conflict. If the ARF is to become, over time, a meaningful vehicle to enhance the peace and prosperity of the region, it will have to demonstrate that it is a relevant instrument to be used in the event that a crisis or problem emerges. The ARF meeting in Bangkok demonstrated this by taking a stand on the Korean issue at the very first meeting. This was a signal that the ARF is ready to address any challenge to the peace and security of the region.</p>
1995	<p>Recognized that the Korean Peninsula issue has a direct bearing on peace and security in the Asia-Pacific. They welcomed the recent US-DPRK talks held in Kuala Lumpur and expressed the hope that this would lead to the full implementation of the Agreed Framework of 21 October 1994. The Ministers urged the resumption of dialogue between the Republic of Korea and the Democratic People's Republic of Korea and believed that it would assist in the successful implementation of the Agreed Framework and the maintenance of peace and stability on the Korean Peninsula. The ministers also recognised the importance which international support for the Korean Peninsula. The Ministers also recognised the importance which international support for the Korean Peninsula Energy Organisation (KEDO) has for the implementation of the Agreed Framework;</p>
1996	<p>Bearing in mind the importance of peace and security on the Korean Peninsula, the Meeting stressed the need to establish a peace mechanism and also emphasized that the 1953 Armistice Agreement until then should remain valid. The Meeting reiterated the importance of the resumption of dialogue between the Republic of Korea and the Democratic Peoples' Republic of Korea. The Meeting noted the importance of the Korean Peninsula Energy Development Organization (KEDO) and encouraged ARF participants to consider giving further financial and political support to KEDO.</p>
1997	<p>Bearing in mind the importance of peace and security in the Korean Peninsula, the Ministers reaffirmed the importance of maintaining the 1953 Armistice Agreement until a permanent peace regime is in place. The Ministers expressed their concern, over the impact of the food shortage in the DPRK on the security and the well being of the people. The Ministers welcomed the recent developments on the proposed four party talks which could paved the way to a permanent peace on the Peninsula. The Ministers also welcomed the progress made by the Korean Peninsula Energy Development Organisation (KEDO) in implementing the Agreed Framework of 1994 and reaffirmed continued support of the ARF to KEDO;</p>
1998	<p>The Ministers welcomed the resumption of official dialogue between South and North Korea in Beijing and the launching of the Four-Party Talks Peace Process on the Korean Peninsula in Geneva. The Ministers emphasized the vital importance of the inter-Korean dialogue in promoting reconciliation and cooperation between the two Koreas. The Ministers also reaffirmed the importance of observing the 1953 Armistice Agreement. The Ministers reiterated their full and continued support for the talks and the KIEDO project to help establish a durable peace and stability on the Korean Peninsula and promote global nuclear non-proliferation. In view of the current financial difficulties that the KEDO is facing, the Ministers called for more international contribution to this organization.</p>
1999	<p>The Ministers noted that developments in the Korean Peninsula remain of concern and agreed that parties involved should not adopt policies which could undermine peace and stability. They emphasised the importance of observing the 1953 Armistice Agreement. The Ministers expressed concern over the August 1998 payload launch and other missile-related activities which could heighten tensions and have serious consequences for stability in the Korean Peninsula and the region. The Ministers supported all efforts to improve relations between the DPRK and the ROK and in this connection, noted the ROK's policy aimed at establishing a regime of peaceful co-existence with the DPRK. They welcomed the recent positive developments at the Four-Party Talks and the US-DPRK negotiations on the suspected underground facility. They also reiterated support for the Four-Party Talks and reaffirmed the importance of maintaining the 1994 Agreed Framework and implementing the Korean Peninsula Energy Development Organization (KEDO) projects.</p>

Year	ASEAN Regional Forum Chairman's Statement on North Korea
2000	<p>The Ministers noted with satisfaction the positive developments on the Korean Peninsula., including the increased dialogue and exchanges between the Democratic People's Republic of Korea (DPRK) and several ARF countries. The Ministers welcomed in particular the historic Summit between the leaders of the DPRK and the ROK held in Pyongyang on 13-15 June 2000 and expressed their support for the "June 15 North-South Joint Declaration", the first agreement signed by the two leaders since the division of Korea in 1945. In this regard, the Ministers were of the view that the Summit represented a turning point in inter-Korean relations, and that the on-going momentum of dialogue and interaction would be carried forward with a view to achieving lasting peace and eventual reunification on the Korean Peninsula. The Ministers also expressed the hope for further efforts by all parties concerned within the frameworks of inter-Korean dialogue, the USDPRK and Japan-DPRK talks, the Four-Party Talks and broader international efforts, as well as for further positive developments regarding the temporary moratorium by the DPRK on missile test launches and for the full implementation of the 1994 Agreed Framework, including the work of the Korean Peninsula Energy Development Organization (KEDO).</p>
2001	<p>The Ministers noted with satisfaction the recent positive development of overall situation on the Korean Peninsula, including increased dialogue and co-operation between the Democratic People's Republic of Korea (DPRK) and the Republic of Korea (ROK) following the North-South Summit on June 15, 2000 in Pyongyang. They further encouraged both the DPRK and the ROK to build on the success of the Summit to continue the peace process and emphasised the importance of holding the second Inter-Korean Summit with a view to establishing lasting peace on the Korean Peninsula. The Ministers also took note of the DPRK's position concerning the DPRK-US Agreed Framework of 1994. They welcomed continued efforts by the international community to contribute to the above endeavours, including the recent visit by H.E. Mr. Goran Persson, the President-in-Office of the European Council and Prime Minister of Sweden, to both the DPRK and the ROK. The Ministers were of the view that outstanding security and humanitarian issues would be addressed through increased dialogues. The Ministers appreciated the active participation by (be DPRK in ARI7 activities in the last year urn! Considered this a contribution towards strengthening the ARI process and advancing the cause of regional peace and security.</p>
2002	<p>The Ministers expressed concern over the recent naval clash in the Yellow Sea/West Sea which had heightened tensions in the Korean Peninsula. They noted, however, the latest moves towards the easing of tensions and the resumption of dialogue. They stressed the need to ensure the prevention of the recurrence of such an incident in the future and underlined the importance of promoting Confidence Building Measures. The Ministers expressed the hope that genuine progress would be made for the mutual confidence building between North and South Korea and the enhancement of North and South reconciliation and cooperation. In that regard, they highlighted the importance of the smooth implementation of the 15 June North-South Joint Declaration and the follow-up measures agreed upon during the visit to Pyongyang by the Presidential Envoy of the ROK last April. They also emphasized the importance of the holding of a second Inter-Korean Summit. The Ministers reiterated the importance of the full implementation of the 1994 Agreed Framework including the Korean Peninsula Energy Development Organisation (KEDO) project. The Ministers hoped that prospects for dialogue between the DPRK and the United States would improve. They also welcomed the Red Cross Talks between the DPRK and Japan and encouraged further dialogue.</p>
2003	<p>Views were expressed on the situation on the Korean peninsula. The Ministers supported the denuclearization of the Korean peninsula. They urged DPRK to resume its cooperation with the International Atomic Energy Agency (IAEA) and to reverse its decision to withdraw from the Non-Proliferation Treaty (NPT). They called for a peaceful solution of the nuclear problem there for the sake of durable peace and security in the region. In this regard, the Ministers were of the view that the ARF has played a useful and constructive role and agreed to support further efforts by the ARF Chair to help ease tensions on the Korean Peninsula. The Ministers welcomed the resumption of high-level inter-Korean talks held in Pyongyang on 28-29 April 2003 and recognized the importance of inter-Korean dialogues and exchange various levels as a channel to pursue peaceful resolution of outstanding security concerns. They welcomed the talks held in Beijing on 23-24 April 2003 among the People's Republic of China, the DPRK and the United States of Americas a good start in the right direction. The Ministers were also of the view that outstanding security and humanitarian issues should be addressed through increased dialogues.</p>

Year	ASEAN Regional Forum Chairman's Statement on North Korea
2004	<p>The Ministers exchanged views on recent developments on the Korean Peninsula . The Ministers encouraged the efforts of concerned parties towards the maintenance of peace and security on the Korean Peninsula and the region by achieving a peaceful solution through dialogue to denuclearization on the Korean Peninsula. The Ministers took note positively that the Third Round of Six Party Talks was recently held in Beijing on 23-26 June 2004, and the participating states agreed to convene the Fourth Six Party Talks in September 2004 in Beijing. The Ministers supported the parties' commitments to the goal of denuclearization of the Korean Peninsula and underlined the need to take first steps towards that goal as soon as possible. The Ministers emphasized the importance of a step-by-step process of "words for words" and "action for action" in search of a peaceful solution to the nuclear issues.</p>
2005	<p>The Ministers exchanged views on recent developments on the Korean Peninsula. The Ministers welcomed the resumption of the Six-Party Talks and expressed the hope that the talks would lead to a substantial progress in finding a peaceful solution acceptable to all concerned parties towards the denuclearization of the Korean Peninsula. They underlined the importance of finding a peaceful solution to the denuclearization on the Korean Peninsula by engaging in dialogue to promote mutual confidence and common approach on the basis of the principle of mutual respect for sovereignty and equality.</p>
2006	<p>The Ministers exchanged views on developments in the Korean Peninsula. The Ministers emphasized that the denuclearization of the Korean Peninsula is essential in maintaining peace and stability in the Asia Pacific region, and voiced support for the peaceful resolution of the nuclear issue through dialogue. The Ministers reaffirmed their support for the Joint Statement on the Denuclearization of the Korean Peninsula unanimously adopted on 19 September 2005 at the Six-Party Talks in Beijing and stressed the importance of the observance and early implementation of the Joint Statement. The Ministers also called upon all parties concerned to resume the Six-Party Talks without preconditions. The Ministers welcomed the informal discussion among some ARF participants on the situation in Northeast Asia in Kuala Lumpur on 28 July 2006 and expressed their hope that this could contribute towards the early resumption of the Six-Party Talks.</p>
2007	<p>The Ministers stressed that the denuclearization of the Korean Peninsula is essential in maintaining the peace and stability of the Asia Pacific region and expressed support for the peaceful resolution of the nuclear issue through dialogue and negotiation. The Ministers welcomed the report of the International Atomic Energy Agency verifying the shutdown of the Yongbyon nuclear facility. The Ministers welcomed the announcement of the Democratic People's Republic of Korea that it shall earnestly implement its commitments to a complete declaration of all nuclear programs and disablement of all nuclear facilities. The Ministers reiterated their support for the Six Party Talks and welcomed the agreements reached at the Heads of Delegation Meeting of the Sixth Round of the Six Party Talks from 18-20 July 2007 in Beijing, China that Parties will earnestly fulfill their commitments in the Joint Statement of 19 September 2005 and the agreement of 13 February 2007 in line with the principle of "action for action". The Ministers welcomed the report of the International Atomic Energy Agency verifying the shutdown of the Yongbyon nuclear facility. The Ministers welcomed the announcement of the Democratic People's Republic of Korea that it shall earnestly implement its commitments to a complete declaration of all nuclear programs and disablement of all nuclear facilities. The Ministers reiterated their support for the Six Party Talks and welcomed the agreements reached at the Heads of Delegation Meeting of the Sixth Round of the Six Party Talks from 18-20 July 2007 in Beijing, China that Parties will earnestly fulfill their commitments in the Joint Statement of 19 September 2005 and the agreement of 13 February 2007 in line with the principle of "action for action".</p>
2008	<p>The Ministers welcomed the convening of the informal meeting of the Foreign Ministers of the Six-Party Talks at the sidelines of the 15th ARF. They reiterated their support for the Six-Party Talks toward the verifiable denuclearization of the Korean Peninsula and the eventual normalisation of the relations between the relevant Six Party members through the full implementation of the Joint Statement of 19 September 2005. They welcomed the submission of the declaration by the DPRK on its nuclear programs and emphasised the importance of the early establishment of an effective verification and monitoring mechanism. They expressed their hope that the recent progress would contribute to an expedited completion of the Second-Phase actions.</p>

Year	ASEAN Regional Forum Chairman's Statement on North Korea
2009	<p>The Ministers of several countries condemned the recent nuclear test and missile launches by the Democratic People's Republic of Korea (DPRK). They strongly urged all member countries of the United Nations to commit themselves to fully implement the provisions of United Nations Security Council Resolution 1874 (2009) according to which these recent activities violated the relevant United Nations Security Council Resolutions. They regarded these activities as adversely affecting peace and stability in the region and beyond as well as the non-proliferation regime. They expressed their strong conviction that peace and stability of each relevant State can and should be safeguarded through political and diplomatic means. In this connection, they supported the dialogue and cooperation among all the concerned parties, including the early resumption of the Six-Party Talks to address the issue of the denuclearisation of the Korean Peninsula and humanitarian concerns of the international community. They also emphasized the importance of the full implementation of the Joint Statement of 19 September 2005. They expected that all concerned parties would exercise self-restraint and refrain from any moves that could aggravate the situation in Northeast Asia. 8. The DPRK did not recognize and totally rejected the UNSC Resolution 1874 which has been adopted at the instigation of the United States. The DPRK briefed the Meeting of the fact that the ongoing aggravated situation on the Korean Peninsula is the product of the hostile policy of the United States against her, and stated that the Six-Party Talks have already come to an end, with the strong emphasis on the unique and specific security environment on the Korean Peninsula which lies in its continued division and presence of US military troops for over half a century to date in South Korea, since this factor is vital to consider and address the question of the Korean Peninsula.</p>
2010	<p>The Ministers expressed deep concern over the sinking of the Republic of Korea's naval ship, the Cheonan, resulted from the attack on 26 March 2010. They extended condolences to the Government of the Republic of Korea for the loss of lives in the incident. They stressed the importance of maintaining peace and stability on the Korean Peninsula and in the region, and called on concerned parties to resolve all disputes by peaceful means. In this connection, they expressed support for the 9 July 2010 UN Security Council Presidential Statement. The Ministers reaffirmed their support for the complete and verifiable denuclearisation of the Korean Peninsula and encouraged the parties to return to the Six Party Talks. They also underscored the importance of the relevant resolutions of the United Nations Security Council.</p>
2011	<p>The Ministers welcomed the meeting between the DPRK and the ROK's Heads of Delegation to the SPT in Bali, Indonesia, and expressed the hope that the inter-Korean Dialogue should be sustained in the future. They emphasized that the inter-Korean Dialogue is a positive step in the efforts to creating an environment conducive toward the resumption of the Six Party Talks. To this end, the Ministers noted that the ARF, where all six members to the Six Party Talks are also participants, could also contribute in forging such conducive atmosphere for the resumption of the Six Party Talks. To this end, the Ministers noted that the ARF, where all six members to the Six Party Talks are also participants, could also contribute in forging such conducive atmosphere for the resumption of the Six Party Talks. The Ministers reaffirmed that the complete, verifiable and irreversible denuclearization of the Korean Peninsula is essential not only for the enduring peace and stability in the region but also the integrity of the global nuclear non-proliferation regime. In this context, they expressed concern about the DPRK's uranium enrichment activities and called on the DPRK to comply fully with its international obligations and commitments, by abandoning all existing nuclear programs. Furthermore, they underlined the importance of addressing humanitarian concerns of the international community, such as the issues of abduction and family reunion. The DPRK responded that their uranium enrichment activities are an exercise of its legitimate right of a sovereign state for peaceful purposes. On the abduction issue, the DPRK responded further that the matter has already been settled.</p>

Year	ASEAN Regional Forum Chairman's Statement on North Korea
2012	<p>The Ministers underlined the importance of peace, security and stability on the Korean Peninsula and urged concerned parties not to take any further provocation actions and to comply with their respective obligations under the relevant UN Security Council Resolutions and their commitment under the 2005 Six-Party Talks Joint Statement. The Ministers further reiterated the call for all parties concerned to explore all possibilities to engage in peaceful dialogue which would lead to the creation of an atmosphere of trust and confidence among the concerned parties. The Ministers noted the successful visit of H.E. HOR Namhong, Deputy Prime Minister, Minister of Foreign Affairs and International Cooperation of Cambodia to Pyongyang, Democratic Republic of Korea on 3-4 June 2012, in his capacity as both the ASEAN Chair and the ARF Chair. The visit has highlighted the enhancing role of the ARF Chair.</p>
2013	<p>The Ministers underlined the importance of peace, security and stability in the Korean Peninsula. Most Ministers encouraged the DPRK to comply fully with its obligations to all relevant UNSC Resolutions and to its commitments under the 19 September 2005 Joint Statement of the Six-Party Talks. To this end, Ministers reiterated their support for all efforts to bring about the denuclearization of the Korean Peninsula in a peaceful manner. Most Ministers reaffirmed their commitments to fully implement all the relevant UNSC Resolutions. The Ministers also emphasized the importance of addressing the issues of humanitarian concerns of the international community. The Ministers further encouraged exploring all possibility of engaging in a peaceful dialogue which would lead to the creation of an atmosphere of trust and confidence among the concerned parties.</p>
2014	<p>The Ministers underlined the importance of peace, security and stability in Korean Peninsula. Most Ministers stressed the need for immediate steps towards the denuclearisation and full compliance with the obligations under all relevant United Nations Security Council (UNSC) resolutions as well as commitments under the 2005 Joint Statement of the Six-Party Talks. The Ministers reaffirmed their support for all efforts to achieve the denuclearisation of the Korea Peninsula in a peaceful manner and encouraged for creating conducive environment for early resumption of the Six-Party Talks. The Ministers welcomed the reunion of separate families between the ROK and DPRK which took place in February 2014 and expected to have regular reunions in the future and emphasised the importance of addressing humanitarian issues. The Ministers welcomed the DPRK to participate in the 17th Asia Games in the Republic of Korea in September 2014. The Ministers also noted the meetings between Japan and DPRK to address pending issues in accordance with the DPRK-Japan Pyongyang Declaration and expected a concrete progress on the matter.</p>

Source: "Statement & Communiques." Asean.org. <http://www.asean.org/news/asean-statement-communiques>

Shifting Opinions: Israel & the International Community

MICHAEL DONOVAN

American and international opinions are shifting away from unconditionally backing Israel. Perception of the conflict is evolving in terms of international legal norms, human rights, and the morality of foreign occupation. This article explores that shift and outlines an opportunity for American policymakers to harness this change of opinion, and perhaps bring Israeli policymakers to the negotiating table.

Shifting trends in American and international opinions pose significant challenges to Israeli policymakers and are of particular relevance to the ongoing Arab-Israeli conflict. There is a sea of change taking place in perceptions of Israeli actions in the decades-long quagmire, exacerbated by the recent 2014 Israel-Gaza conflict. By definition, the responses of democratic governments are influenced to varying degrees by the sentiments of their respective publics. Evidence supports the claim that these publics are increasingly supportive of the Palestinian cause. This is a direct result of the international community embracing a re-framing of the conflict in terms of international legal norms, human rights, and the morality of foreign occupation, versus the previous (mostly American) framing in terms of Israeli security and terrorism threats. As more of the international community accepts this re-framing, there will be a movement for increased condemnation of Israeli actions, resulting in political isolation. These pressures could motivate the political leadership of Israel towards meaningful peace negotiations, and eventually the resolution of the ongoing dispute.

While the United States generally maintains sympathy for Israel over Hamas, there is a widening opinion gap among subgroups, providing cues to the direction of the American public's thought on the conflict.¹ Compared with prior polls, more Americans now find Israel's actions unjustified, and responsible for the continued violence, with increasing segments of the nonwhite population being far more critical of Israel's actions than their white counterparts.² Most telling, though, is the fact that young Americans (18-29) right now oppose Israel's actions at twice the rate of their parents' generation (50+).³ The American partisan perspective is another prism through which to view this issue, with many insiders believing that US-Israeli relations will improve under the recently elected Republican-led Congress, diminishing the potential for American action to coerce Israel. According to polling data from July 2014, 73% of Republicans sympathize with Israel, while only 44% of Democrats feel the same. Since the beginning of the

¹ Jones, Jeffrey. "Americans' Reaction to Middle East Situation Similar to Past: Divided on whether Israel's actions against Hamas justified," Gallup News Service, accessed January 8, 2015, <http://www.gallup.com/poll/174110/americans-reaction-middle-east-situation-similar-past.aspx>.

² Pew Research Center, "Hamas Seen as More to Blame than Israel for Current Violence," July 2014, <http://www.people-press.org/files/2014/07/7-28-14-Israel-Hamas-Release.pdf>.

³ Ibid.

1980s, Republican support for Israel has steadily increased and is currently at an all-time high.⁴ Those same security experts believe the Republican-led Congress will create further impediments to a successful nuclear deal with Iran, a move aligning closer with Israeli interests and counter to the priorities of the Obama Administration.⁵ Thus, the divergence of opinion between American youth and the American government, as influenced by Republican-led Congressional oversight, seems to be widening with recent political developments.

A Shift in U.S. Government Rhetoric

There are many indications that there has been a chilling effect on the relationship between the U.S. government and the government of Israel, regardless of the most recent U.S. political developments following the 2014 midterm elections. Past American administrations have had varied relations with Israel, from Republican President Ronald Reagan's threats to cut off military aid due to Israel's advancement into Lebanon in the 1980's, to President Clinton's repeated efforts at mediating peace via summits convened at the White House, in Oslo, Shepherdstown, Camp David, and Sharm al-Shaykh.⁶ While some argue relations between the Obama White House and Israel are at a historical low, this changing tide arguably has its beginnings in the period following the failure of the 2000 Camp David Summit. The U.S. government took a marked change of rhetorical course, expressing that, for example, occupation and settlement expansion are impediments to the peace process. At present, the U.S. government is more open to criticizing occupation and settlements, and Israeli action in general, while concurrently striving to maintain a strong relationship.⁷ The most talked-about recent evidence of this contentious relationship was reported by Jeffrey Goldberg in an October 28th, 2014 article for the Atlantic in which he quotes a senior administration official as saying, "The thing about Bibi is, he's a chickenshit".⁸

Other developments reflect a continuation of this trend. It should be noted that while Operation Protective Edge, the latest Israeli military engagement against Hamas in the Gaza Strip from July 8th to August 26th, 2014, is the latest flare up of the conflict, many other significant conflagrations had taken place previously, like the three-week assault on Gaza in 2008-09 known as Cast Lead and a series of rockets fired toward Jerusalem during the fall of 2012, followed by a responsive attack on Gaza on November 14th, 2012. Many developments such as these examples contributed to the decision to execute Protective Edge, and the events certainly did not occur in a vacuum unaffected by past flare ups of open hostilities.

⁴ Pew Research Center for the People and the Press, "As Mideast Violence Continues, a Wide Partisan Gap in Israel-Palestinian Sympathies" July 15, 2014. <http://www.people-press.org/2014/07/15/as-mideast-violence-continues-a-wide-partisan-gap-in-israel-palestinian-sympathies/>

⁵ Waddell, Kaveh, *U.S.-Israel Relations Will Improve With a Republican Congress, Security Insiders Say* <http://www.nationaljournal.com/defense/insiders-poll/u-s-israel-relations-will-improve-with-a-republican-congress-security-insiders-say-20141111>

⁶ Montanaro, Domenico, "Obama is not the first U.S. president to be frustrated with Israel", PBS NewsHour. <http://www.pbs.org/newshour/updates/obama-first-u-s-president-frustrated-israel/>

⁷ Parsi, Trita, "Class #4 – Power Politics in the Greater Middle East (Lecture, Georgetown University, Washington, D.C., September 22, 2014).

⁸ Goldberg, Jeffrey, *The Crisis in U.S.-Israel Relations Is Officially Here*. The Atlantic. October 28th, 2014. <http://www.theatlantic.com/international/archive/2014/10/the-crisis-in-us-israel-relations-is-officially-here/382031/>

During Protective Edge, President Obama spoke with Prime Minister Netanyahu via telephone five times. While the transcripts of these phone calls are not public record, “readouts” of the calls were released to members of the media. In every readout, President Obama reaffirms “Israel’s right to defend itself and condemns ‘terrorist groups’”.^{9 10} However, it is important to notice the conspicuous attempt to strike a balance in public signaling between this rhetoric and deep concerns about repercussions on the Palestinian people.

Key language includes “serious concern about the rising number of Palestinian civilian deaths”, “the worsening humanitarian situation in Gaza”, “concern about the risk of further escalation,” “...protect the lives of civilians,” “...serious concern about the growing number of casualties, including increasing Palestinian civilian deaths in Gaza...”^{11 12 13 14 15} In a call on July 27th:

“The President underscored the enduring importance of ensuring Israel’s security, protecting civilians, alleviating Gaza’s humanitarian crisis, and enacting a sustainable ceasefire that both allows Palestinians in Gaza to lead normal lives and addresses Gaza’s long-term development and economic needs, while strengthening the Palestinian Authority.”¹⁶

Later, in a bilateral meeting between President Obama and Prime Minister Netanyahu held at the White House on October 1st, 2014, there were further signals of a tenuous relationship. Again, the President, while standing resolutely with Israel on many issues, publicly addressed the plight of Palestine, so “...that we don’t have the tragedy of Palestinian children being killed as well. And so we’ll discuss extensively both the situation of rebuilding Gaza but also how we can find a more sustainable peace between Israelis and Palestinians.”¹⁷

The personal relationship between President Obama and Prime Minister Netanyahu is fraught with tension and dysfunction. Reports have noted that Netanyahu effectively has “written off” the Obama Administration, and much of the tension surrounds not just the issue of Israeli settlement expansion but also the future of a nuclear Iran, as well as a host of other issues.¹⁸ According to White House officials, Obama was furious following a 2011 meeting in the Oval Office where Netanyahu lectured President Obama on the history of peace talks and warned him

⁹ “Readout of the President’s Call with Prime Minister Netanyahu of Israel,” White House Office of the Press Secretary, July 27, 2014, <http://www.whitehouse.gov/the-press-office/2014/07/27/readout-president-s-call-prime-minister-netanyahu-israel>.

¹⁰ “Readout of the President’s Call with Prime Minister Netanyahu of Israel,” White House Office of the Press Secretary, July 10, 2014, <http://www.whitehouse.gov/the-press-office/2014/07/10/readout-president-s-call-prime-minister-netanyahu-israel>.

¹¹ Ibid.

¹² “Readout of the President’s Call with Prime Minister Netanyahu,” July 10, 2014.

¹³ “Readout of the President’s Call with Prime Minister Netanyahu of Israel,” White House Office of the Press Secretary, August 13, 2014, <http://www.whitehouse.gov/the-press-office/2014/08/13/readout-president-s-call-prime-minister-netanyahu-israel>.

¹⁴ Ibid.

¹⁵ “Readout of the President’s Call with Prime Minister Netanyahu of Israel,” White House Office of the Press Secretary, July 20, 2014, <http://www.whitehouse.gov/the-press-office/2014/07/20/readout-president-s-call-prime-minister-netanyahu-israel>.

¹⁶ “Readout of the President’s Call with Prime Minister Netanyahu,” July 27, 2014.

¹⁷ “Remarks by President Obama and Prime Minister Netanyahu of Israel before Bilateral Meeting,” White House Office of the Press Secretary, October 1, 2014, <http://www.whitehouse.gov/the-press-office/2014/10/01/remarks-president-obama-and-prime-minister-netanyahu-israel-bilateral-me>.

¹⁸ Goldberg, Jeffrey, *The Crisis in U.S.-Israel Relations Is Officially Here*. The Atlantic. October 28th, 2014.

not to fall prey to “illusions”. Additionally, the American posture towards the Arab world is increasingly open and inviting, often for the sake of counterterrorism cooperation, at the consternation of Netanyahu.¹⁹

While not exceptionally provocative, the tenuous relationship between President Obama, Prime Minister Netanyahu, and other representatives of their respective governments, is notable. This rhetoric in public discourse indicates a break from a history of unconditional American support for Israeli actions. There is more evidence that this unconditional support is waning. Other U.S. government officials have been more forthcoming with recent criticism of Israeli military adventurism. Phil Gordon, the White House coordinator for the Middle East, said in early July 2014, “How will [Israel] have peace if it is unwilling to delineate a border, end the occupation, and allow for Palestinian sovereignty, security, and dignity? It cannot maintain military control of another people indefinitely. Doing so is not only wrong but a recipe for resentment and recurring instability.”²⁰

Secretary of State John Kerry has repeatedly been forced to defend himself as an advocate for Israel, as he has been, in his view, slandered by opponents as wavering on Israeli issues.²¹ And yet, his rhetoric is in line with the administration – supporting Israel on one hand, and demanding support for the Palestinian cause as well. “Palestinians need to be able to live with the opportunity to educate their children and move freely and share in the rest of the world, and to lead a life that is different from the one they have long suffered.”²²

One influential organization that has been a significant factor in constraining the options for American policymakers is the American Israel Public Affairs Committee (AIPAC). The organization has long been an important fixture of American politics, possessing the ability to galvanize a vast membership of often deep-pocketed advocates in support of or against various candidates or proposed U.S. legislation, depending upon whether doing so is in Israel’s interest. According to journalist Connie Bruck, there are some significant indications its grip of influence is loosening.²³ Much of the waning strength of the group can be attributed to demographic differences in opinions, with Jewish American youth identifying less and less with the Israeli state and thus, with AIPAC. In the words of former Israeli Prime Minister Shimon Peres, (and more recently, former President of AIPAC): “My impression is that AIPAC is weaker among the younger people. It has a solid majority of people of a certain age, but it’s not the same among younger people.”²⁴ Evidence also suggests this. In a poll conducted in late July 2014 of young Jewish American adults, 64% of whom participated in the Birthright program, which offers a trip to Israel for the purpose of strengthening Jewish identity, “a significant sub-group believed that Israel had gone “too far” in responding to Hamas, while simultaneously believing that Hamas,

¹⁹ Collinson, Stephen, “*The Personal Tension between Obama, Netanyahu*”. CNN. October 30, 2014. <http://www.cnn.com/2014/10/29/politics/obama-netanyahu-relationship/>

²⁰ Bruck, Connie, “*Friends of Israel: Are American Jews Turning Against AIPAC?*,” New Yorker, September 1, 2014, <http://www.newyorker.com/magazine/2014/09/01/friends-israel>.

²¹ “*On Support for Israel*,” U.S. Department of State – Office of the Spokesperson, April 28, 2014, <http://www.state.gov/secretary/remarks/2014/04/225326.htm>.

²² “*Joint Statement on the Humanitarian Ceasefire Announcement in Gaza*,” U.S. Department of State – Office of the Spokesperson, July 31, 2014, <http://www.state.gov/r/pa/prs/ps/2014/07/230067.htm>.

²³ Bruck “*Friends of Israel: Are American Jews Turning Against AIPAC?*,” September 1, 2014,

²⁴ Ibid.

not Israel, was responsible for the conflict.”²⁵ It should be noted that other lobbying groups, such as the Anti-Defamation League, NORPAC, the American-Jewish Committee, and the Conference of Presidents of Major American Jewish Organizations, work in similar fashions to influence elected officials as well as public opinion by punishing criticism of Israel.²⁶ AIPAC, however, looms as one of the top two most influential lobbying groups in Washington, alongside the National Rifle Association.²⁷

The reduced ability of AIPAC to influence American policymakers in the future due to waning membership could permit an opening for an even firmer policy stance from Washington towards Tel Aviv. In the same manner that demographic changes are affecting the efficacy of AIPAC, there is a burgeoning American youth mobilization in support of the Palestinian cause that has significant implications for the future. Again, it appears that the prism through which increasing numbers of Americans view the conflict continues to move closer to the perspective embraced more fervently by the international community – the shift of framing the conflict away from the lens of security and terrorism to a frame of international law and occupation.²⁸ According to a Gallup Poll conducted July 22-24, 2014, 51% of Americans ages 18-29 believe that Israel’s Operation Protective Edge was unjustified, whereas just 25% found it to be justified. The reverse was true for the oldest range polled, with 55% of 65+ year olds believing the Israeli actions were justified, and 31% believing they were unjustified.²⁹ Many observers believe that the largest existential threat to Israel is the Israeli-Palestinian conflict, as the nature of the conflict has now metastasized from land-based to moralistic in nature. It is to this framework that youth-centric movements have attached themselves. A common rallying cry for increased mobilization and activism on the side of the Palestinian cause emphasizes the moral imperative of righting a perceived injustice. In this case, Israel is losing the propaganda war. While not intrinsically dangerous, losing the sympathy of increasingly large sectors of the international community spawns the potential for an increased perception of illegitimacy of the Jewish state. This is where Israeli leadership must be wary of a loss of public support, because it could foment an existential crisis for Israel.

A Shift in the International Community

As previously mentioned, much of the international community, especially Arab states and those with significant Arab minorities, has been more sympathetic to the Palestinian cause than the government of the United States has, and increasingly so. It should be noted that Egypt is an important exception to this phenomenon in the Arab world, where significant American military and economic aid has historically encouraged Egyptian cooperation and security assurance with Israel. However, with the instability and Islamic fundamentalism that struck Cairo in recent

²⁵ Borschel-Dan, Amanda “*Study of young US Jewish adults finds nuanced support for Israel*,” | The Times of Israel, August 29, 2014, <http://www.timesofisrael.com/study-of-young-us-jewish-adults-finds-nuanced-support-for-israel/#ixzz3OI8ryzHj>

²⁶ Mearsheimer, John and Walt, Stephen, “*The Israel Lobby*,” London Review of Books, Vol. 28, No. 6, pp 3- 12 , March 23, 2006, <http://www.lrb.co.uk/v28/n06/john-mearsheimer/the-israel-lobby>.

²⁷ Ibid.

²⁸ Parsi, “*Class #4 – Power Politics in the Greater Middle East*, September 22, 2014.

²⁹ Jones, Jeffrey, “*Middle East Update: American’s Reaction to Middle East Situation*,” Gallup, July 24, 2014, <http://www.gallup.com/poll/174110/americans-reaction-middle-east-situation-similar-past.aspx>

years, Israeli policymakers are undoubtedly on edge regarding their southern border. Recent events and data confirm this trend elsewhere, and have had profound repercussions as governments adjust their official stances to fall closer in line with their publics, often by condemning Israeli actions. International observers stress that some Israeli actions are counter-productive because they polarize the region into ‘moderates’ and ‘extremists,’ and that the Israeli policy of waging war on Hamas while simultaneously pursuing peace talks with Fatah has failed.³⁰

The international community is increasingly supportive of the Palestinian cause partly as a result of the “internationalization” of the conflict by the Palestinian Authority (PA). This goal has been pursued by actions such as PA President Mahmoud Abbas’ signing of the Rome Statute, the founding document of the International Criminal Court (ICC), as well as the PA’s ratification of other international treaties. In particular, the PA has been aggressive in moves for the ICC to open investigations into potential war crimes committed by Israeli citizens during Operation Protective Edge. These actions serve to validate the cause of the PA as a sovereign entity and to amplify their appeal for support to the international community, and thus to structure the argument in international legal norms, human rights, and the morality of foreign occupation. Evidence shows these tactics may be successful in promoting sympathy for the PA. Recent public opinion polls conducted by the Israeli Foreign Ministry in the United Kingdom, Germany, and France show that most respondents “hold Israel and Hamas responsible in equal degree for the latest bout of violence in Gaza,” a marked departure from previous conceptions of Hamas as the sole responsible party.³¹ The efforts at raising the profile of the PA to that of a nation-state have also humanized the conflict for an international audience.

In early November 2014, the government of Sweden became the 135th member of the United Nations to recognize Palestine.³² The United Nations General Assembly approved the recognition of Palestine as a sovereign state in 2012, however, the European Union collectively and most E.U. countries individually have yet to provide official recognition.³³ The international community has coalesced into a bloc demanding more of Israel, as evidenced by the recent launch of a U.N. commission of inquiry into possible human rights violations and war crimes committed during Operation Protective Edge. Navi Pillay, the leading U.N. human rights official, said on July 31st, 2014 that “she believed Israel was deliberately defying international law in its military offensive in Gaza and that world powers should hold it accountable for possible war crimes.”³⁴ This development is a clear indicator of an international change regarding what is considered legitimate action by Israel, focused specifically on the seemingly indiscriminate targeting of Palestinian civilians by Israeli Defense Forces. Technology is also an important facet

³⁰ Bahgat, Gawdat, “*The Gaza War and the Changing Strategic Landscape in the Middle East*,” *Mediterranean Quarterly*, 20, no. 3 (2009): 63-76.

³¹ Eichner, Itamar, “*Poll: Europeans Say Both Israel, Hamas Responsible for Gaza Violence*,” YNet News, October 3, 2014, <http://www.ynetnews.com/articles/0,7340,L-4577373,00.html>.

³² “*Map: The countries that recognize Palestine as a state*,” The Washington Post, November 7, 2014, <http://www.washingtonpost.com/blogs/worldviews/wp/2014/11/07/map-the-countries-that-recognize-palestine-as-a-state/>

³³ “*Sweden to Become First European Country to Recognize ‘Palestine’*,” The Jerusalem Post, Oct 2014, <http://www.jpost.com/Middle-East/Sweden-to-become-first-European-country-to-recognize-Palestine-378002>

³⁴ Nebehay, Stephanie. “*U.N. Names Panel to Investigate War Crimes in Gaza; Israel Slams It*,” Reuters, Aug 11, 2014, <http://www.reuters.com/article/2014/08/11/us-mideast-gaza-un-inquiry-idUSKBN0GB1QR20140811>

contributing significantly to the pace of the change. Due to the proliferation of consumer communication technologies the international community can more easily experience the brutalities of war first-hand. That, coupled with increased media attention and sympathy for the Palestinian cause, has increased the pace with which the international community has been galvanized towards a shifted perspective and embraced the Palestinian cause.

Much of the changing international opinion relates to a perceived disparity in power.³⁵ The relative wealth and immense military capability of the Israeli state dwarfs the meager resources of the Palestinian Authority and, to an even greater degree, those of Hamas in the impoverished and starving Gaza Strip. This furthers the narrative of occupation and incites support in the international community for the underdog, particularly where violations of human rights are suspected. For example, the economic blockade of Gaza has provoked significant international condemnation as it is seen as another disproportionate effort by a vastly superior Israeli state against its weak enemies, with the result of punishing with crippling poverty and dire living conditions both Hamas loyalists and innocent Gazans alike, including women and children.

However, there is a dangerous fallacy in the apparent preponderance of Israeli capability: much economic damage can be done via asymmetric, psychological warfare. Prior to Iron Dome (the American-supplied Israeli missile defense system), the ease with which inexpensive rocket attacks could disrupt the complex interworking of the advanced Israeli economy should not be understated. As a result, there is a paradox created in the minds of Israeli citizens – they are technically more secure while feeling subjectively less safe.³⁶ This has significant implications with regard to changing perceptions within the Jewish State.

There is evidence of shifting perceptions among the Israeli public. Recent polling data from Mitvim, an Israeli foreign policy think tank, indicates that the Israeli public is not satisfied with Israel's global standing. They rank their global standing at 5.1 out of 10 and 45% of respondents believe that Operation Protective Edge damaged that standing.³⁷ When asked if they felt personally more secure due to the operation, 60% said they felt less secure. On August 27th, 2014, Knesset member Danny Danon, the chairman of the Likud central committee, Prime Minister Netanyahu's own party, announced that "the Protective Edge war that began with huge support ended with Israel shamed and confused."³⁸ This internal fracturing of support within the conservative Likud Party is significant in that it is contradictory to the public image and the long tradition of "hasbara", the practice of the Israeli government disseminating positive information regarding the state of Israel. Nimrod Goren, Chairman of Mitvim, further explains "the peace process emerges as a central issue for the Israeli public – as a condition for improving Israel's

³⁵ Parsi, Trita. "Class #4 – Power Politics in the Greater Middle East (Lecture, Georgetown University, Washington, D.C., September 22, 2014).

³⁶ Ibid.

³⁷ Goren, Dr. Nimrod. "2014 Foreign Policy Index." Mitvim - The Israeli Institute for Regional Foreign Policies. 4 Oct 2014, <http://www.mitvim.org.il/en/10-news/199-mitvim-poll-on-israel%E2%80%99s-foreign-policy>

³⁸ Hoffman, Gil. "Polls: Israelis Unhappy with Truce, Feel Less Secure than before Gaza Operation." The Jerusalem Post, 28 Aug 2014. <http://www.jpost.com/Israel-News/Politics-And-Diplomacy/Protective-Edge-began-with-huge-support-ended-with-Israel-shamed-and-confused-says-Likud-MK-372472>

foreign relations and as a key foreign policy priority on its own.”³⁹ Israeli disillusionment with the ongoing conflict is a crucial factor in driving Israeli policymakers to the negotiating table. Following the Second Intifada, concluding in 2005, many Israelis lost what modicum of hope for peace had remained prior to the outbreak of continued violence. As a result, in the Israeli Defense Forces, a new generation of young soldiers believes this is the permanent end-state and that there is no hope for peace.⁴⁰ A perceptible expression of this despondency has been the belittlement of the Israeli concept of Beilinizism: the perspective that peace is even reachable.⁴¹

What Washington Should Do

The U.S. government should seize the opportunity for peace offered by Israeli international isolation. The possibility for a negotiated peace would be greatly improved by convincing the Israeli people and government that increased international isolation is a worse outcome than negotiation. The United States should pursue this through continued and strident strategic communication efforts and signaling as well as via back-channel diplomatic efforts. It should be noted that the strong foundation of the Israeli-American relationship should not be weakened, although the relationship has been fraught with mistrust and misperception since the creation of the Jewish state in 1948, because Israel is an important strategic ally in the region. However, coercive diplomatic tactics are warranted insofar as they induce a result that ultimately is in the best interest of the belligerents, the region, and the international community. Clearly, there is a narrow line to follow between the conflicting tensions of both maintaining a cordial relationship while simultaneously seeking to force a modified behavior. To maintain this balance, the U.S. government, primarily through the two main individual actors, the President and the Secretary of State, should publicly maintain the language of continued but conditional support for Israel. However, privately, U.S. government officials should increase rhetorical and material support for the Palestinian cause, as well as further overtures to Iran and to the Arab Middle East. These gestures will spark significant fears of abandonment in the Israeli government, and will serve as a signal of American reproach for their actions.⁴² One recent example is the Arab-American anti-ISIS coalition, which undoubtedly evoked consternation in Tel Aviv, as it represents a consolidation of U.S. relations with the Arab states at the exclusion of Israel. The private Palestinian overtures would undoubtedly become public over time and contribute to signaling to the Israeli people the American loss of support.

Additionally, the U.S. government should seek to influence the domestic polity of Israel directly by encouraging increased political participation among Israeli youth, who tend to be less conservative than older Israelis, as well as the Arab-Israeli population. During the 2013 parliamentary elections, Arab-Israeli voter turnout increased to 56%, from 53% in 2009

³⁹ Goren, Dr. Nimrod. "2014 Foreign Policy Index." Mitvim - The Israeli Institute for Regional Foreign Policies. 4 Oct 2014, <http://www.mitvim.org.il/en/10-news/199-mitvim-poll-on-israel%E2%80%99s-foreign-policy>

⁴⁰ Pressman, Jeremy. "The Second Intifada: Background and Causes of the Israeli-Palestinian Conflict." *The Journal of Conflict Studies*. (Fall 2003): 114-141. <http://journals.hil.unb.ca/index.php/jcs/article/view/220/378>.

⁴¹ Parsi, Trita. *Power Politics in the Greater Middle East*.

⁴² Ibid.

elections.⁴³ If these sectors of the electorate were to continue to increase in turnout, promoted by State Department-supported public relations campaigns, then a small erosion of the power held by the conservative Likud party would take place. This could provide a more diverse coalition-building environment, bringing the government closer to the center of the political spectrum, as well as help break up the stalemate in Israeli politics that has contributed to calcifying the conservative bloc.

Should current trends endure and international and domestic public opinion continue to rebuke and isolate Israel as a pariah state for its actions, then American leadership will have the domestic political cover necessary to demand action of Israel, due to the waning influence of Israeli lobbying organizations. At first, the isolation and fear of abandonment could embolden Israeli leaders to increase military offensives. This potential provocation by Israel to flout international opinion would lead to further political isolation and increased rhetorical and diplomatic support for the Palestinian Authority.

As political isolation increases, the Israeli business community and trade partners could become concerned over the potential for a contracted export market for Israeli goods, as an international backlash could endanger the desire for foreign firms and states to engage in trade with Israeli interests. The business sector could then exert pressure on the political establishment to return to the most favorable conditions for business. In this case, that means an appeasement of the international community, and coerces the Israeli state to value economic security over non-negotiation. In short, it would increase the cost of non-negotiation.

Exploiting vulnerabilities in the strategic culture of the Israeli military and political establishment could induce Israel to modify its behavior and come to the negotiating table. Israeli military institutions, with compulsory military service and what some commenters describe as a “Bloated War Machine”, relies heavily upon the patronage of the American taxpayer.⁴⁴ While Israel has been the largest annual recipient of direct American economic and military aid for the last four decades, the United States failed to condemn Israel even after the 2006 Qana airstrike massacre of Lebanese civilian children, despite unified international outrage. This and other assaults are a result of the so-called Dahiya doctrine, which targets civilian infrastructure as a means of deterrence against militant use of that infrastructure.^{45 46} The mentality behind much of the relatively massive military establishment is an antiquated strategy that requires that Israel possess the capability to combat all potential coalitions of its regional foes in conventional warfare at the same time. This pillar of the state defense has proven to be crucial to Israeli confidence in its regional security, bolstered by aforementioned security assurances from Egypt. Thus, the dependency of the Israeli state upon this annual military aid presents a strategic potential for the United States. An increased political estrangement between

⁴³ Solomon, Ariel Ben, “Arab Israeli voters 56% turnout defies expectations,” The Jerusalem Post, January 25, 2013, <http://www.jpost.com/Diplomacy-and-Politics/Arab-Israeli-voters-56-percent-turnout-defies-expectations>

⁴⁴ Blau, Uri, “Israel’s Bloated War Machine”, The Nation, September 25, 2014, <http://www.thenation.com/article/181765/israels-bloated-war-machine#>.

⁴⁵ Mearsheimer, John and Walt, Stephen, “The Israel Lobby,” London Review of Books, Vol. 28, No. 6, pp 3- 12, March 23, 2006, <http://www.lrb.co.uk/v28/n06/john-mearsheimer/the-israel-lobby>.

⁴⁶ “Statement on Three-Part Comprehensive Settlement,” Secretary Condoleezza Rice, July 31, 2006, <http://www.state.gov/r/pa/ei/bgn/3581.htm>; See also “U.S. Relations With Israel,” Bureau of Near Eastern Affairs, March 10, 2014, <http://www.state.gov/r/pa/ei/bgn/3581.htm>

Washington and Tel Aviv could insert doubt into the minds of Israeli policymakers that the military aid would continue into perpetuity. This doubt could be fomented in various ways and is especially salient at present time considering the overall “belt tightening” that has been forced upon the Pentagon, due to sequestration and other budget constraints. This presents an opportunity for American policymakers to bring Israel to the negotiating table.

Over time, international public and government opinions may plummet to such a low level that there could be significant internal Israeli demand for a change of policy in order to ameliorate the situation. We have already seen evidence of this internal discontent in the polity regarding Israeli global standing.⁴⁷ The international community will then have the opening to persuade Israeli leaders to meaningfully come to the negotiation table with concessions that could lead to a settlement of the conflict.

What Israel Should Do

The major determining factor that drives Israeli decision-making is internal domestic politics. According to polling data from Mitvim, 67% of Israelis agree with Henry Kissinger’s famous quote that “Israel has no foreign policy, only domestic policy”.⁴⁸ By the same token, leadership personalities can affect domestic politics, as well. There has been a few times in Israel’s history, in fact, when the action of a strong leader has understood that the costs of non-negotiation outweigh those of negotiation and has dramatically influenced public opinion.⁴⁹ Menachem Begin’s decision to withdraw from the Sinai Desert following the Camp David Accords and Anwar Sadat’s visit to Jerusalem immediately improved his image as well as the domestic hope for peace.⁵⁰ Yitzhak Rabin’s public recognition of Yasir Arafat and the Palestine Liberation Organization as sole representatives of the Palestinian people in 1993 similarly spawned a swell in public support for peace negotiations.⁵¹

More consistently, however, it is domestic politics and the proportional representation electoral system that drive Israeli foreign policy towards non-negotiation. Prime Minister Netanyahu in particular is focused primarily on securing his domestic political base above all else. The proportional representation system forces the need to govern through coalition cabinets, which has often meant governance is effectively an all-consuming exercise in coalition management. As a result, political considerations often supersede the strategic interests of the state, resulting in reactive and ad hoc policymaking. For the sake of coalition cohesion, marginal parties can make excessive demands of powerful ones, exaggerating and skewing their role.^{52 53} For example, the issue of occupation has bitterly divided the Israeli public. Nearly half of Israelis

⁴⁷ Goren, Dr. Nimrod, *2014 Foreign Policy Index*.

⁴⁸ Ibid.

⁴⁹ Meir, Yehuda Ben and Bagno-Moldavsky, Olena, *The Voice Of the People: Israeli Public Opinion on National Security 2012*, Memorandum No. 126 (Tel Aviv: Institute for National Security Studies, 2013), p 16.

⁵⁰ Ibid.

⁵¹ Ibid. See also Haberman, Clyde, “Mideast Accord: The Overview; P.L.O. and Israel Accept Each Other After 3 Decades of Relentless Strife,” *The New York Times*, September 10, 1993, <http://www.nytimes.com/1993/09/10/world/mideast-accord-overview-plo-israel-accept-each-other-after-3-decades-relentless.html>.

⁵² Freilich, Charles. “National Security Decision-Making in Israel: Processes, Pathologies, and Strengths.” *Middle East Journal*, 60, no. 4 (2006): 635-663. http://belfercenter.ksg.harvard.edu/publication/815/national_security_decisionmaking_in_israel.html

⁵³ Parsi, Trita. *Power Politics in the Greater Middle East*.

polled in 2012 blamed the stalled peace process entirely on one side or the other – either “the recalcitrance of the Palestinian authority” or “the lack of flexibility of the Israeli government.”⁵⁴ Israeli citizens are deeply and emotionally entrenched in their individual positions on the conflict, and not at all united in those positions – a majority supports the establishment of a Palestinian state, yet 45% believe the Arabs’ ultimate goal is to destroy Israel and kill the Jewish population, and 79% believe the terrorism they fear cannot be solved by military means.⁵⁵ As a result of this divide, there has been a lack of a clear political mandate. This has strengthened several ultra-Orthodox parties, effectively turning them into the power brokers of Israel’s coalition system.⁵⁶ This results in significantly raising the profiles of what otherwise would be marginal players in the system.

Considering the structural framework in which Israeli domestic and foreign policies intertwine, the Israeli government is at a difficult intersection. Due to the remarkable efficacy of the Iron Dome program, Israelis suffer from a paralysis of strength, in that there is a cognitive dissonance between the relative stability of daily life and the violent Arab-Israeli conflict they know is occurring nearby.⁵⁷ This protection permits many to rally in support of conservatism and military adventurism, fomenting extremism and revenge tactics without bearing the costs of the conflict themselves. Again, this phenomenon contributes to significantly raising the profile of fringe extremes in the political process.

The prominence of domestic politics means that domestic costs for non-negotiation are nominal. This creates an incentive structure skewed towards non-negotiation, let alone concession or conciliatory actions towards real peace.⁵⁸ As Henry Kissinger once put it, Israel doesn’t want to negotiate when they are weak so that they don’t negotiate from a weak stance, and when they are strong, why negotiate?⁵⁹ In order to bring about meaningful negotiation, at least from the Israeli side, the costs of non-negotiation must be raised.

To do this, policymakers must identify strategic weaknesses. The Israeli leadership and society at large are very sensitive to changes in international perceptions, especially American opinion. The “fear of abandonment” is a powerful motivator that has the potential to induce a modification of behaviors.⁶⁰ Additionally, it has been a keystone goal of Israel and her advocates since the creation of the Jewish state to firmly establish Israel’s legitimacy in the community of nations.⁶¹ These are all indicators that such a course of action could be successful. In the best case, as has happened in the past, a very strong and persuasive Prime Minister could appeal to the importance of international opinion, the historic implications of negotiation and the high international cost of non-negotiation. Therefore, the Israeli public must demand more of their

⁵⁴ Meir and Bagno-Moldavsky, p 22.

⁵⁵ Ibid pp. 74, 78.

⁵⁶ Krebs, Ron. “Israel’s Bunker Mentality: How the Occupation Is Destroying the Nation.” *Foreign Affairs*. 90, no. 6 (Nov-Dec 2011): 10-18. <http://www.foreignaffairs.com/articles/136593/ronald-r-krebs/israels-bunker-mentality>

⁵⁷ Ibid.

⁵⁸ Freilich, Charles. “National Security Decision-Making in Israel: Processes, Pathologies, and Strengths.” *Middle East Journal*. 60, no. 4 (2006): 635-663. http://belfercenter.ksg.harvard.edu/publication/815/national_security_decisionmaking_in_israel.html

⁵⁹ Parsi, Trita. *Power Politics in the Greater Middle East*.

⁶⁰ Ibid.

⁶¹ Dershowitz, Alan. “Countering Challenges to Israel’s Legitimacy.” *Jerusalem Center for Public Affairs*. (2011): <http://www.jcpa.org/text/israel-rights/kiyum-dershowitz.pdf>.

leadership and seek transformative representation in the Knesset and local governments that take seriously the implications of widespread international isolation. By rebuking divisive political tactics as counter-productive and harmful to the long-term vitality of the Israeli state, Israeli citizens can alter the strategic calculus of policymakers. Ultimately, Israelis must seek to rise above politics as usual, united by a common goal of retaining a place as a respected and legitimate member of the international community.

Every proposal for policy change results in counter-arguments, and this is no different. For one, much of the rhetoric emanating from the U.S. government that could be perceived as provocative towards Israel could in fact be a concerted attempt to hedge. This tactic could be meant to cement the United States' role as an impartial mediator in the conflict. Although the seemingly provocative language could be an effort at maintaining the status quo, the potential positives remain for a policy of increased pressure. The policy proscription detailed here aims to continue, extenuate, and extend the provocative rhetoric in order to isolate Israeli leadership, as a means to coerce them into negotiation.

Additionally, the relationship between the U.S. government and the Israeli government, as well as between individual leaders and actors, is most likely rife with misperception, especially to outside observers. As Charles Duelfer and Stephen Dyson note, misperception is the result of both situational and individual causes, and in this environment, both undoubtedly become manifest and will understate, exaggerate, and conflate the intended signaling conveyed in strategic communication.⁶² Therefore, it is impossible to predict that the Israeli government would perceive international isolation in the manner described, let alone react in the proscribed manner. It is equally possible that increased isolation could drive even more fervor for political conservatism and extremism in Israel and galvanize the blocs against a negotiated settlement. The premise of this argument is based on an assumption that the Israeli desire to be a legitimate and respected member of the international community trumps impediments to a negotiated settlement. This itself could be a miscue as a result of misperception. However, it has been made clear through tense exchanges that the Obama-Netanyahu relationship, and the U.S.-Israeli relationship, is rife with animosity. These exchanges leave little room for misperception, and reflect strong policy objections and personal enmity.

Another counterpoint is that there is, in fact, a chilling effect on U.S.-Israeli relations, but it is due to a change in U.S. and Western strategic concerns in the region that are often at conflict with Israeli perspectives, such as the spreading of ISIS, the deadly conflict in Syria, and the nuclear showdown in Iran. Because so many important developments have manifested in the region in recent years, U.S. and Western policymakers could be rethinking the strategic price of supporting Israel, as doing so represents a major vulnerability in the region and with international partners. For example, the American involvement in the Arab-Israeli issue is undoubtedly serving as a recruiting tool for organizations like ISIS. As well, American unconditional support for Israel complicates burgeoning relations with the Arab world, and those relationships contribute to isolating Iran. This argument is valid and is not necessarily incongruous with the argument of this paper. While nation-state actors may very well re-evaluate

⁶² Duelfer, Charles A. "Chronic Misperception and International Conflict: The U.S.-Iraq Experience." 36, no. 1 (2011): 73-100. <http://belfercenter.ksg.harvard.edu/publication/21173/>.

their positions with Israel due to the pressing and dynamic strategic interests in the region, public opinions are re-evaluating their positions based on perceived violations of a nearly universal conception of human rights and state sovereignty. However, most importantly, both the strategic interests of the state and what is politically popular, feasible, or administrable are crucial to the decision-making process for policymakers.

This work is not intended to assign blame to any specific party in the Arab-Israeli conflict, and it is not intended to be especially harsh to the Israeli side, knowing that both belligerents and their actions are crucial to the success of a negotiated settlement. Nor does this work examine the potential outcomes of continued peace negotiations once they continue in earnest. It does not elucidate the strategic and regional benefits emerging from a peace settlement, for Israel, the Palestinian Authority, outside actors, the region, or the international community. Nor does it discuss the potential drawbacks or pitfalls of efforts to induce Palestinian negotiation or the specific terms of a negotiation. This work is intended to expound upon a strategy to earnestly bring one actor (Israel) to the negotiating table.

Conclusion

There is ample evidence to support the claim that American and international opinions are shifting away from an unconditional backing of Israeli action. Recent events have accelerated these shifts, including the latest 50-day engagement over the Gaza Strip in 2014, the reduction in the political clout of the pro-Israel lobby, and the proliferation of consumer technology that more easily captures and presents to global audiences the savagery of war. The international groundswell of support for the Palestinian cause is a result of an increasing portion of the international community embracing a re-framing of the conflict in terms of international legal norms, human rights, and the morality of foreign occupation, partly due to the “internationalization” of the conflict by the Palestinian Authority. As more of the international community accepts this re-framing of the conflict, the condemnation of Israeli actions and further political isolation will increase. These pressures could mount on the Israeli political leadership and motivate a meaningful change of policy towards negotiation. American policymakers can harness this changing opinion to promote a peace settlement by demanding concessions of the belligerents and even leading an international campaign of isolation. Due to factors such as the internal dynamics of the Israeli polity and the desire for improved global standing and legitimacy, diplomatic isolation and the potential of becoming an international pariah could induce Israeli leadership to earnestly seek a resolution of hostilities. This could be the catalyst ultimately leading to reinvigorated peace negotiations, with the potential for an eventual resolution.

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Technology Domain Awareness: Building the Defense Innovation Base

ADAM JAY HARRISON, JAWAD RACHAMI, & CHRISTOPHER ZEMBER

This article outlines the innovation imperative facing the U.S. Department of Defense and details current and future plans pursued by the DOD Information Analysis Centers to develop a defense innovation operating system that sustains the United States' military-technology edge in the face of persistent operational, technological, and fiscal volatility and uncertainty.

Opinions expressed in this paper belong solely to the authors and do not reflect official positions of the Department of Defense or U.S. Government.

Prussian Field Marshall and military philosopher, Helmuth von Moltke famously said, “No plan of operations extends with certainty beyond the first encounter with the enemy’s main strength.”¹ This maxim is even truer today than it was in von Moltke’s day, but what he could not have appreciated from his historical vantage is the awesome effects that ubiquitous networks and connectivity would have on amplifying the reactivity of future battlefields. Today, the Department of Defense (DOD) must contend not only with the friction and fog of tactical engagements but also with the complexities of a threat environment that is in a continuous state of operational and technological flux. Against this backdrop, innovation has come to play an increasingly decisive role.

Technology-based innovation looks different today than it did in the past, and it requires new tools and new approaches. The United States derived its traditional military-technology advantage from “going long” on a small number of game changing technologies with expected operational half-lives measured in years to decades. Under the old rules of innovation, which enabled DOD to build a decisive high tech edge after World War II, technological competitiveness was generally linked to large capital investments, lengthy development cycles, and strategic forecasting. Today, these same rules no longer apply.

DOD has become a relatively minor player in a global research and development marketplace that is increasingly dominated by commercial concerns.² In this context, it can no longer rely on dictating or even shaping the technology environment. At the same time, the globalization and democratization of advanced technology has precipitated a new competitive

¹ Daniel J. Hughes, ed., *Moltke on the Art of War: Selected Writings* (New York: Presidio Press, 1993), 45-47.

² Battelle, *2014 Global R&D Funding Forecast*, December 2013, http://www.battelle.org/docs/tpp/2014_global_rd_funding_forecast.pdf (accessed 2 July 2014).

high tech landscape characterized by what technology writer Gil Press describes as Amazon-style innovation: at scale, high-velocity, and low-cost.³

Technology proliferation and rapid development cycles driven by market forces are also increasing opportunities for technology-based disruption with national security implications. As the commercial marketplace dedicates more and more resources to system-level innovations in areas once exclusive to the advanced militaries of the world like space, robotics, sensors and communications, computation, and energy, “fast followers” (i.e. military organizations oriented towards a commercial-first mindset) earn the opportunity to capitalize on superior capabilities more quickly and at a comparatively lower cost.⁴ In contrast to traditional notions of defense innovation based on organic capability development, competing in this new environment requires a continuous process of capability reinvention that rapidly discovers and exploits technology opportunities ahead of the threat.

Recognizing the foundational role that technology has played for the U.S. military since World War II, the Office of the Secretary of Defense is actively pursuing a number of related efforts intended to preserve and extend DOD’s military-technology edge. Bracketed by an overarching Defense Innovation Initiative announced by Secretary of Defense Chuck Hagel on November 15, 2014 at the Reagan National Defense Forum, these efforts reflect some awareness that breakthrough technologies are no longer the exclusive domain of the traditional military-industrial base.⁵ What is somewhat less clear is whether this awareness extends to understanding that DOD’s business practices must also evolve for it to effectively compete in the global technology commons. In this environment, a more nuanced strategy is called for – one that explicitly positions the Department of Defense as a lead consumer, and not just a lead producer, of technologies.

Re-Thinking Defense Innovation

Innovation, as used herein, refers to the delivery of operational capability in a new way (either through new technology or new use of existing technology) that provides advantages over the status quo (including enhanced capability or reduced cost). It stems from the use of timely, relevant, and accurate information to create actionable insights, that is, the synchronization of real-world opportunities and challenges with the art of the possible. Within this context, information asymmetries lead to enhanced innovation velocity (i.e., time to market) and

³ Gil Press, “Top 10 Technology Predictions for 2015,” *Forbes*, 2 December 2014, http://www.forbes.com/sites/gilpress/2014/12/02/idc-top-10-technology-predictions-for-2015/?linkId=10950225&utm_channel=Technology (accessed 1 June 2014).

⁴ Adam Jay Harrison, “Offset 3.0, or: How I Learned to Stop Worrying and Love Commercial Technology,” *War on the Rocks*, 17 November 2014, <http://warontherocks.com/2014/11/offset-3-0-or-how-i-learned-to-stop-worrying-and-love-commercial-technology/> (accessed 29 December 2014).

⁵ Department of Defense, “Hagel Announces New Defense Innovation, Reform Efforts,” 15 November 2014, <http://www.defense.gov/news/newsarticle.aspx?id=123651> (accessed 30 December 2014).

innovation efficiency (i.e., cost to market), principles around which companies in the commercial high tech economy seek to optimize their performance.^{6, 7, 8}

Much has been made of the relative advantages of speed, agility, and cost that the commercial technology marketplace enjoys over legacy approaches to defense capability development. To the extent that rapid innovation spawned by the proliferation of new technologies is underwriting new threats such as cyber warfare and Improvised Explosive Devices (IEDs), military service and operational stakeholders have begun to weigh in on the need for the DOD to better integrate commercial technology products and practices. In 2009, U.S. Army Vice Chief of Staff General Peter Chiarelli rebuked the defense acquisition system in *National Defense Magazine* for “depriving soldiers of the latest technology and making it more difficult for them to do their jobs.”⁹ Fueled by fiscal austerity in recent budget cycles, calls for acquisition reform that promulgate perceived commercial market efficiencies have only accelerated with many stakeholders advocating for the institutionalization of a more innovation-focused, agile, and responsive acquisition enterprise.^{10,11}

Stakeholder antagonism towards the legacy defense acquisition system combined with shifting geostrategic priorities, hybrid threats, declining operational tempo, and falling defense budgets have given acquisition reform a renewed emphasis on Capitol Hill, among the defense policy think tanks, and inside the Obama administration. As of this writing, ongoing initiatives led by the Senate and House Armed Services Committees, the National Defense Industrial Association, the Center for Strategic and International Studies, and the Brookings Institution are all studying various aspects of defense acquisition reform ranging from the health of the defense industrial base to acquisition policy.^{12, 13, 14} Meanwhile, Under Secretary of Defense for Acquisition, Technology, and Logistics Frank Kendall is focusing the third installment of his Better Buying Power initiative on “innovation and how we move things more rapidly and more

⁶ Adam Jay Harrison, “The Defense Innovation Imperative,” *Small Wars Journal*, 12 March 2014, <http://smallwarsjournal.com/jrnl/art/the-defense-innovation-imperative> (accessed 30 June 2014).

⁷ Kent Beck et al., *Manifesto for Agile Software Development*, Agile Alliance, <http://www.agilealliance.org/the-alliance/the-agile-manifesto/> (accessed 30 June 2014).

⁸ Dave Kelley and Tom Kelley, *Creative Confidence* (New York: Crown Business, 2013) 19-20.

⁹ Sandra I. Erwin, “Army’s Vice Chief: ‘We Have to Speed Up How We Buy Things’,” *National Defense Magazine*, October 2009, <http://www.nationaldefensemagazine.org/archive/2009/October/Pages/Army’sViceChief‘WeHavetoSpeedUpHowWeProcureThings’.aspx> (accessed 30 June 2014).

¹⁰ Lourdes Duvall, “Be Quick, Be Usable, Be on Time: Lessons in Agile Delivery of Defense Analytic Tools,” *Foreign Policy at Brookings*, 6 June 2012, http://www.brookings.edu/~media/research/files/papers/2012/6/06%20defense%20practices%20duvall/06_defense_practices_duvall.pdf (accessed 30 June 2014).

¹¹ General David H. Petraeus, interview by Frank Anderson, “Adaptive, Responsive, and Speedy Acquisitions,” *Defense AT&L Journal*, January-February 2010, http://www.dau.mil/pubscats/ATL%20Docs/Jan-Feb/petraeus_jan-feb10.pdf (accessed 30 June 2014).

¹² Carl Levin, et al. to National Defense Industry Association, 31 March 2014. http://www.ndia.org/Advocacy/LegislativeandFederalIssuesUpdate/Documents/SASC-HASC_Letter_to_NDIA_3.31.14.pdf (accessed 2 July 2014).

¹³ National Defense Industry Association, “NDIA Chairman Arnold Punaro Announces NDIA Lead for Acquisition Reform Initiative,” 9 April 2014, <http://www.prweb.com/releases/2014/04/prweb11736244.htm> (access 2 July 2014).

¹⁴ Center for Strategic and International Studies, “The Federated Defense Project Launch,” 16 December 2013, <https://csis.org/event/federated-defense-project-launch> (accessed 2 July 2014).

effectively into the hands of warfighters.”¹⁵ More recently, two pilot projects associated with Secretary Hagel’s Defense Innovation Initiative, the Long Range Research and Development Planning Program and Deputy Secretary of Defense Bob Work’s Offset 3.0 campaign, are exploring new approaches to align commercial technologies with defense needs. Collectively, these efforts point to a widening recognition among defense stakeholders that achieving a sustainable military-technology edge in the current environment requires a departure from the status quo.

The convergence of the innovation imperative, with its incumbent demands for speed, flexibility, and efficiency, and the on-going acquisition reform conversation could lead critics to frame the debate in mutually exclusive terms: either commercial-style acquisition or legacy defense acquisition.^{16, 17} This is a false dichotomy. To be sure, the rapid pace of technological change set by the commercial marketplace is underwriting new threats and new opportunities, and the militaries that capitalize on this dynamic will earn a major competitive advantage through enhanced innovation velocity and innovation efficiency. Within the context of defense capability development, however, commercial-style innovation comes with its own set of limitations and should be framed as a complementary tool as opposed to a wholesale alternative to the standing defense acquisition enterprise. The question then becomes how can DOD build an extended defense-focused innovation base that informs the existing defense acquisition enterprise by broadly aligning innovative commercial and consumer-facing products that are susceptible to defense applications with opportunities across the entire defense acquisition spectrum? Furthermore, how can DOD more efficiently and comprehensively synthesize information concerning emerging military operational needs, the commercial (non-defense) tech base, legacy and emerging defense capabilities, and technology experimentation and lessons learned to systematically create the necessary conditions for continuous defense product innovation?

It is with these considerations in mind that the DOD Information Analysis Centers (IACs) have embarked on an initiative called Technology Domain Awareness to build the information backbone of an extended defense innovation base that augments the legacy defense acquisition enterprise. TDA is the effective understanding of the technology landscape as it relates to current and future defense capability needs.¹⁸ It seeks to connect and incentivize stakeholders inside government and the military with their counterparts in academia and industry in order to create a strategic context for innovation and technology decision-making that incorporates (a) lessons learned from programs and operational engagements, (b) warfighter insights into problem sets at the tactical edge, and (c) technology marketplace awareness, including traditional defense and emerging commercial markets.

¹⁵ Frank Kendall, interviewed by Jared Serbu, “DOD plots third chapter in Better Buying Power initiative,” Federal News Radio, 9 April 2014, <http://www.federalnewsradio.com/394/3599360/DOD-plots-third-chapter-in-Better-Buying-Power-initiative-> (accessed 2 July 2014).

¹⁶ Harrison, “The Defense Innovation Imperative.”

¹⁷ Bill Greenwalt, “Build Fast, Effective Acquisition: Avoid the System We’ve Got,” *Breaking Defense*, 25 April 2014, http://breakingdefense.com/2014/04/build-fast-effective-acquisition-avoid-the-system-weve-got_ (accessed 2 July 2014).

¹⁸ DOD IACs Online, “Technology Domain Awareness,” <http://iac.dtic.mil/tda.html> (accessed 2 July 2014).

The Defense Innovation Base

Throughout the Cold War, DOD was in the vanguard of global applied technology development. The Soviet Union and its satellites maintained a two to five times numerical superiority over the U.S. and NATO in virtually every category of conventional forces, an asymmetry that the U.S. countered through qualitative improvements to conventional and strategic weapons systems.^{19, 20} Throughout World War II and in the early days of the Cold War, the majority of defense equipment was developed and produced by commercial companies like General Motors and General Electric.²¹ However, the advanced technology strategy employed by DOD to counter Soviet military mass created demand for more exotic, defense-specific capabilities, which in turn led to the emergence of a dedicated defense industrial base – a group of predominantly federally-funded companies, laboratories, and non-profits that supply products and services for the U.S. armed forces.

Given the existential demands of national defense during the Cold War and the associated need to ensure a reliable supply of materiel, the defense market quickly evolved towards autarkic self-sufficiency. Because U.S. federal R&D spending, of which defense spending was the primary component, constituted the majority of global R&D expenditures through the early 1980's, DOD could afford to maintain a “build first” development model centered on a defense-specific industrial base and effectively ignore commercial R&D outputs.²²

Self-selection was another important factor shaping the emergence of the defense industrial base. DOD's demand-side monopoly (i.e. where a single consumer governs the market) forced firms to adhere to a strict set of behaviors in order to participate in the defense marketplace. To the extent that these behaviors were largely irrelevant to potentially more lucrative commercial opportunities and constituted a significant overhead burden, virtually all commercially oriented firms supplying DOD opted out of the defense sector in the years following World War II. None of the top ten defense suppliers during World War II – many of which continue to be notable commercial and consumer brands today – are currently among the leading defense suppliers.²³ The self-selection process resulted in a defense industrial base optimized for the long-term strategic planning model employed by DOD – a model based on mirroring a conventional Soviet threat and reliably delivering innovations to counter that threat at scale – but largely divorced from the commercial R&D arena.

Viewed from the perspective of systems theory, where resilience to disruption and performance efficiency are in a constant state of tension, the military-industrial complex that

¹⁹ Richard A. Bitzinger, *Assessing the Conventional Balance in Europe: 1945-1975*, (May 1989), Rand Note. Rand Corp, <http://www.rand.org/content/dam/rand/pubs/notes/2007/N2859.pdf> (accessed 2 July 2014).

²⁰ Department of Numbers, “R&D Spending by the Federal Government,” 2 January 2012, <http://www.deptofnumbers.com/blog/2012/01/rd-spending-by-federal-gov/> (accessed 2 July 2014).

²¹ Jacques S. Gansler, *Democracy's Arsenal: Creating a 21st Century Defense Industry* (Boston: MIT Press, 2011).

²² American Association for the Advancement of Science, “Guide to R&D Funding Data –Historical Data,” May 2014 <http://www.aaas.org/page/historical-trends-federal-rd> (accessed 2 July 2014).

²³ Gansler, *Democracy's Arsenal: Creating a 21st Century Defense Industry*.

emerged in the Cold War was optimized for efficiency and reliability.²⁴ During this period, DOD evolved detailed forecasting and planning models to reduce the likelihood of unanticipated disruption. Such an approach is valid only so long as the motives and capabilities of the threat can be anticipated with a reasonable degree of accuracy and in an environment where key externalities, like the technology landscape, can be shaped through capital outlays and regulatory controls. In the two decades since the end of the Cold War, however, much has changed. Today, the U.S. maintains overwhelming conventional military superiority, a fact that in all likelihood has contributed to the destabilization of the security environment by forcing would-be peer competitors like China, rogue regimes, and non-state entities alike to seek out and exploit asymmetric strategies such as Anti-Access/Area Denial (A2/AD) and cyber warfare.²⁵

At the same time, an explosion of global public and private R&D investment has dramatically outstripped U.S. federal R&D spending and led to the proliferation of increasingly sophisticated component, design, prototyping, and manufacturing technologies – enabling a new generation of innovators and threats that learn in rapid, iterative cycles.²⁶ Increasingly, the commercial market dynamics contributing to this trend are producing system-level technologies equivalent or superior to comparable military systems. Take Schaft, the Japanese start-up recently acquired by Google that competed in and won the 2013 DARPA Robotics Challenge, beating a number of well funded DOD technologies in the process. Another striking example is D-Wave Systems, a Canadian start-up spun out of the University of British Columbia responsible for developing the world's first quantum computer.²⁷ In short, the steady state threat and technology environment around which the defense acquisition system and the defense industrial complex emerged have been replaced by an uncertain, rapidly evolving world subject to disruptions that cannot be predicted or planned for with a high level of certainty.

Paraphrasing Darwin, management sociologist Leon Megginson once said: “It’s not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.”²⁸ In a threat environment subject to constant, rapid disruption the appropriate military capability package for any given scenario is not just a question of degree – it is also a question of kind. The current imperative is for DOD to augment a defense acquisition system that has proven so effective at equipping the U.S. military for industrial scale warfare by improving its capacity to adapt to disruption. This is the role of the defense innovation base.

Former Under Secretary of Defense for Acquisition, Technology, and Logistics Jacques Gansler has argued that “there is a need for a parallel track: first, find and implement ways to reduce the costs of national security itself, and second, find and implement ways to strengthen

²⁴ Judith Rodin, *Being Strong in a World Where Things Go Wrong: the Resilience Dividend* (New York: Rockefeller Foundation, 2014).

²⁵ Harrison, “The Defense Innovation Imperative.”

²⁶ “2013 Global R&D Forecast,” *R&D Magazine*, December 2012, http://www.rdmag.com/sites/rdmag.com/files/GFF2013Final2013_reduced.pdf (accessed 2 July 2014).

²⁷ Adam Jay Harrison, Jawad Rachami, and Christopher Zember, “Innovation Warfare: Technology Domain Awareness and America’s Military Edge,” *War on the Rocks*, 29 October 2014, <http://warontherocks.com/2014/10/innovation-warfare-technology-domain-awareness-and-americas-military-edge/> (accessed 30 December 2014).

²⁸ Darwin Correspondence Project, *One thing Darwin didn’t say: the source for a misquotation*, <http://www.darwinproject.ac.uk/one-thing-darwin-didnt-say/> (accessed 2 July 2014).

the U.S. economy through dual-use investments in security and economic growth.”²⁹ The concept of a defense innovation base encompasses these goals, but also seeks to create an explicit, complementary system consisting of a more diverse, independent, and unencumbered set of participants, including commercial firms, academic institutions, and even private citizens that augments the dedicated defense industrial base in a way that yields both performance relative to the industrial-scale requirements of major military conflicts and resilience in the face of disruption.

CHARACTERISTICS	INDUSTRIAL BASE	INNOVATION BASE
Regulation	Heavily regulated (e.g. IP, export controls, cost accounting, etc.)	Commercial regulation
Principal Markets	Defense	Commercial and Consumer
Investor Base	Public	Private
Margins and Incentives	Low margins and low capital risk	Higher margins and higher capital risk
Product Life Cycle	Years to decades	Months to years
Benchmark	Reliability and predictability of outputs	Speed to market
Development Model	Planned and top-down	Iterative and bottom-up
Planning Model	Long-range planning	Experimental and opportunistic
Risk Profile	Fault intolerant	Fail early, learn, repeat
Market Objective	Sustaining	Disrupting
Information Flows	Linear (constrained to organizational hierarchy)	Networked

Table 1. Characteristics of the defense industrial and innovation bases

The object of both the industrial base and the innovation base are the same: deliver the solutions required to equip the U.S. Armed Forces for the successful execution of future military operations. Notwithstanding this similarity, the outputs of each are decidedly different. While the industrial base produces capabilities that are reflective of long-term defense planning, programming, and budgeting cycles and in alignment with DOD Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities (DOTML-PF), the innovation base delivers solutions that respond to specific threat conditions or user needs for which there may or may not be an enduring or global demand. As a result, the capabilities stemming from the innovation base are more opportunistic than planned and rely on a current understanding of the dynamics between technologies and applications to create value.

²⁹ Gansler, *Democracy's Arsenal: Creating a 21st Century Defense Industry*.

The composition and economics of the innovation base are also very different from traditional military suppliers. As such, the business practices and tools that underwrite engagement with this community have little in common with established defense acquisition practices. Fundamentally, the commercial marketplace and, by extension, the innovation base is optimized for the market conditions that drive the broader U.S. economy. As such, the small profit margins (usually less than 10%), heavy regulatory overhead, domain-specific knowledge and infrastructure, and overall lack of transparency in the defense market are significant barriers to participation for many commercial-facing high technology firms. Mitigating these barriers between DOD and the most innovative sectors of the global high tech economy requires a deliberate, nuanced, and supported strategy that goes well beyond merely soliciting commercial firms for their good ideas. Such a strategy is predicated on a foundation of Technology Domain Awareness.

In a global threat environment where disruption is more prevalent and innovation has assumed a more decisive role, the performance of DOD is proportional to the rate of discovery advanced by the innovation base – discovery that not only depends on DOD’s awareness of the innovation base, but also on the innovation base’s knowledge of defense capability needs and problem sets.³⁰ TDA collectively refers to the processes and tools that underwrite the process of bi-lateral discovery based on (1) the accumulation of sufficient, shared knowledge of technologies and applications to formulate opportunistic capability prototypes and (2) disciplined, accretive experimentation to test and learn from these prototypes in a self-reinforcing manner.

Technology Domain Awareness

Unlike the defense industrial base, the innovation base is not a dedicated DOD resource but rather a fluid collection of entities with products or services that are susceptible to military applications at any given point in time. As such, the defense innovation base is a reflection of the broader commercial tech base resolved through the lens of defense capability needs. The alignment between DOD and the commercial tech base is constantly evolving as a function of the immediate needs of DOD and the specific capabilities or inclinations of the firms potentially available to support those needs. Optimizing this alignment depends on improving information flows between and among DOD stakeholders and the sources of innovation in the commercial marketplace.

A vital and engaged defense innovation base demands several things, a subset of which includes improved commercial market incentives and synergies, reduced regulatory burdens, and revised Intellectual Property (IP) protections that preserve the interests of all parties. However, the essential element of a defense innovation base primed to address the emerging needs of the warfighter is information synergy – specifically shared market awareness between DOD consumers and commercial market suppliers. TDA is a defense-focused innovation “operating

³⁰ Steve Spear, “Gap-Filling Organizations,” 24 March 2014, http://sdm.mit.edu/news/news_articles/webinar_032414/spear-webinar-gap-filling-organizations.html (accessed 2 July 2014).

system” developed by Harrison, Rachami, and Zember and sponsored by the Office of the Assistant Secretary of Defense for Research and Engineering via the DOD IACs.³¹ It is based on the concept of facilitating information-based transactions in order for the commercial technology base to conditionally self-organize to support defense opportunities without requiring DOD to solely underwrite the costs of market access and availability.

The two principal goals of TDA are to: (1) increase opportunities for DOD to tap into the innovation throughput of the commercial technology ecosystem (i.e., high tech firms, academia, entrepreneurs, and enthusiasts) and (2) improve DOD’s ability to promulgate, sustain, and consolidate innovations across all phases of the defense acquisition life cycle. It achieves these goals by: (1) reducing the interaction latency between defense technology stakeholders (i.e., users, developers, investors, planners, and programmers) through improved information flows and (2) capturing and synthesizing transactional and technical information. In this way, TDA forms an accretive knowledge framework within which stakeholder inputs can be analyzed to assess local and enterprise-level impacts of various technology activities and investments. TDA is ultimately concerned with the development of a living information baseline that provides context for technology decision-making related to investment, development, employment, and overall technology enterprise-level risk management. This baseline has the added benefit of furnishing commercial firms with the insights they need to determine how best to “opt-in” to the defense market.

Achieving Technology Domain Awareness

Achieving TDA depends on a number of preliminary activities such as mapping the decision space to identify technology-related data sets, information products, and residuals relevant to defense-technology decision-making. This function in turn requires the development of a simplified data model or taxonomy that supports the organization of heterogeneous and unstructured content. TDA also relies on implementing and organizing community engagement activities and information technology resources that enable dynamic problem solving as well as distributed access to relevant marketing, R&D, test, transactional (pro forma), and operational information. To facilitate the emergence of a rich defense innovation base, which is the foundation of TDA, appropriate outreach and incentive mechanisms reflecting the conventions of the commercial marketplace are also needed.

The DOD IACs are currently pursuing a phased implementation of a TDA platform. In Phase 1, the IACs are developing multiple technology-focused consortia and associated Section 845 Other Transaction Authority (OTA) contracting mechanisms as a catalyst for formalizing the defense innovation base.³² The OTA contracting approach will help mitigate many of the transactional barriers to entry that negatively impact start-ups and other firms unaccustomed to

³¹ Adam Jay Harrison, Jawad Rachami, and Christopher Zember, “A New Defense Innovation Base,” *War on the Rocks*, 21 August 2014, <http://warontherocks.com/2014/08/a-new-defense-innovation-base/> (accessed 30 December 2014).

³² FebBizOpps.gov, “Re-Use of Energy-Related Scientific and Technology Information (STI) for DoD Prototypes to Support the DoD Information Analysis Centers,” <https://www.fbo.gov/index?s=opportunity&mode=form&tab=core&id=29fbfa5679e0471a053c12187db386e7> (accessed 30 December 2014).

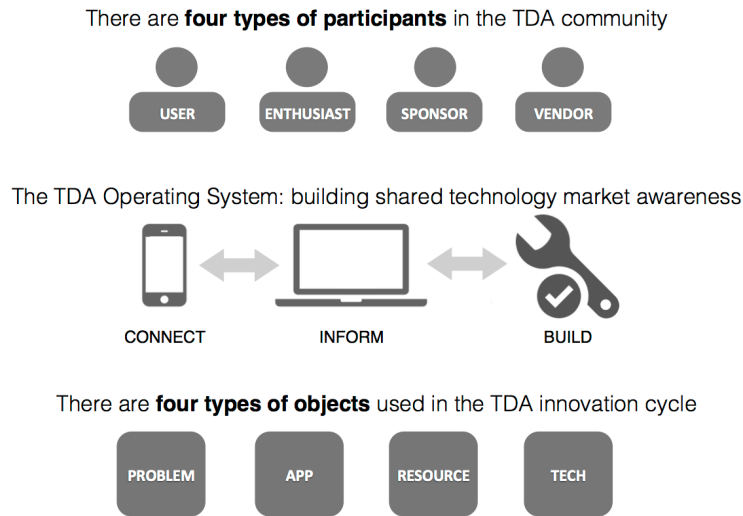


Figure 1. Core functions of the objective TDA Operating System

the DOD acquisition environment. Benefits of the OTA method of contracting include enhanced Intellectual Property protections for businesses and reduced DOD-specific regulatory overhead. For the Phase 1 effort, the IACs are also organizing a program of novel industry outreach opportunities, including defense-industry co-creation and experimentation events and industry-focused services designed to promote engagement with targeted segments of the innovation base.³³

As an initial use case for TDA, the IACs have partnered with the U.S. Special Operations Research, Development, and Acquisition Center (SORDAC) and the National Defense University to build a defense innovation community of practice focusing on the needs of the Special Operations Forces (SOF) community. This initiative, dubbed Project Vulcan, will network SOF operators and acquisition professionals with their counterparts in global academia, commercial industry, the start-up and venture capital communities, and the traditional defense industry in order to increase technology access, improve collaboration, and reduce transaction latency for advanced prototype development. During this effort, many of the TDA-related business practices and information technology tools prototyped for the SOF application will also be evaluated for potential DOD-wide deployment.

Phase 2 efforts will build on the foundational elements of TDA, which include learning, analysis, experimentation, outreach, and collaboration. DOD-wide deployment of a TDA platform ultimately requires the implementation of a technology discovery and collaboration capability that takes advantage of existing IACs and government-wide information systems and supports casual interactions among stakeholders both inside and outside of DOD. In addition to providing basic knowledge management functions, the TDA information system will

³³ DoD IACs, “Information Analysis Centers,” http://www.slideshare.net/AdamHarrison2/tc-tda-panel-18-jun-2014-v4?qid=e70b69ab-d692-4b42-b320-acff2ff87d99&v=default&b=&from_search=1 (accessed 30 December 2014).

complement other TDA outreach mechanisms by providing a network-enabled hub for the engagement of the extended defense innovation base. Consistent with Under Secretary of Defense Kendall's emphasis on using objective data and analysis to measure acquisition performance, the DOD IACs plan to extend TDA efforts to incorporate metrics that describe DOD's conventional Return On Investment (ROI) from technology prototyping as well as the expanded concept of Learning From Investment (LFI).³⁴ In the TDA context, LFI refers to the iterative development approach favored in Silicon Valley, where prototyping and experimentation activities are undertaken as mechanisms to build knowledge through the systematic exploration of technologies and applications.

The IACs ultimately intend to extend the TDA program to incorporate facilitated, constructive prototyping and experimentation services and infrastructure by coordinating existing resources within DOD in support of defense innovation objectives. Central to this idea is a concept referred to as the National Security Technology Accelerator – a distributed defense innovation center of excellence overseen by the National Defense University that will furnish facilities, equipment, education, and outreach to facilitate defense-relevant prototyping and related innovation activities.³⁵ The NSTA will provide resources that network disparate innovation initiatives across DOD to enhance information sharing and collaboration and promote scalability for the most promising innovations. By providing a framework to connect disparate innovation efforts with specific DOD learning objectives, TDA will increase the institutional knowledge derived from DOD-sponsored technology activities (i.e. Learning From Investment).

Expected Outcomes

Accomplishing TDA means synchronizing the innovation objectives of DOD and commercial industry leading to the emergence of a robust and scalable defense innovation base. TDA also provides an explicit information pathway for defense acquisition stakeholders to engage each other and the global technology commons through the alignment of defense needs with technology opportunities and market-based incentives. By operating at the nexus of military needs, government and commercial technology, and experimentation, TDA creates a transactional knowledge environment for DOD and the defense innovation base to rapidly identify and capitalize on shared equities.

Irrespective of the unique constraints of the defense marketplace, classic economic theory indicates that the exchange of information between buyers and sellers is a precondition for an efficient market where supply and demand are balanced and prices reach an optimum minimum. As a tool for engaging the commercial marketplace and defense consumers alike through shared information, TDA ultimately enhances competition by easing participation constraints for firms operating outside of the traditional defense industrial base. Improving the availability of market

³⁴ Department of Defense, "Performance of the Defense Acquisition System: 2013 Annual Report," 28 June 2013, <http://www.defense.gov/pubs/PerformanceoftheDefenseAcquisitionSystem-2013AnnualReport.pdf> (accessed 2 July 2014).

³⁵ DoD IACs, "Information Analysis Centers."

information also lowers transaction costs and increases the number of buyers and sellers willing to transact in the defense marketplace.³⁶

Bearing these economic principles in mind, there are two specific outcomes expected from TDA in terms of improving the innovation velocity and innovation efficiency of DOD. First, TDA will increase the diversity of the defense marketplace through the creation of a robust and scalable innovation base that complements the competencies of the defense industrial base. The emergence of an explicit and consistently engaged defense innovation base will increase DOD's ability to capitalize on technologies born outside of the traditional industrial base. To the extent that the commercial marketplace tends to focus on markets distinct from defense, improved access to this innovation channel increases technology diversity and enhances DOD's ability to absorb disruptions promulgated by the contemporary threat environment.

The cultivation of additional technology sources that are primarily underwritten by investors and markets outside of DOD creates tangible economic value through improved burden sharing. Given the increased fiscal pressure of the current budget climate, sharing the cost of product development with the commercial marketplace offers great potential to optimize DOD spending for defense-specific priorities – an approach not altogether dissimilar from how SOCOM restricts their investments to SOF-specific equipment and relies heavily on the force providers to underwrite common capability development costs.³⁷ Moreover, by increasing the product options available to DOD consumers, competition will increase for those classes of products where reasonable substitutes exist – leading to commensurate cost savings. Ultimately, the cultural orientation of defense acquisition may change from a “build first” mindset to a “buy first, modify second, build third” mindset, a shift that promises to usher in all kinds of cost, speed, and innovation efficiencies.

The second tangible outcome expected from TDA is to increase the return on DOD's innovation investment by (1) improving the adoption rate of internally and externally derived innovations by Programs of Record, (2) identifying opportunities for technology reuse through the identification of users with similar requirements, and (3) capturing and preserving the knowledge value of R&D activities to improve future technology decision-making. Author Geoffrey Moore's groundbreaking 1991 book *Crossing the Chasm* argues that there is a “chasm” between early adopters (i.e. “technology visionaries”) and the early majority (i.e. “pragmatists”) from a market penetration standpoint.³⁸ His thesis is equally applicable to defense acquisition and is a possible explanation for the poor track record of opportunistic innovations transitioning to a long-term DOD sustainment path. As depicted in Figure 2, the information furnished by TDA can “bridge the gap” between the exploitation side of the defense acquisition spectrum, where DOD has enjoyed some measure of success in terms of leveraging commercially-derived

³⁶ Robert S. Pyndick and Daniel L. Rubinfeld, *Microeconomics* (Princeton: Pearson, 2011).

³⁷ Posture Statement of Admiral William H. McRaven, USN, Commander United States Special Operations Command, Before the 112th Congress, Senate Armed Services Committee, 6 March 2012, <http://docs.house.gov/meetings/AS/AS00/20130306/100394/HHRG-113-AS00-Wstate-McRavenUSNA-20130306.pdf> (accessed 2 July 2014).

³⁸ Geoffrey A. Moore, *Crossing the Chasm: Marketing and Selling Disruptive Products to Mainstream Customers*, (New York: Harper Collins, 2002).

innovations, and the consolidation side of the spectrum, where DOD has had more limited success transitioning commercial products to formal programs. Moreover, by focusing on the knowledge value of prototype activities (i.e. learning from investment) and explicitly linking prototypes with long-term DOD capability objectives, TDA serves as a channel for increasing the mobility of innovations up the defense acquisition value chain. Through the continuous alignment of legacy defense capabilities with emerging needs and requirements, TDA also expands the opportunity for the incremental and evolutionary improvement of products within which DOD has already incurred a significant investment.

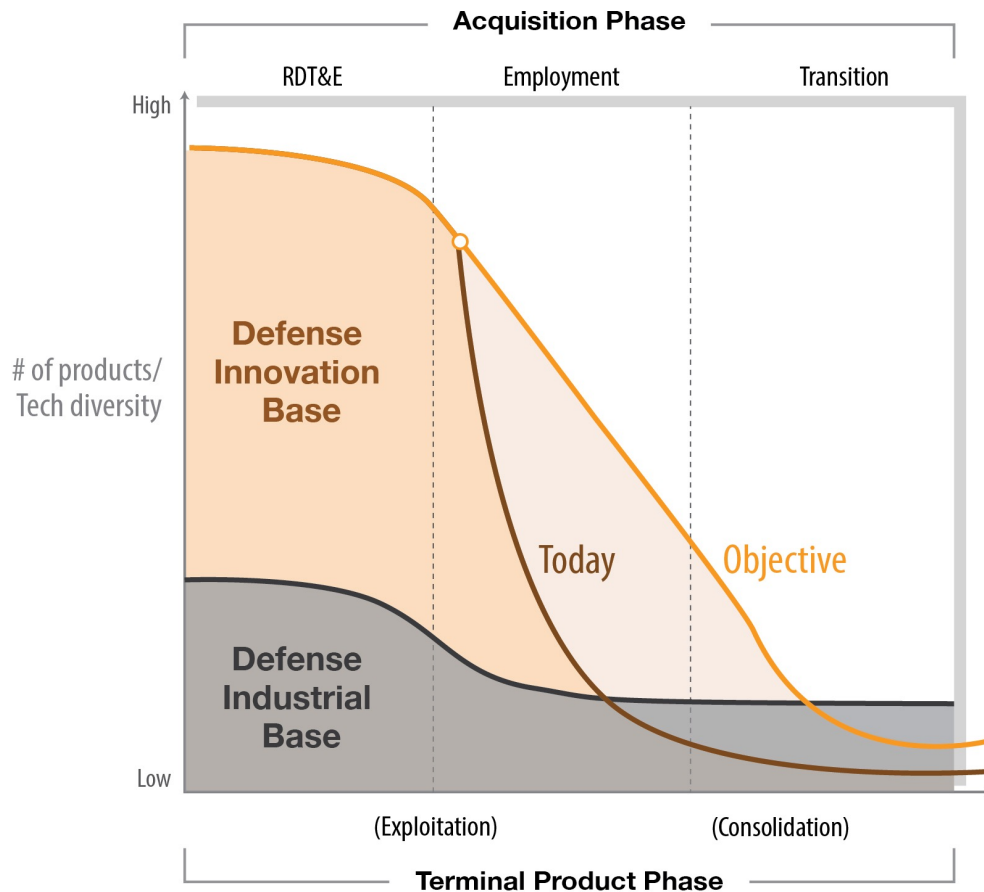


Figure 2. TDA's impact on the defense capability value chain

Increasing the return on DOD's innovation investment can also mean sustaining promising defense prototypes through the commercial marketplace. Today, the mortality rate of technologies developed or incubated in support of transient military applications is high; however, the shared knowledge generated by TDA creates expanded opportunities for private investors to capitalize on defense prototypes with commercial market potential. Current trends in venture capital favor market risk over technical risk, that is, the risk of a market existing for a

product versus the risk that a product will perform as advertised.³⁹ Conversely, DOD tends to invest in technical risk, where the imperatives of national security dictate the deployment of R&D capital. The information sharing facilitated by TDA allows the venture capital community to more quickly and accurately identify high potential defense prototypes with dual-use potential, thereby offsetting the technical risk associated with prototype development. At the same time, the commercialization of dual-use technologies offsets DOD's market risk (i.e. the risk of successfully transitioning a prototype to a long-term sustainment path) by leveraging the commercial marketplace to create option value for DOD to revisit a technology in the future.

Conclusion

Innovation is neither a silver bullet nor, in and of itself, a strategy. To the extent that the United States has reaffirmed its commitment to an innovation agenda that seeks to preserve DOD's historical military-technology edge, appropriate tools are required. Today, when DOD can no longer expect to command a monopoly over advanced military-relevant R&D by outspending the competition, the tools of innovation are different than they were in the past.

TDA is a defense innovation operating system that seeks to position DOD as both a lead consumer and a lead producer of technologies by framing relevant lessons learned from the commercial high-tech marketplace – concepts like re-use, connectivity, collaboration, institutional learning, and iterative development – in the context of defense. Built on a community of practice that incorporates both internal and external stakeholders, TDA is not an agency, organization, program, or project. It is a user-driven network underwritten by a common set of business practices and tools designed to foster diverse connections between problems, technologies, and enabling resources. To this end, a successful implementation of TDA depends first and foremost on stakeholder interactions and efficient knowledge transfer.

While the DOD IACs have taken a leadership role in developing a core set of TDA-related services, full implementation of TDA requires a DOD and government-wide commitment. Such a commitment includes legislative changes consistent with those proposed in a November 2014 National Defense Industrial Association report to Congress. The *Pathway to Transformation: NDIA Acquisition Reform Recommendations* report recommends statutory language mandating evaluation, communication, and exchange of “research, development, and technological” data to enhance coordination and decision-making associated with defense research activities.⁴⁰ Such language would provide a compelling legal basis for DOD to pursue policies consistent with the TDA idea – policies along the lines of:

- (a) Use of public-private partnerships and flexible contracting mechanisms like Other Transaction Agreements and Partnership Intermediary Agreements to

³⁹ Sarah Max, “Venture Capital is Looking for Ways to Outrun the Herd,” *New York Times*, 10 December 2014, http://mobile.nytimes.com/blogs/dealbook/2014/12/10/venture-capital-is-looking-for-ways-to-outrun-the-herd/?emc=edit_dlbkam_20141211&nl=business&nid=63604034&_r=0&referrer= (accessed 10 December 2014).

⁴⁰ National Defense Industrial Association, *Pathway to Transformation: NDIA Acquisition Reform Recommendations*, November 2014, <http://www.ndia.org/Advocacy/AcquisitionReformInitiative/Documents/NDIA%20Pathway%20to%20Transformation%20Acquisition%20Report.pdf>.

- increase the diversity of participants from industry (traditional and non-traditional) and academia in all phases of defense R&D;
- (b) Integration of the operational community with the defense R&D enterprise to provide continuous feedback for product opportunities and improvements;
- (c) Development of agency, service, and departmental learning objectives and challenges to frame DOD-wide prototyping and experimentation efforts;
- (d) Instantiation of guidelines governing DOD engagement with the venture capital community to identify R&D co-investment opportunities; and
- (e) Development of standards and industry incentives governing R&D data collection and sharing.

While the above list is not exhaustive, policy initiatives such as these are required to promote the intra-government and government-industry interactions that drive TDA.

Achieving TDA is not envisioned to require a significant capital investment. Instead, TDA seeks to better organize preexisting assets, including data resources and infrastructure, acquisition authorities, and on-going and planned technology activities, to more effectively support DOD's innovation objectives. It is about taking fuller advantage of what already exists to bring about an explicit innovation context for defense technology decision-making that capitalizes on the natural synergies between DOD and commercial industry. Ultimately, this will increase defense capability and reduce costs in a "world that is growing more volatile, more unpredictable, and in some instances more threatening to the United States."⁴¹

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⁴¹ Department of Defense, *Quadrennial Defense Review*, 2014.

The Resilience of Profit-seeking Illicit Networks: The Case of the Arellano-Félix Organization

BARBARA CEDILLO LOPEZ

It is important to understand why some profit seeking illicit networks have chosen to evade, co-opt, or confront government forces; and why the states choose to target some illicit networks through repression, while they tolerate and even collude with others. This paper presents a typology of resilience for illicit networks, and uses a historical case study to test this typology.

Mexico is in the midst of a growing security crisis. On September 26, 2014, in Iguala, Guerrero, 6 people were killed, 20 were injured, and 43 students went missing at the hands of corrupt municipal authorities working for a local criminal group called United Warriors (*Guerreros Unidos*). The country's unprecedented violence levels in the last decades raise serious concerns for its citizens, its policy makers, and its neighboring countries. Mexico has become the hub of some of the world's biggest and most sophisticated criminal networks due to its weak police and judicial institutions, as well as its vicinity with the world's largest drug market, the United States.¹

Profit-seeking illicit networks (PSINs)² are one of a state's main enemies because they challenge its legitimacy and look to supplant its authority.³ Mexican PSINs have evolved in their goals and modus operandi in response to market opportunities and the state's actions. Currently, the discussion is centered on elucidating why some PSINs have survived the Mexican state's actions, while others have not. Some authors argue that this is due to the fact that certain types of illicit networks are more resilient than others. Others argue that it depends on the illicit network's reaction to the state's actions. In light of this, it is important to address the following question: why have some Mexican profit-seeking illicit networks been more impacted by disruptive events caused by the state's actions than others?⁴ In answering this question, it is important to understand why some illicit networks appear more resilient to the Mexican state's action than others; why some profit-seeking illicit networks chose to evade the state's actions or co-opt government forces, while others chose to confront them; and why the state chose to target some illicit networks through repression, while it tolerated and even colluded with others.

¹ Brianna Lee, "Mexico's Drug War," *Council on Foreign Relations*, March 5, 2014. Available at: <http://www.cfr.org/mexico/mexicos-drug-war/p13689>.

² Nathan Jones first introduced the term in his doctoral dissertation in lieu of the more generic term of drug cartels.

³ Nathan P. Jones, "The State Reaction: A Theory of Illicit Network Resilience." *Doctoral dissertation University of California* (2011), 12. Available at: <http://www.wpsa.research.pdx.edu/awards/jones.pdf>.

⁴ All disruptive events that have triggered a response from Mexican profit-seeking illicit networks have been caused by Mexican state actions, except an internal conflict in 2010 within the Gulf-Zetas cartel that led to its fragmentation.

Studying why some Mexican illicit networks seem more resilient than others to disruptive actions by the state is important for three main factors. First, security issues have gained relevance in Mexico's public opinion due to an increase in violence and the challenge this poses to the state's legitimacy. Second, Mexican PSINs operate with a perceived degree of impunity due to an ineffective and colluded police-justice system. And finally, organizational resilience and survival are two of the most understudied areas in organizational research.

The next section will outline this project's methodology. The third section develops a typology of PSIN's resilience levels to help explain which types of illicit networks survive (or not) the state's actions, and why. In the final section a case study of the Arellano-Félix Organization (AFO) is provided to help exemplify this typology.

Methodology

The existing literature on illicit network features and resilience defines different types of illicit networks, describes what characteristics make them more likely to survive state actions, and explains how illicit networks react to state repression. However, none of these works have developed a typology of the different levels of PSIN resilience and what features influence these, nor have they provided case studies to exemplify their findings. This paper will present such a typology. It primarily assesses factors that influence PSIN resilience level, such as their business strategies and their reaction to disruptive events caused by the state. Once enough elements were gathered on illicit networks' business strategies and their response to state action, a typology of resilience levels following potentially disruptive events was created.

Furthermore, in order to gain a richer understanding of why some PSINs are more resilient than others and test the typology, this paper presents a case study of the AFO's business strategy and its reactions to disruptive events caused by state action. This PSIN was chosen due to its decline from one of the strongest Mexican PSIN to a severely weakened one.

After reviewing newspaper and magazine articles in English and Spanish, as well as scholarly articles, books, and doctoral dissertations, the data collected was analyzed and a historical narrative of the PSIN was elaborated. Due to the clandestine nature of PSINs, these are difficult to study. A PSIN will attempt to appear less visible by hiding behind licit activities, operating in the informal sector, and maintaining a low profile.⁵ Thus, a historical case study was used to understand the structure, business strategy, and response of PSINs to disruptive events caused by the state. After identifying and classifying its structure and business strategy, and the disruptive events caused by the Mexican state were selected, process tracing was used to establish a causal relationship between business strategy and response to disruptive events, and the PSIN's resilience level. A disruptive event was defined as any arrest or killing of a leadership figure in this PSIN that made it change its organizational structure or business strategy.

The period studied runs from 1983 to the present day for two reasons. First, Mexico was incorporated into the cocaine trafficking routes from the Andes to the United States following the toppling of the Colombian cartels by the U.S. and Colombian governments. Towards the end of the 1980s, this positioned Mexican PSINs as factors of significant power. Prior to this, drug

⁵ Phil Williams, "Transnational Criminal Networks." in John Arquilla and David Ronfeldt (Eds.), *Networks and Networks: the Future of Terror, Crime, and Militancy* (Santa Monica: Rand, 2001), 71.

trafficking in Mexico was limited to the production and smuggling of marijuana and heroin. Second, following the 1982 economic crisis, the first National Development Plan (PND, *Plan Nacional de Desarrollo*) recognized drug trafficking as a national security issue for the first time and mandated armed forces' assistance in the fight against narcotics.⁶

Results: Typology of PSIN's Resilience Levels

Resilience is defined as the ability to survive a disruptive event.⁷ Resilient networks persist and continue operating under pressure from external shocks.⁸ They have the ability to remain operational or adapt in spite of exposures to threat, stress, or adversity.⁹ PSINs are constantly faced with potential disruptive events to their operations, such as the arrest or killing of key leadership. The literature on resilience has a weakness in that it deals with an illicit network's reaction after a disruptive event as a twofold scenario: either the illicit network survives or it does not. Rather, there are different levels of survival. The contribution of this research to the existing literature is to develop a typology of the levels of PSIN resilience, dependent on their business strategy and their reaction to disruptive events caused by the state's action. After analyzing the evolution of different Mexican PSIN's, it was determined that an illicit network's business strategy and the disruptive events they undergo caused by the state's actions had strong explanatory power for a PSIN's resilience level.

PSINs' Business Strategies

Illicit networks challenge the state's authority and legitimacy by attempting to weaken its economic and territorial authority. States react by attacking PSINs through kingpin strategies.¹⁰ Large PSINs are often composed of both territorial and transnational cells. When illicit networks have undergone sufficient decapitation strike pressure from the state, they fragment into specialized factions. These resulting factions usually take the form of two distinct types of PSINs: one that is transnational in nature, and another that is territory-oriented.¹¹

Transnational PSINs typically have flat structures and few members, allowing for higher profit margins. They are composed of experienced and sophisticated individuals, which ally with other PSINs with similar business interests. Transnational PSINs focus their illicit activities on drug trafficking, money laundering, and front-businesses. They attempt to minimize violence and

⁶ Paulina Lomeli, "Plan Nacional de Desarrollo." *Bien Común, Fundación Rafael Preciado Hernández*, Vol. 13, No. 150 (2007), 50. Available at: <http://www.fundacionpreciado.org.mx/biencomun/bc150/115plan%20nacional.pdf>.

⁷ Paul Chabot, "An Historical Case Study of Organizational Resiliency within the Arellano-Felix Drug Trafficking Organization." *Doctoral dissertation The George Washington University* (May 18, 2008), 32. Available at: <http://www.paulchabot.com/PDF/PaulChabotDissertationMar272008.pdf>.

⁸ Amitrajeet Batabyal, "Human actions, the survival of keystone species, and the resilience of ecological-economic systems." *Resources Policy*, Vol. 28 (2002), 153. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=434280.

⁹ Kathleen Sutcliffe and Timothy Vogus, "Organizing for resilience." in K. Cameron, J. Dutton, and R. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (San Francisco: Berrett-Koehler Publishers, 2003), 108.

¹⁰ Removal of illicit networks' heads or leadership figures, by arresting or killing them.

¹¹ Jones, "The State Reaction," 20-21.

maintain a low profile, and thus are difficult to identify because they can appear as licit businesses.¹²

Territory-oriented PSINs, on the other hand, typically have hierarchical structures. Although they also traffic drugs, they diversify into crimes such as kidnapping and extortion of licit and illicit businesses. They seek to control illicit markets and transit zones, and tax other traffickers using or going through their turf. These PSINs constantly recruit enforcers in order to control their territory. The high number of enforcers allows them several hierarchy levels and gives them a comparative advantage when fighting security forces or other illicit networks. Territorial illicit networks stage acts of public violence to evidence the state's lack of control over its territory, and to send messages to rival groups and to the local population.¹³ (See appendix A)

Disruptive Events Caused by the State's Actions and PSIN's Reactions

Shocks are events, such as the arrest or killing of leadership figures, which result in a radical change, existential threat, or increase in the level of uncertainty within a network.¹⁴ A network's capability to overcome shocks can be measured by its ability to replace captured or killed actors, and to integrate their replacements into its existing structure. While some networks thrive by maintaining a certain level of stability or reestablishing a relatively stable structure after a shock, others that are unable to replace their actors become less operationally active and may cease to exist.¹⁵ Illicit networks survive in an evolutionary fashion. PSINs that are best suited to their environment and capable of adapting to disruptive events will survive, while those that fail to adapt will be removed from the system.¹⁶ Understanding how and why profit-seeking illicit networks are targeted by the state and the impacts of the state's actions, indicates which PSINs are likely to survive and which are not. This research shows that although the state aims at combating all illicit networks, it reacts differently to the different types of illicit networks depending on their business strategies.

Given the fact that transnational PSINs' major sources of revenue are drug trafficking, money laundering, legitimate and front businesses, and high-profile kidnappings, they wish to attract the least attention from the state and society so they can continue operating and generating profits. As these PSINs and their activities generally go unnoticed, the state reacts to them either by tolerating their activities or colluding with them. Therefore, transnational PSINs' modus operandi consists of evading state actions by maintaining a low profile and corrupting the

¹² John Bailey, *The Politics of Crime in Mexico: Democratic Governance in a Security Trap* (Colorado: Forum Press, 2014), 92-96; Jones, "The State Reaction," 78-79.

¹³ Bailey, *The Politics of Crime in Mexico*, 88-89, 94-96; Jones, "The State Reaction," 1-2, 80-82, 90-91

¹⁴ For example, actions of external actors or unpredictable environmental elements and events that are likely to affect the network.

¹⁵ Marlene Burkhardt and Daniel Brass, "Changing patterns or patterns of change: The effects of a change in technology." *Administrative Science Quarterly*, Vol. 35 (1990), 105. Available at: http://fbemoodle.emu.edu.tr/file.php/777/Burkhardt_M_E_Brass_D_J_1990_Changing_patterns_or_patterns_of_change_ASQ.pdf.

¹⁶ Jones, "The State Reaction," 49; Baker, Raab, and Milward, "A Preliminary Theory of Dark Network Resilience," 34.

government's higher levels, especially at the federal and state levels. This is the most common interaction between criminal organizations and the state.¹⁷

Territory-oriented PSINs, on the other hand, tend to generate revenue from low-profile kidnappings, extortions of legitimate and illegitimate businesses, and taxing other traffickers using or going through their territory. These PSINs are the most threatening to the state and thus become its priority, as it cannot tolerate a threat to its legitimacy, and monopolies on taxation and use of force. The state faces increased pressure from civil society due to a rise in crimes such as homicides, kidnappings, and extortions, forcing it to react strongly through repression. Territorial PSINs react to the state's action by confronting it through the threat or use of symbolic violence, and by corrupting the government's lower levels, especially at the local level.¹⁸ (See appendix B)

Typology of PSIN's Resilience Levels

A typology of PSINs resilience levels was developed through an analysis of the structural and strategic changes illicit networks undergo after disruptive events caused by the state's actions.¹⁹ In this analysis, resilience is the dependent variable, and business strategy and reaction to disruptive events caused by the state's action are the independent variables. After a disruptive event caused by the state's actions there are six different resilience levels:

- 1) *The PSIN survives unharmed*: This is the highest resilience level. After a disruptive event caused by a state action, there is no significant drop in the PSIN's operational activity and the illicit network survives unharmed due to its highly adaptive structure. The PSIN is organized in a way in which when one of its leaders is arrested or killed, its successor assumes leadership without any setbacks.
- 2) *The PSIN restructures*: This is the second highest resilience level. After a disruptive event caused by a weak and limited state action, the illicit network is able to resume its operational activity but it needs to reorganize its organizational structure or strategy after the shock. After one of its leaders is arrested or killed, a new leader is chosen.
- 3) *Large PSIN splinters along lines of functional specialization*: After a disruptive event caused by state action, large PSINs splinter into smaller factions along lines of functional specialization: one adopts a transnational business strategy and the other a territorial one. These splinters normally occur in the context of internecine conflicts between the factions fighting for territory and business.
- 4) *The PSIN weakens*: After undergoing continuous disruptive events caused by the state's actions, the PSIN is severely weakened and its operational activity suffers a significant drop. After the leader is arrested or killed, it is unclear who will rise as the new leader. This leads to an internecine conflict in the illicit network.
- 5) *The PSIN fragments*: A disruptive event caused by repressive state actions, leads to the fragmentation of the PSIN into smaller and weaker factions. The rupture occurs in the

¹⁷ Jones, "The State Reaction," 25.

¹⁸ Ibid, 24.

¹⁹ This typology uses four of the resilience levels outlined by Nathan Jones. The remaining resilience levels were elaborated based on Mexican PSINs' reactions to disruptive events observed using process-tracing. See Jones, "The State Reaction," 28.

context in which the PSIN is severely weakened and there is no clear leader so the leadership is disputed amongst many.

- 6) *The PSIN dissolves*: This is the lowest level of resilience. After a disruptive event, the illicit network is unable to recover from the shock and it eventually dissolves.²⁰

After identifying the different resilience levels, the types of PSINs that are more resilient to disruptive events and those which are less were defined. While analyzing the data collected, it was determined that transnational PSINs typically survive unharmed, are forced to reorganize, or are weakened after disruptive events caused by a weak and limited state action. However, when the state's actions against large transnational PSINs are strong enough, these can splinter along lines of functional specialization. On the other hand, strong and repressive state action causes territorial PSINs to become less resilient – causing them to weaken, fragment, or dissolve. Therefore, transnational PSINs are more resilient than territorial PSINs because they challenge the state less and corrupt its authorities to preserve their clandestine business strategy. If this holds true, a process of natural selection will take place in which surviving illicit networks will be mainly low profile transnational PSINs that have infiltrated and colluded the state apparatus.²¹ (See appendix C)

Case study: the Arellano-Felix Organization's resilience

In this section, the security strategies for every administration in Mexico and the United States from the early 1980s to today are defined. Additionally, the data collected was analyzed to create a historical narrative of how the AFO's business strategy triggered different state actions that had different effects on the PSIN's resilience level.

The Mexican Government's Security Strategy

The state's reaction is a key factor in understanding PSINs' resilience level. Whether or not a state chooses to attack an illicit network, and the intensity of that attack, determines its survival and resilience level.²² Officially, Mexican policy towards PSINs has been confrontational. However, for decades PSINs worked under a period of peaceful cooperation known as *Pax Mafiosi*, thanks to a highly permissive environment in which the corrupt Federal Security Directorate was complicit in the drug trafficking business and mediated conflicts between traffickers. In addition, a highly centralized hegemonic party system under the PRI political party and a strong presidency allowed a *Pax Mafiosi* between the state and the trafficking organizations, in which the former could make long-term credible promises to the latter in terms of protection, tolerance, and collusion in their illegal activities. It was only under U.S. pressure that the Mexican state arrested or killed major PSINs' leaders.²³

In the first six months of each administration, Mexico's federal government is required to submit a National Development Plan (PND) to Congress. After conducting a diagnosis for each sector in the country that needs attention, and after analyzing the results from referendum forums

²⁰ Baker, Raab, and Milward, "A Preliminary Theory of Dark Network Resilience," 36.

²¹ Jones, "The State Reaction," 96-97.

²² Ibid, 15.

²³ Bailey, *The Politics of Crime in Mexico*, 117.

in which Mexico's representative groups and members of Congress are convened, each incoming administration elaborates a plan that reflects the national objectives, strategies, and priorities for the country's development.²⁴ Although all administrations since the early 1980s to the present have agreed that drug trafficking and organized crime represent some of the main sources of violence and insecurity for Mexican society and pose a threat to the country's institutions, they each have had their own strategies to overcome this issue.

For instance, although President Miguel de la Madrid's PND (1983-1988) mainly focused on recovering from the economic crisis, it stipulated the armed forces would contribute to national security by defending territorial integrity and aiding in the combat against narcotics.²⁵ In President Carlos Salinas de Gortari's administration, the PND (1989-1994) specified that in order to combat drug trafficking, criminal organizations had to be dissolved and their financial resources seized.²⁶ Moreover, in President Ernesto Zedillo's administration, a timid fight against PSINs began in which major traffickers were arrested. Its PND (1995-2000) recognized that in order to preserve territorial integrity, criminal organizations should be targeted and punished.²⁷ During his administration, the Federal Law Against Organized Crime, which described the phenomenon for the first time and outlined the scope of the federal response, was approved.²⁸ In line with this effort, the National System of Public Safety and the Federal Preventive Police were created in 1995 and 1999, respectively.²⁹

The collapse of the seven-decade PRI supremacy and the Mexican democratization process in the 2000s hindered the drug-traffickers' ability to negotiate with the state, as the government was no longer willing to make long-term promises to them. The more democratic Mexico has become, the less tolerant it has been with PSINs.³⁰ The state's actions against criminal organizations were strengthened through repression and kingpin strategies. Although these strategies successfully frustrated certain illicit activities and weakened or dismantled some PSINs, they also triggered a fractionalization of PSINs into specialized factions that led to an increase in the number and type of crimes committed. Kingpin strategy opponents argue the strategy has led to an increase in violence levels, that Mexican illicit networks are far from defeated, and that the arrests or killings are limited mainly to lower level cartel lieutenants. Decapitation strategy supporters argue that the increased violence has been caused by and limited

²⁴ Mexico's Deputies Chamber, "Ley de Planeación." (January 5, 1983). Last reformed April 9, 2014. Accessed December 1, 2014. Available at: <http://www.diputados.gob.mx/LeyesBiblio/pdf/59.pdf>.

²⁵ Federation's Official Journal, "Seguridad Nacional." *Plan Nacional de Desarrollo 1983-1988* (May 31, 1983). Accessed December 1, 2014. Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=4805999&fecha=31/05/1983.

²⁶ Federation's Official Journal, "Soberanía, Seguridad Nacional y Promoción de los Intereses de México en el Exterior." *Plan Nacional de Desarrollo 1988-1994* (May 31, 1989). Accessed December 1, 2014. Available at: <http://ordenjuridico.gob.mx/Publicaciones/CDs2011/CDPlaneacionD/pdf/PND%201989-1994.pdf>.

²⁷ Federation's Official Journal, "Crimen Organizado." *Plan Nacional de Desarrollo 1995-2000* (May 31, 1995). Accessed December 1, 2014. Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=4874791&fecha=31/05/1995.

²⁸ Mexico's Deputies Chamber, "Ley Federal Contra la Delincuencia Organizada." (November 7, 1996). Last reformed: March 14, 2014. Accessed December 1, 2014. Available at: <http://www.diputados.gob.mx/LeyesBiblio/pdf/101.pdf>.

²⁹ Alejandro Hope, "Las trampas del Centralismo." *Revista Nexos* (July 1, 2014). Available at: <http://www.nexos.com.mx/?p=21661>.

³⁰ Jones, "The State Reaction," 156.

to criminals, and that it is a sign of success against all Mexican criminal organizations, which are now allegedly in decline and consumed by an internecine conflict after the killing or arrest of their leaders.³¹ In this sense, some of the most important arrests of PSINs leaders were done during President Vicente Fox's administration. Its PND (2001-2006) stated that the armed forces were committed to counter criminal organizations and their illicit activities.³² To complement this objective, the Federal Investigations Agency was created during his administration, which established coordination between federal, state, and local authorities.³³

Moreover, in President Felipe Calderon's administration, national security was elevated to the top of the agenda.³⁴ This was reflected in its PND (2006-2012), which indicated that in order to recover the state's force and regain its territory, PSINs had to be disarticulated by attacking their structure and operational logistics.³⁵ This objective was reinforced in its National Security Program (PSN) (2009-2012),³⁶ which established that the armed forces were deployed to confront armed groups, reclaim territory, and attack PSINs' operational networks.³⁷ The administration's National Security Strategy was comprised of five main components: 1) weakening all criminal organizations; 2) strengthening security and law enforcement institutions, especially at the local level; 3) reconstructing the legal framework; 4) rebuilding the social tissue in communities that have been affected the most; and 5) strengthening international cooperation.³⁸ Furthermore, in March 2009, Mexico's Attorney General Office issued an agreement where it offered millions of Mexican pesos to whomever gave relevant, accurate, and timely information that contributed to the detention of the major Mexican criminal organizations' top leaders and lieutenants.³⁹ Through bilateral cooperation with the United States, Mexican forces captured or killed 25 of the 37 most-wanted drug kingpins in Mexico by the end of the administration.⁴⁰

President Enrique Peña Nieto's administration aims to shift the previous administration's rhetoric on combating PSINs and focuses on preventive approaches to tackle security issues.⁴¹

³¹ Ibid, 153, 156.

³² Federation's Official Journal, "Área de Orden y respeto." *Plan Nacional de Desarrollo 2000-2006* (May 30, 2001). Accessed December 1, 2014. Available at: http://dof.gob.mx/nota_detalle.php?codigo=766335&fecha=30/05/2001.

³³ Hope, "Las trampas del Centralismo."

³⁴ Eduardo Guerrero, "La guerra de los seis años." *Revista Nexos* (December 1, 2012). Available at: <http://www.nexos.com.mx/?p=15082>.

³⁵ Office of the President of Mexico, "Crimen Organizado." *Plan Nacional de Desarrollo 2006-2012* (May 31, 2006). Accessed December 1, 2014. Available at: <http://pnd.calderon.presidencia.gob.mx/index.php?page=crimen-organizado>.

³⁶ The National Security Program was first announced in 2005 in Mexico's National Security Law and was first implemented towards the end of the first half of President Calderon's administration. This Program is required to be linked to the administration's National Development Plan.

³⁷ Federation's Official Journal, "Crimen Organizado." *Programa para la Seguridad Nacional 2009-2012* (August 20, 2009). Accessed December 1, 2014. Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5106082&fecha=20/08/2009.

³⁸ Eduardo Guerrero, "La estrategia fallida." *Revista Nexos* (December 1, 2012). Available at: <http://www.nexos.com.mx/?p=15083>.

³⁹ Federation's Official Journal, "Acuerdo A/123/09." (March 23, 2009). Accessed December 1, 2014. Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5084563&fecha=23/03/2009.

⁴⁰ Lee, "Mexico's Drug War."

⁴¹ Eduardo Guerrero, "Después de la Guerra." *Revista Nexos* (December 1, 2013). Available at: <http://www.nexos.com.mx/?p=15586>.

Although its PND (2013-2018) states that reducing violence levels caused by organized crime in the country is a priority,⁴² as well as reducing the number of crimes that most affect the population, such as kidnappings and extortions, it does not lay out a substantial strategy on how to combat PSINs.⁴³ However, its PSN (2014-2018) recognizes that the state's action has led to the fragmentation of criminal structures and diversification of criminal activities. To overcome this, it maintains that federal authorities must design containment schemes to combat criminal networks, as part of the National Effort against Drug trafficking.⁴⁴ In response to protests after the killing of 6 people and the disappearance of 43 students in Iguala, Guerrero on September 26, 2014, by the hands of corrupt municipal authorities working for the local PSIN *Guerreros Unidos*, President Peña Nieto announced a series of measures to make the rule of law a priority in his administration. However, he failed to acknowledge the federal government's responsibility in the act; there was no cabinet reshuffling to signal an acknowledgment of its failure, and his proposals were limited to drafting laws to reform local and state authorities, and deploying federal forces to the region without laying out a substantial strategy to combat PSINs.⁴⁵

Since 2000, the federal government is required to submit a Federal Expenses Budget annually to Congress. The data available shows an upward tendency in the budget allocated to this sector in the last three administrations, suggesting that combatting PSINs has increased in relevance to the federal government. (See appendix D)

The Role of the United States

The common threat of illicit networks can draw states closer to assist each other in defeating them. Since the early 1980s through today, U.S.-Mexican security relations have been cooperative and steadily improved. Although both countries are committed to combat organized crime, they differ in their means. While the Mexican government is more interested in reducing criminal violence and attacking illicit networks, the United States has focused more on stopping transnational drug flows and less on restricting the southbound weapons trafficking.⁴⁶

The United States' policy towards PSINs, guided by its National Security Strategies (NSS), has been largely confrontational. During President Ronald Reagan's administration (1981-1989), the NSS stated that in order to deal with drug trafficking, the United States had to assist other countries in the interdiction and eradication of illicit narcotics production and traffic.⁴⁷ President George H. W. Bush's (1989-1993) NSS contended that in order to combat

⁴² In the section Pact For Mexico, in order to overcome the increase in violence Peña Nieto's administration proposed a national plan for prevention and community participation, a reform to the police by coordinating state polices and creating a national gendarmerie, the nation wide implementation of the new oral-adversarial criminal justice system, the implementation a nation wide penal code, and a prisons' comprehensive reform.

⁴³ Federation's Official Journal, "Seguridad Nacional." *Plan Nacional de Desarrollo 2013-2018* (May 20, 2013). Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5299465&fecha=20/05/2013.

⁴⁴ Federation's Official Journal, "Delincuencia Organizada Transnacional." *Programa para la Seguridad Nacional 2014-2018* (April 20, 2014). Available at: http://dof.gob.mx/nota_detalle.php?codigo=5342824&fecha=30/04/2014.

⁴⁵ H.T., "Missing the point." *The Economist* (November 27, 2014). Available at: <http://www.economist.com/blogs/americasview/2014/11/mexico-s-law-and-order-crisis>.

⁴⁶ Bailey, *The Politics of Crime in Mexico*, 167-171.

⁴⁷ National Security Strategy Archive, "National Security Strategy." (1987), 34. Available at: <http://nssarchive.us/NSSR/1987.pdf>; National Security Strategy Archive, "National Security Strategy." (1988), 34, <http://nssarchive.us/NSSR/1988.pdf>.

drug trafficking, the United States' military and foreign intelligence activities had to be coordinated with the host-country's law enforcement agencies to identify illicit drugs smuggling and the networks that facilitated and managed this trafficking.⁴⁸ Moreover, in President Bill Clinton's administration (1993-2001) the NSS explained that to combat drug trafficking there would be a shift in emphasis from transit interdiction to an effort with source countries to build institutions, destroy trafficking organizations, and stop supplies.⁴⁹ In President Clinton's second period, the NSS stated that the strategy to combat drug trafficking, in concert with allies abroad, would be to prosecute major drug traffickers, destroy drug trafficking organizations, prevent money laundering, and eliminate criminal financial support networks.⁵⁰ On December 3, 1999, President Clinton signed the Foreign Narcotics Kingpin Designation Act to apply economic and financial sanctions to significant foreign narcotics traffickers and their organizations worldwide.⁵¹

The United States' security policy after September 11, 2001, was driven by the war against terror and thus the priorities shifted to regional concerns in the Middle East and Asia. Notwithstanding, President George Bush's (2001-2009) National Security Strategy in his first term contended that to combat drug trafficking in Latin America they would defeat terrorist organizations and cut off the supply of drugs, while reducing the demand for drugs in their own country.⁵² During President Bush's second term, the NSS did not lay out a strategy to combat drug trafficking at all. However, in December 2006 Mexican President Felipe Calderon launched the war against drugs and requested the United States' help to combat criminal organizations in the region, causing a shift in President Bush's approach. In this context, the United States government launched the Merida Initiative in 2007, designating 1.4 billion dollars in U.S. funds for Mexico, Central America, Haiti, and the Dominican Republic. The objective was to break the power and impunity of criminal organizations, strengthen the U.S. southern border, improve Mexican institutional capacity, and reduce the demand for drugs.⁵³

Finally, President Barack Obama's (2009-2016) NSS states that in order to combat transnational crime and trafficking networks, a multidimensional strategy that "safeguards citizens, breaks the financial strength of criminal and terrorist networks, disrupts illicit trafficking networks, defeats transnational criminal organizations, fights government corruption,

⁴⁸ National Security Strategy Archive, "National Security Strategy." (1990), 29. Available at: <http://nssarchive.us/NSSR/1990.pdf>.

⁴⁹ National Security Strategy Archive, "National Security Strategy." (1994), 9. Available at: <http://nssarchive.us/NSSR/1994.pdf>; National Security Strategy Archive, "National Security Strategy." (1995), 11. Available at: <http://nssarchive.us/NSSR/1995.pdf>; National Security Strategy Archive, "National Security Strategy." (1996), 16. Available at: <http://nssarchive.us/NSSR/1996.pdf>; National Security Strategy Archive, "National Security Strategy." (1997), 13. Available at: <http://nssarchive.us/NSSR/1997.pdf>.

⁵⁰ National Security Strategy Archive, "National Security Strategy." (1998), 18. Available at: <http://nssarchive.us/NSSR/1998.pdf>; National Security Strategy Archive, "National Security Strategy." (2000), 15. Available at: <http://nssarchive.us/NSSR/2000.pdf>; National Security Strategy Archive, "National Security Strategy." (2001), 33. Available at: <http://nssarchive.us/NSSR/2001.pdf>.

⁵¹ U.S. Department of the Treasury, "Narcotics Sanctions Program." (Updated July 18, 2014), 3. Accessed December 1, 2014. Available at: <http://www.treasury.gov/resource-center/sanctions/Programs/Documents/drugs.pdf>.

⁵² National Security Strategy Archive, "National Security Strategy." (2002), 10. Available at: <http://nssarchive.us/NSSR/2002.pdf>.

⁵³ Bailey, *The Politics of Crime in Mexico*, 168.

strengthens the rule of law, bolsters judicial systems, and improves transparency” is needed.⁵⁴ This objective was supported with the Merida Initiative revision in 2010. Under the label Beyond Merida, President Obama’s administration shifted from a combined regional perspective to one with separate sub regions, and defined four pillars: disrupting organized criminal groups, institutionalizing the rule of law, building a 21st century border, and building strong and resilient communities.⁵⁵ The United States Congress has appropriated 2.1 billion dollars for Mexico since the Merida Initiative began in fiscal year 2008. The funds are allocated to military equipment, capacity building, and training to aid Mexican authorities in its combat against PSINs. (See appendix E). Finally, in July 2011, the United States Strategy to Combat Transnational Organized Crime was issued.⁵⁶ The Strategy contends that in order to overcome the challenge posed by transnational criminal networks their infrastructures should be targeted, their kingpins pursued, and their economic and corruptive powers broken.⁵⁷

U.S. law enforcement agencies have played a major role in assisting the Mexican state against profit-seeking illicit networks. As the Mexican state has decapitated PSINs through a kingpin strategy, it has fractured these. An example of a splintering Mexican PSINs is the Arellano-Félix Organization.

The Arellano-Félix Organization

The Arellano-Félix Organization (AFO), also known as the Tijuana Cartel, was once considered one of the most powerful Mexican PSINs. Based in Baja California, it was organized around familial ties, had a flat structure, and a transnational business strategy. Despite the resilience shown in the 1980s and 1990s, in the first two decades of the 21st century the AFO faced several disruptive events in which it lost its top leaders to arrests or death. This decapitation led to its fragmentation into two factions, one remained as a transnational PSIN that, despite tolerant and collusive state action, is severely weakened. The other adopted a territorial business strategy and was dissolved due to repressive state action.⁵⁸

During the 1980s, drug trafficking in Mexico was a highly transnational “loosely coupled federation.”⁵⁹ Federal Security Directorate agents were corrupted into being complicit in the drug trafficking business. This allowed PSINs to work under a period of peaceful cooperation known

⁵⁴ National Security Strategy Archive, “National Security Strategy.” (2010), 49. Available at: <http://nssarchive.us/NSSR/2010.pdf>.

⁵⁵ U.S. Department of State, “Merida Initiative.” Accessed December 1, 2014. Available at: <http://www.state.gov/j/inl/merida/>; Clare Ribando Seelke and Kristin Finklea, “U.S.-Mexican Security Cooperation: The Mérida Initiative and Beyond.” *Congressional Research Service* (April 8, 2014). Available at: <https://fas.org/sgp/crs/row/R41349.pdf>.

⁵⁶ The Strategy recognizes that the demand for illicit drugs, both in the United States and other countries, fuels the power, impunity, and violence of criminal organizations. It details that Mexican transnational criminal organizations are expanding beyond drug trafficking into human smuggling, weapons smuggling, bulk cash smuggling, extortion, and kidnapping.

⁵⁷ White House, “Strategy to Combat Transnational Organized Crime.” (July 2011), 6, 9, 13-14, 16, 18, 35, 27. Available at: http://www.whitehouse.gov/sites/default/files/Strategy_to_Combat_Transnational_Organized_Crime_July_2011.pdf.

⁵⁸ Jones, “The State Reaction,” 117.

⁵⁹ Ibid, 120.

as *Pax Padrino*, under the leadership of Miguel Ángel Félix Gallardo's, *El Padrino* (The Godfather), Guadalajara Cartel's leader.⁶⁰

In February 1985, Drug Enforcement Administration (DEA) agent Enrique Camarena was kidnapped, tortured, and murdered in Guadalajara, Jalisco. After his death, the United States government put enormous pressure on the Mexican government to cooperate in the investigation. The Mexican state responded by arresting *El Padrino* on April 8, 1989, for his presumed complicity in agent Camarena's death. While in prison, he continued coordinating his cartel's operations until he was moved to a maximum-security prison in 1991, where he allegedly divided the territory between his major lieutenant groups: the Sinaloa-based group, the Arellano-Félix brothers; and the Ciudad Juárez-based group. The AFO was assigned the Tijuana territory in Baja California, where they continued to operate under a transnational business strategy trafficking cocaine and marijuana, and laundering profits.⁶¹

Upon taking control of the territory, they entered into conflict with the Sinaloa Cartel led by Joaquín Guzmán Loera, *El Chapo* (Shorty), who had received the nearby Mexicali trafficking corridor, which led the AFO to recruit enforcers headed by David Barron-Corona to fight them. After a frustrated attack against AFO leaders by *El Chapo*'s enforcers in 1992, AFO enforcers assassinated Mexican Archbishop Jesús Posadas on May 24, 1993, at the Guadalajara airport in a case of mistaken identity. AFO enforcers responsible for hunting down *El Chapo* thought they had killed him. The killing of an archbishop put enormous pressure on the state from the Catholic Church, one of the most respected institutions in Mexico, forcing the government to bring down the AFO.⁶² This was the first major disruptive event the PSIN underwent.

For the next two years following the assassination, AFO leadership went into hiding and bribed high-level Mexican government officials to soften the government's response. Benjamín Arellano-Félix, AFO leader, had the enforcers involved in Archbishop Posada's assassination arrested, to portray a strong state crackdown on the AFO. After a while, the AFO was profit-starved and restructured its business strategy by engaging in high-profile kidnappings on an "as-needed" basis. During this period, although Benjamín remained as the organization's leader, the operational control was left to high-level lieutenant, Ismael Higuera-Guerrero, *El Mayel* (short for Ismael).⁶³

In 1997, two incidents marked the beginning of the AFO's weakening. The first was David Barron-Corona's death, head of the AFO's group of enforcers, on November 27, 1997, after his failed attempt to kill *Zeta* magazine director, Jesus Blancornelas, who had written lengthy stories about AFO leaders.⁶⁴ The second was the arrest of Arturo Páez-Martínez, *El Kitty* (The Kitty), an AFO high-level lieutenant who was extradited to the United States in 2001 after Mexico's Supreme Court decided to allow extradition of Mexican citizens to the United States.⁶⁵

⁶⁰ Ibid, 120-124.

⁶¹ Investigaciones ZETA, "El empoderamiento y el ocaso de una familia del narco." *Zeta Magazine* (July 1, 2014). Accessed December 1, 2014. Available at: <http://zetatijuana.com/noticias/reportaje/6472/el-empoderamiento-y-el-ocaso-de-una-familia-del-narco>.

⁶² Ibid.

⁶³ Jones, "The State Reaction," 136-138.

⁶⁴ ZETA, "El empoderamiento y el ocaso de una familia del narco."

⁶⁵ Jones, "The State Reaction," 139.

After the archbishop's death and the attempted killing of *Zeta* editor, the Mexican state adopted a stronger reaction against the PSIN. In 2000, the United States and Mexican law enforcement agencies cooperated in a decapitation strategy against AFO leaders, under Operation United Eagles. Through the training of Mexican forces and the electronic surveillance of the AFO, Jesús Labra-Aviles, *Chuy* (short for Jesús), and *El Mayel*, both high-level lieutenants, were arrested in this same year.⁶⁶ Two years later, two major disruptive events marked the beginning of the AFO's dismantlement phase. On February 11, 2002, Mexican forces killed Ramón Arellano-Félix and in March 2002 Benjamín Arellano-Félix was arrested, both top AFO leaders. The death of Ramón led to the weakening of the operational control over the AFO enforcers, while the arrest of Benjamín, head of the organization, represented a major blow to the AFO's central command.⁶⁷ With these key losses, AFO members in custody were willing to testify. *El Kitty* started cooperating with United States law enforcement in the case against top AFO leadership. During this period of decapitation, operational control over AFO enforcers and business strategy weakened, and there was a major loss of Colombian cocaine connections. This dramatically reduced profits and the organization was forced to diversify its criminal activities to compensate for this loss. After Ramón's death and Benjamín's arrest, the AFO had to reorganize its structure. Francisco Javier Arellano-Félix, *El Tigrillo* (The Little Tiger), the youngest brother, headed the organization until he was arrested off the coast of Baja California on August 14, 2006, as part of a joint DEA/Coast Guard Operation Shadow Game. A couple of months later, on January 2, 2007, the federal government launched a joint operation in Baja California to combat criminal organizations in the region. As part of this effort, Eduardo Arellano-Félix, *El Doctor* (The Doctor), who had assumed the AFO's leadership after *El Tigrillo*'s arrest, was arrested on October 26, 2008.⁶⁸

The arrests and death of AFO's top leadership in the first decade of the 21st century reduced the PSIN's resilience and led to its fragmentation. Fernando Sanchez Arellano, *El Ingeniero* (The Engineer), who had already taken the PSIN's operational control two years earlier with the support of his uncle and mentor, *El Doctor*, assumed total control of the organization after *El Doctor*'s arrest. However, AFO lieutenant Teodoro Garcia Simental, *El Teo* (short for Teodoro), who headed a group of enforcers within the PSIN that began kidnapping in the early 2000s when the AFO was starved for profits, decided to split from *El Ingeniero*. *El Teo* believed *El Ingeniero* was a weak leader and wanted to continue kidnapping for profits for his group, while *El Ingeniero* believed *El Teo*'s enforcers were heating the turf and drawing too much attention with the increase in kidnappings.⁶⁹ The contest led to an internecine conflict within the AFO and its fragmentation into two factions in April 2008. The faction led by *El Teo* adopted a territorial business strategy and continued kidnapping for profits. The faction led by *El Ingeniero* maintained its transnational business strategy trafficking drugs and operating money laundering front-businesses.⁷⁰ With the increasing number of kidnappings, *El Teo*'s faction attracted the state and civil society's attention, triggering a stronger state action. This repressive

⁶⁶ Ibid, 140.

⁶⁷ ZETA, "El empoderamiento y el ocaso de una familia del narco."

⁶⁸ Ibid.

⁶⁹ Jones, "The State Reaction," 144-145.

⁷⁰ ZETA, "El empoderamiento y el ocaso de una familia del narco."

approach led to the arrest of *El Teo* on January 12, 2010, as well as that of his top lieutenants – Raydel López Uriarte, *El Muletas* (The Crutches), and José Manuel García Simental, *El Chiquilin* (The Little One) – in February 2010. These disruptive events led to the dissolution of *El Teo*'s faction.⁷¹

The *Ingeniero*-led faction reassumed control of the PSIN, maintaining a low profile to avoid the state's attention and initiating an alliance with the Sinaloa Cartel that would allow them to traffic drugs through its territory in exchange for a fee. Notwithstanding, with information provided by United States agents, the Mexican Army arrested *El Ingeniero* on June 23, 2014. The arrest of its only leader severely weakened the AFO, which is being supplanted by the Sinaloa Cartel.⁷² (See appendix F)

Findings and Policy Implications

Mexico has been challenged by the presence of profit-seeking illicit networks in its territory. Its strategic geographical position between the main producers of cocaine and the largest consumer, coupled with weak police and judicial institutions, have made the emergence and prevalence of PSINs in the country inevitable. The rising violence in Mexico in the last years has placed pressure on policy makers to develop a strategy to eradicate all criminal organizations and violence related to them.

The Mexican-U.S. kingpin strategy has resulted in flatter PSINs, which appear to threaten the state's legitimacy less. Large PSINs are often comprised of both territorial and transnational cells. As the Mexican state has decapitated illicit networks, it has splintered them into smaller factions along lines of functional specialization. One faction usually adopts a transnational business strategy and the other a territorial one.

The data analyzed in this research suggests the state is targeting territorial PSINs first and being corrupted by transnational PSINs at the higher levels of government. As states maintain the advantage over illicit networks, PSINs that ally with the state were more resilient than PSINs that challenged the state through violence and territoriality. This research found that, given the clandestine nature of transnational PSINs' business strategies, these are better at evading the state's attention than territorial PSINs. As transnational PSINs are less violent in their interaction with the state than territorial PSINs and avoid engaging in crimes against the population, they mitigate state responses. The state reacts by tolerating their activities or colluding with them. This weak state action increases their resilience, which allows them to survive, reconstruct, or weaken after a disruptive event.

Meanwhile, Mexican PSINs that adopt a territorial business strategy become the state's priority because they challenge the its legitimacy, control over territory, use of force, and tax collection. Territorial PSINs are more visible to civil society due to their use of violence and engagement in crimes such as extortions and kidnappings. As territorial PSINs become the state's priority, these weaken, fragment, or dissolve. Territorial PSINs thus become less resilient than their transnational counterparts and are eliminated first. Therefore, Mexican illicit networks

⁷¹ George Grayson, *The Cartels* (Santa Barbara: Praeger, 2014), 84.

⁷² ZETA, "El empoderamiento y el ocaso de una familia del narco."

survive in an evolutionary manner as a process of natural selection takes place, in which surviving illicit networks will primarily be low profile, flat, transnational PSINs.

After evaluating PSINs' business strategies and reactions to disruptive events, a typology of PSINs' resilience levels was developed. With this categorization, it was demonstrated that an illicit network's business strategy triggers varying state reactions, which, depending on the strength of the response, affects a PSIN's resilience level. This research revealed that the key to resilience is based not only on how quickly a PSIN can adapt to the changes in its structure and business strategy after it has undergone a disruptive event, but on avoiding territorial business strategies, as this triggers a stronger state reaction.

Mexican illicit networks have proven highly resilient and survive under constant state attacks. However, with a sufficiently strong response, they can be dismantled. As the Mexican state, in coordination with the United States, has decapitated illicit networks it has splintered them. Examples of splintering Mexican PSINs include: the Sinaloa Cartel and its splinter, the Beltrán-Leyva Organization; the Arellano-Félix Organization and its splinter, the *El Teo* faction; the Gulf Cartel and its splinter, Los Zetas, and *La Familia Michoacana* and its splinter, *Los Caballeros Templarios*.

After analyzing the data collected and testing the typology, it was determined that a PSIN's level of resilience is largely dependent on its business strategy and on the state action against it. Transnational PSINs, such as the Sinaloa Cartel, typically survive unharmed, are forced to reorganize, are weakened, or splinter along lines of functional specialization after disruptive events caused by a weak and limited state action. However, it was demonstrated that when the Mexican state's actions against transnational PSINs are strong enough, normally triggered by U.S. pressure, illicit networks can splinter along lines of functional specialization, weaken, and even fragment. This was the case of the Arellano-Félix Organization. Meanwhile, it was resolved that strong and repressive state action usually causes territorial PSINs to become less resilient, causing them to weaken, fragment, or dissolve. This was illustrated by the dissolution of the AFO's faction led by *El Teo*.

There are many further research opportunities along the basis of what has been discussed here. The typology of PSINs' resilience levels could be extended not only to all Mexican PSINs, but to other types of illicit networks. The argument that territorial business strategies trigger a stronger state reaction and therefore reduce a PSIN's resilience level can be applied beyond Mexico.

Further research might also include the elaboration of more sophisticated patterns of PSINs' resilience levels. It is also important to examine in future research the process by which PSINs replace not only their leaders, but also other nodes in the network, when it is restructuring after suffering a disruptive event. Given the clandestine nature of PSINs, a challenge for further research would be to find reliable data on illicit networks, such as size and revenue, to further test resilience levels. Further research on Mexican PSINs must also focus on studying those illicit networks that have adopted a transnational business strategy, as these are a long-term threat for the Mexican state.

If it holds true that Mexican illicit networks survive in an evolutionary manner, surviving illicit networks will be primarily low profile, flat, transnational PSINs that have colluded with the state apparatus. Although transnational PSINs appear to threaten state legitimacy less, they

have become the Mexican state's long-term threat as they have established a plural authority between transnational PSINs and state authorities. This has weakened Mexico's rule of law, democracy, and economic development.

If all surviving PSINs adopt transnational business strategies, the state's ability to combat these PSINs will be more contingent upon improved police and judicial institutions than increased military capabilities. Building institutions and pursuing PSIN's leaders are both vital in combating PSINs. Strong institutions at the local, state, and federal levels will not only hinder the PSINs' ability to negotiate with the state, but will increase the state's intelligence capabilities to disrupt and frustrate illicit activities such as drug trafficking, money laundering, and the use of front-businesses.

Mexico and the United States appear to be deepening ties with each other in their fight against Mexican PSINs. Although much has been achieved under the Merida Initiative, more comprehensive and stronger actions need to be put in effect as the strengthening of transnational PSINs not only threatens Mexico, but the United States too. This is due to the fact that 90% of the drugs in the country enter through the southern border and there is the risk that violence in Mexico could spread into United States territory. In order to mitigate this, the United States government must adopt measures both within its territory and to aid Mexico. Internally, it should take actions to reduce demand for drugs, as well as disrupt the flow of weapons and bulk cash south of the border. In terms of aiding Mexico, the United States must enhance the coordination of military and intelligence activities with Mexico's law enforcement agencies to identify and destroy illicit networks, pursue their leaders, target their infrastructures, eliminate criminal financial support networks, and break their corruptive power. It should also help Mexico channel their resources and efforts to strengthen their institutions and eliminate corruption, especially at the higher levels of the state and federal agencies. Finally, the United States ought to aid the Mexican state in strengthening the rule of law and bolstering its judicial system, to maintain the state as the dominant unit of the international system.

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Appendix A

Table 1. Territorial vs. Transnational PSIN's business strategies

	Territorial PSINs	Transnational PSINs
Organizational structure	<ul style="list-style-type: none"> - Hierarchical structure due to need of high number of enforcers - Young and violent leadership 	<ul style="list-style-type: none"> - Flat structure - Experienced / sophisticated individuals and few enforcers
Size and market influence	<ul style="list-style-type: none"> - Large organizations, high number of enforcers - Less capital reserve resulting in diversification of criminal activity 	<ul style="list-style-type: none"> - Fewer individuals, allowing for higher profit margins - Strong market influence and financial muscle
Main types of crimes committed	<ul style="list-style-type: none"> - Kidnappings of citizens and rival criminals - Extortions of legitimate and illegitimate businesses - Human smuggling 	<ul style="list-style-type: none"> - Kidnapping of rival criminals or drug debtors - Money laundering - Drug trafficking
Major sources of revenue	<ul style="list-style-type: none"> - Low profile kidnappings - Extortions of legitimate and illegitimate businesses - Taxation for use of territory 	<ul style="list-style-type: none"> - High profile kidnappings - Money laundering - Legitimate and front businesses - Drug trafficking
Use of alliances	<ul style="list-style-type: none"> - Fewer and less stable alliances 	<ul style="list-style-type: none"> - More stable alliances based on business interests - Likely to create "federations" with other PSINs

Appendix B

Table 2. State's actions and PSINs' reactions

	Territorial PSINs	Transnational PSINs
Common state action	- <i>Repression</i>	- <i>Tolerance</i> - <i>Collusion</i>
Reaction to state action	- <i>Confrontation</i> by the threat and use of symbolic violence - <i>Corruption</i> of lower levels of government (local)	- <i>Evasion</i> of state actions by maintaining a low profile - <i>Corruption</i> of higher levels of government (federal / state)

Appendix C

Table 3. Typology of PSINs' resilience levels dependent on business strategy and state action

Type of PSIN	State Action	Resilience level
Transnational	Weak: tolerance or collusion	Survives unharmed
		Restructures
		Weakens
		Splinters along lines of functional specialization
Territorial	Strong: repression	Weakens
		Fragments
		Dissolves

Appendix D

Table 4. Mexican Military Budget (2000-2014)

Year	Military budget (millions of pesos)
2000	28,373
2001	31,298
2002	31,223
2003	31,730
2004	32,135
2005	30,638
2006	35,195
2007	43,152
2008	48,244
2009	59,682
2010	59,624
2011	73,348
2012	75,291
2013	82,675
2014	89,840

Source: Mexico's Ministry of Finance, Federal Expenses Budget

Appendix E

Table 5. Merida Initiative funding for Mexico (FY2008-2015)

Fiscal Year	Total (\$ in millions)
FY2008	400
FY2009	720
FY2010	385.3
FY2011	143
FY2012	281.8
FY2013	227.2
FY2014 (Estimate)	194.2
FY2015 (Request)	115

Source: Congressional Research Service, U.S.-Mexican Security Cooperation: The Merida Initiative and Beyond

Appendix F

Table 6. Disruptive events suffered by the Arellano-Félix Organization (transnational) and the El Teo faction (territorial), and the effect on its resilience level

Disruptive event	State action	PSIN's resilience level
1985: DEA agent Enrique Camarena was killed	- Repression in response to U.S. pressure	- Guadalajara Cartel dissolved - <i>El Padrino</i> divided territory
1993: Archbishop Posadas was killed	- Tolerance - Limited repression in response to pressure from Catholic Church	- AFO leaders went into hiding and restructured
1997: David Barron-Corona was killed	- Limited repression	- AFO restructured
1997: <i>El Kitty</i> was arrested	- Limited repression	- AFO restructured
2000: Jesús Chuy Labra-Aviles was arrested	- Repression in response to U.S. pressure	- AFO restructured
2000: <i>El Mayel</i> was arrested	- Repression in response to U.S. pressure	- AFO restructured
2002: Ramón Arellano-Félix was killed	- Repression in response to U.S. pressure	- AFO restructured
2002: Benjamín Arellano-Félix was arrested	- Repression in response to U.S. pressure	- AFO restructured
2006: <i>El Tigrillo</i> was arrested	- Arrested by United States authorities	- AFO restructured
2008: <i>El Doctor</i> was arrested	- Repression - Joint operation in Baja California	- AFO fragmented
2010: <i>El Teo</i> , <i>El Muletas</i> , and <i>El Chiquilin</i> were arrested	- Repression	- <i>El Teo</i> faction was dissolved - AFO restructured
2014: <i>El Ingeniero</i> was arrested	- Repression in response to U.S. pressure	- AFO was severely weakened

Moroccan Jihadism in Europe: A Quantitative Analysis of Migration and Terror Plots by Individuals of Moroccan Origin in Western Europe

JEFFREY D. PALMER

This essay provides an analysis of the quantitative properties of Moroccan migration patterns and incidents of jihadist terrorism, whether disrupted, failed, or executed, by individuals of Moroccan origin (i.e. first- and second-generation migrants) in Western Europe from 2001 to 2013.

This study offers an analysis of the 21 incidents of jihadist terrorism in Western Europe from 2001 to 2013 in which individuals of Moroccan origin were involved. The study draws from a sample of 109 total incidents of jihadist terrorism in Western Europe during that time, including plots disrupted, failed, or executed, as illustrated in separate articles published in *Studies in Conflict & Terrorism* by Javier Jordan and Peter Nesser. The essay first explores trends of Moroccan migration to Western Europe, which is expected to supplant Turkish migrants as the largest non-EU migrant contingent in Western Europe within the decade. The sample of jihadist terror incidents is then outlined and the location, nature, and modus operandi of the plots are analyzed for key findings. The dataset reveals there is no apparent correspondence between migrant population sizes, the rate of remittances, and incidents of terrorism. Discussion follows from an anomaly arising from the absence of terrorist plots involving Moroccan migrants in France, which hosts the greatest Moroccan migrant contingency – over 35% of all Moroccans living abroad. The author concludes that incidents of terror in Western Europe by individuals of Moroccan origin may be diminished in the presence of qualitative factors, such as historic relations, a high quality of life, and the relative ease of assimilation.

Sources and Methods

The collection of migratory data varies across the European Union, as each nation employs a unique method to generate migrant data; for example, Spain offers data for foreign nationals, while others gather statistics of first-generation migrants. These numbers often differ from statistics offered by the Moroccan consulate, which includes migrants, their descendants, and in some cases undocumented migrants. As such, in order to maintain consistency for the quantitative analysis of migration and to avoid conflicting reports, the analysis relies on an academic publication by the Maastricht Graduate School of Governance in The Netherlands entitled, “Migration in Morocco: History, Current Trends and Future Prospects (2009).” As a general rule, the migratory data employed in this study should be considered estimation.

The data collected for jihadist terror incidents is found to be more accurate, but should not be considered infallible. As principal sources, this study relies upon Javier Jordan’s “Analysis

of Jihadi Terrorism Incidents in Western Europe, 2001-2010” as well as Peter Nesser’s “Toward an Increasingly Heterogeneous Threat: A Chronology of Jihadist Terrorism in Europe 2008-2013,” both published in *Studies in Conflict & Terrorism*. As leading academics in the study of global jihadist terrorism, the data provided in these studies are generally considered to be objective and accurate. Although Jordan and Nesser employ different systems of threat categorization, both systems provide a general idea of the gravity of a particular plot and are reconciled here accordingly. In the dataset, Category 1 reflects plots presenting the greatest threat and Category 3 the lowest.

Classification of Incidents

The determination of Moroccan nationality or origin of individuals involved in plots spanning from 2001-2013 is based on media sources where such information is not provided by Nesser and Jordan. In just eight out of 109 cases, the origin of the perpetrator(s) was indeterminable and was therefore omitted from the present dataset. In other cases, where media sources were the primary source of information, this study attempted to analyze critically and confirm nationality through the triangulation of alternative sources.

Terrorist acts committed by the same cell or group on different days have been classified in the dataset as distinct incidents. For example, the string of attacks and plots committed by the Hofstad Group between 2003 and 2005, composed of a majority of individuals of Moroccan origin, are classified herein as separate incidents. Inevitably, this inclusion within the dataset alters final results and implications, but is important to note that the Hofstad Group plots were conspired or executed by multiple individuals.

Terrorist acts or plots that resulted in the arrest of at least one individual of Moroccan origin are included in the dataset. For example, in October 2012 Italian police arrested members of a Milan-based cell composed of 14 Algerians and one Moroccan. In this particular case, the Milan cell was affiliated with the Salafist Group for Preaching and Combat (GSPC) -- now integrated into al-Qaeda in the Islamic Maghreb (AQIM) -- which has a broad network spanning the Maghreb region, and was thus included in the sample.

Moroccan Migration to Western Europe

Western Europe has for decades been a destination for Moroccan nationals seeking not only greater economic opportunity and quality of life, but also to reunite with cross-border relatives. Some 90% of over three million Moroccan nationals living abroad are currently distributed across European countries, with a vast majority living in France, Spain, and Italy.¹ Indeed, Moroccans constitute the second largest non-European Union migrant community within the

¹ Özge Bilgili and Silja Weyel, *Migration in Morocco: History, Current Trends and Future Prospects*, Paper Series: Migration and Development Country Profiles. Maastricht Graduate School of Governance, December 2009, 21.

European Union and are expected to surpass the Turkish contingent within the next decade.² Within Morocco today, the European influence impressed upon young adults is readily apparent. In the economic capital of Casablanca, for example, business dealings are seldom executed in Moroccan Arabic; instead, French is spoken to reflect a degree of professionalism, education, and intellect. Additionally, many Moroccan students learn to speak a multitude of languages because of their desire to immigrate to Western Europe.

France hosts the largest contingency of Moroccans with 1.13 million, or 35.4% of all Moroccans living abroad. Heavy migration to France is largely due to proximity, but is also attributed to strong relations throughout history as a former colonial ruler of northern Morocco. Additionally, Morocco and France have since 1987 shared bilateral agreements regarding labor migration of Moroccans in France.³ This has resulted in a Moroccan diaspora twice the size of the second greatest migrant contingent in France. The strong bilateral relationship enjoyed by Morocco and France has also played a large role in the geopolitical environment of North Africa, particularly pertaining to their respective relationships with Algeria.

Spain currently hosts the second largest Moroccan diaspora of 547,000 individuals. In the past two decades Spain gained a greater contingent of Moroccan migrants due to immigration and labor reform. Like France, Spain once held several protectorates on Moroccan land along its coast and in the south, and currently claims sovereignty over the North African territorial enclaves of Ceuta and Melilla. Italy has also recently attracted low-skilled migrant workers, where an estimated 379,000 Moroccan migrants reside.

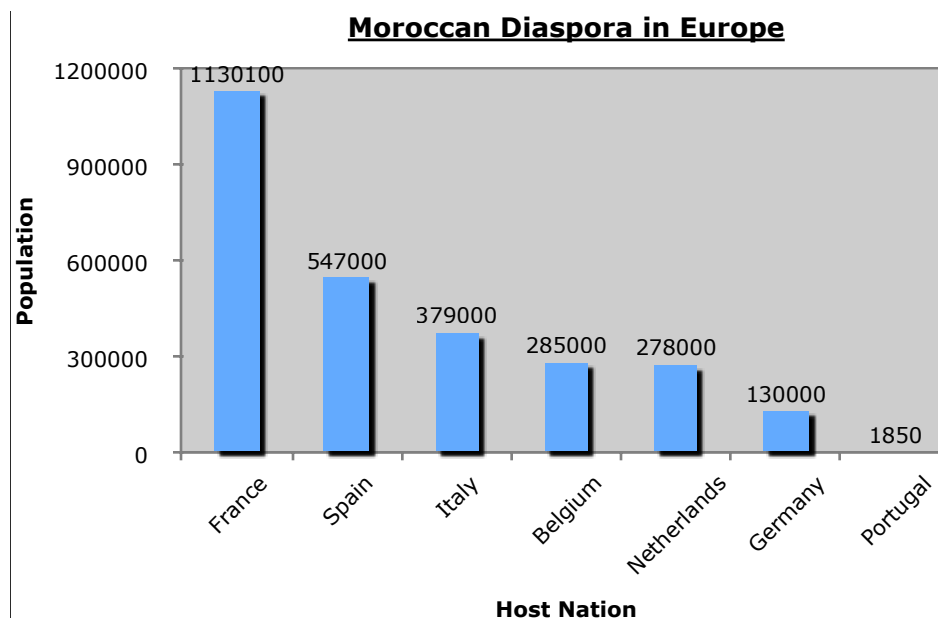


Chart 1: Distribution of the Moroccan Diaspora in Europe (2009)

² Hein de Haas, "Morocco, Country profile, No. 16" *Focus Migration*, (Hamburg: Hamburg Institute of International Economics (HWWI), 2009), 4. Accessed at http://focus-migration.hwwi.de/uploads/tx_wilpubdb/CP_16_Morocco.pdf

³ Migration Policy Centre Team, *MPC Migration Profile: MOROCCO*, June 2013, 5.

While the distribution of Moroccan migrants to Western Europe is largely in France, Spain, and Italy, significant communities also reside in the Netherlands, Belgium, and Germany (Chart 1). The countries of Belgium, which hosts 285,000 Moroccan migrants, and the Netherlands, hosting 278,000, maintain policies notably tolerant of Islamic culture and values and represent the fourth and fifth largest Moroccan contingent, respectively.⁴ Finally, Germany hosts the sixth largest Moroccan contingent at 130,000 as of 2009.

Incidents of Jihadist Terrorism in Western Europe from 2001 – 2013

Between 2001 and 2013, the data reflects that 21 of 109 (19.2%) total incidents of jihadist terror in Western Europe involved individuals of Moroccan origin (i.e., first- and second-generation migrants), including those who had been arrested for having some role in the planning, organization, or execution of a plot. In most cases, information pertaining to the country of origin, intended target, and intended method or weapon was discernible through open sources. The data reveals (Chart 2) that there is no apparent correlation between the Moroccan diaspora in Western Europe and incidents of jihadist terrorism.

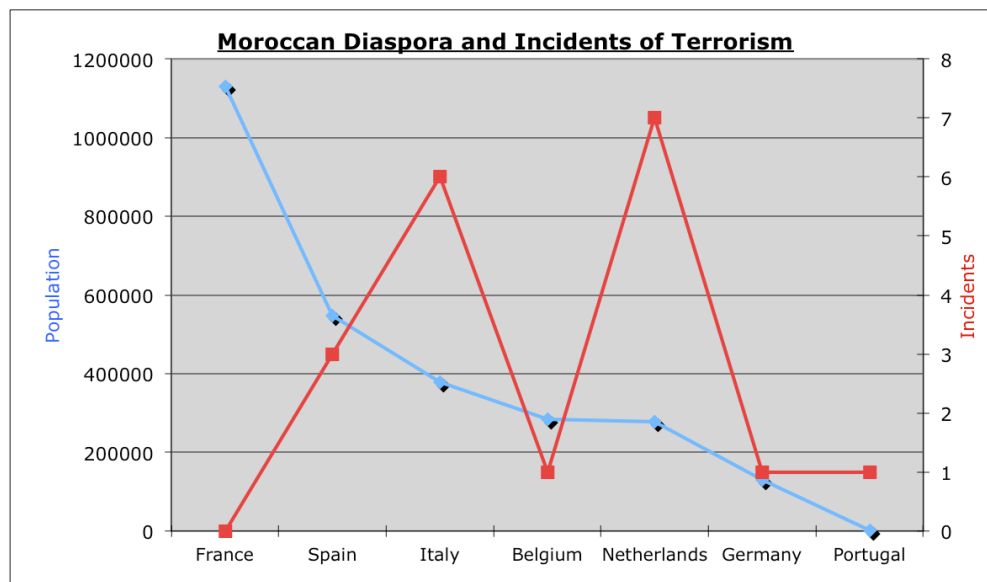


Chart 2: Moroccan Diaspora in Western Europe and Incidents of Terrorism Involving Individuals with Moroccan Origin from 2001-2013

Dataset results and implications^{5 6}

The dataset results are surprising when looking at the distribution of the Moroccan diaspora across Western Europe. The Netherlands, whose polity has historically been marked by pluralism

⁴ Bilgili and Weyel, *Migration in Morocco: History, Current Trends and Future Prospects*, 21.

⁵ Javier Jordan, "Analysis of Jihadi Terrorism Incidents in Western Europe, 2001-2010," *Studies in Conflict & Terrorism*, 35:5 (2012), 382-404.

⁶ Peter Nesser, "Toward an Increasingly Heterogeneous Threat: A Chronology of Jihadist Terrorism in Europe 2008-2013," *Studies in Conflict & Terrorism*, 37:5 (2014), 440-456.

and tolerance of its large immigrant populations, represents the greatest frequency of jihadist terror plots.⁷ Seven out of twenty-one, or 33% of plots involving first- or second-generation Moroccans were in the Netherlands. Jihadist activity in the Netherlands is almost exclusively attributed to the highly active nature of the Hofstad Group from June 2004 - June 2005, which was responsible for six of the seven plots. The most notable incident committed by members of the Hofstad group is the violent murder of Dutch filmmaker Theo van Gogh. A majority of the members within the Dutch terrorist organization were of Moroccan origin. The Hofstad Group was also held responsible for the single incident in Portugal, in which authorities disrupted an alleged plot to bomb the Euro Cup and assassinate Prime Minister José Manuel Barroso.⁸

Six out of twenty-one, or 28.5% of incidents/plots involving first- or second-generation Moroccans occurred in Italy. Three of those plots occurred in Milan, where Moroccan and Tunisian members of the GSPC sought to influence the political environment so as to prevent the reelection of Silvio Berlusconi.⁹ In the bomb plot of the Milan metro, inspired by the March 2004 Madrid metro bombings, attackers sought to exact revenge against President Berlusconi for contributing Italian troops to the coalition force in Iraq.¹⁰ This same GSPC cell additionally sought to destroy the Basilica di San Petronio in Bologna, Italy. The GSPC cell was disrupted by Italian and Moroccan police services before their plots could be executed.

Four jihadist terror incidents/plots involving individuals of Moroccan origin occurred in Spain. Only one, however, was executed: the March 2004 Madrid metro bombings. In this significant terrorist attack, the simultaneous detonation of ten bombs placed in four trains resulted in 191 deaths and 1,400 injuries.¹¹ This attack constitutes the most lethal plot involving individuals of Moroccan origin in Western Europe. A vast network of cells composed of jihadists of various nationalities and origins contributed to these violent attacks.

Only two incidents/plots occurred in Belgium and one in Germany. The single case that was executed in Belgium involved the attempted arson of a Shi'a mosque by a follower of the Sunni branch of Islam. During the incident, the knife-wielding attacker poured gasoline over the floor before setting it alight. The mosque's imam, Abdullah Dadou, subsequently died of smoke inhalation while attempting to save a member of the congregation.¹²

⁷ Marcel Maussen and Thijs Bogers, "Tolerance and Cultural Diversity Discourses in the Netherlands," *ACCEPT PLURALISM Working Paper 11/2010*, European University Institute, (Amsterdam: University of Amsterdam, 2010), 10, 22-4.

⁸ Diogo Noivo, "Jihadism in Portugal: Grasping a Nebulous Reality," *ARI* (Madrid: Real Instituto Elcano 2010), 6.

⁹ Javier Jordan, "The Foiled Attacks in Italy in 2006," in *The Evolution of the Global Terrorist Threat: From 9/11 to Osama bin Laden's Death*, Bruce Hoffman and Fernando Reinares (eds.), (New York: Columbia University Press, 2014), 273.

¹⁰ *Ibid.*, 282-3.

¹¹ Javier Jordan and Nichola Horsburgh, "Mapping Jihadist Terrorism in Spain," *Studies in Conflict and Terrorism*, 28:3 (2005), p. 174.

¹² "Imam dies trying to save worshipper after axe-wielding attacker stormed into Belgian mosque and set it alight," *Daily Mail*, March 13, 2012. <http://www.dailymail.co.uk/news/article-2114244/Belgium-mosque-arson-attack-Imam-dies-trying-save-worshipper-Brussels-suburb.html>

The modus operandi of the incidents/plots is also revealing. Twelve out of twenty-one (57%) incidents/plots were to be executed by the use of an explosive, either homemade or industrial. The use of explosives appears to be preferred by jihadists because of its ability to garner media attention. In contrast, only two plots were to be committed through the use of a firearm, one by poison, and one, aforementioned, by arson. In five of the twenty-one cases, the method was unable to be determined by authorities or the press.

Incidents/plots involving individuals of Moroccan origin are generally done in a group setting or cell composed of at least three individuals. According to the data, eighteen out of twenty-one (85.7%) incidents/plots involved more than one individual. The remaining three cases were considered "lone wolf" plots, most notably the plot by Yehya Kadouri, a Dutch-Moroccan teenager who had self-radicalized and sought to make an explosive device in his parents' home using instructions from the Internet.

Interestingly, the radicalization process seems to be occurring within Western Europe and not in Morocco. In fact, most perpetrators or plotters apparently radicalized within their European host countries or countries of citizenship. The most notable cases of European domestic radicalization include individuals belonging to the Madrid bombing network, the Hofstad Group in the Netherlands, and the Milan cell in Italy. Indeed, these three groups represent the most networked jihadist contingency within the sample.

Not a single incident or plot involving first- or second-generation Moroccans was recorded in France, the nation with the largest Moroccan population. Again, of all Moroccans living abroad, 35.4%, or 1.2 million, are located in France. According to the dataset, there is a no apparent correlation between jihadist terror plots/incidents in Western Europe and Moroccan migration patterns.

The Anomaly of France

EUROPOL reports that arrests for religiously inspired terrorism in France constituted over 66% of all E.U. Member States in 2013.¹³ It seems counterintuitive, then, that there have been no recorded incidents or plots involving persons of Moroccan origin in France. One explanation may come from the relative economic prosperity France provides Moroccan migrants compared to other host nations of the Moroccan Diaspora.

Remittances sent to Morocco from abroad has been a large part of the Moroccan economy for decades and composed of 6.9% of Morocco's GDP in 2011. The greatest single source of remittances comes from France, which constitutes 40.4% of total inflows, followed by Spain (10.8%), Italy (10.7%) and Belgium (6.1%).¹⁴ Here, we find that remittances generally correlate to the population size within the Western European Moroccan diaspora (Chart 3).¹⁵ Although France represents the greatest source of remittances in absolute terms, there is no discernible advantage of remittances relative to the population. In fact, Germany and Italy

¹³ Europol, *European Union Situation and Trend Report 2014*, 27.

¹⁴ MPC *Migration Profile: MOROCCO*

¹⁵ Fernando García Quero and Aboussi Mourad, *Remittances in Crisis: is Moroccan development at risk?* Revista Internacional de Estudios Migratorios. December 2011, 27.

represent the greatest remittance rates relative to the Moroccan diaspora. Despite an unsatisfying explanation for instances of jihadist terrorism through remittance rates, there is some evidence that France provides qualitative advantages in the standard of living for individuals of Moroccan origin.

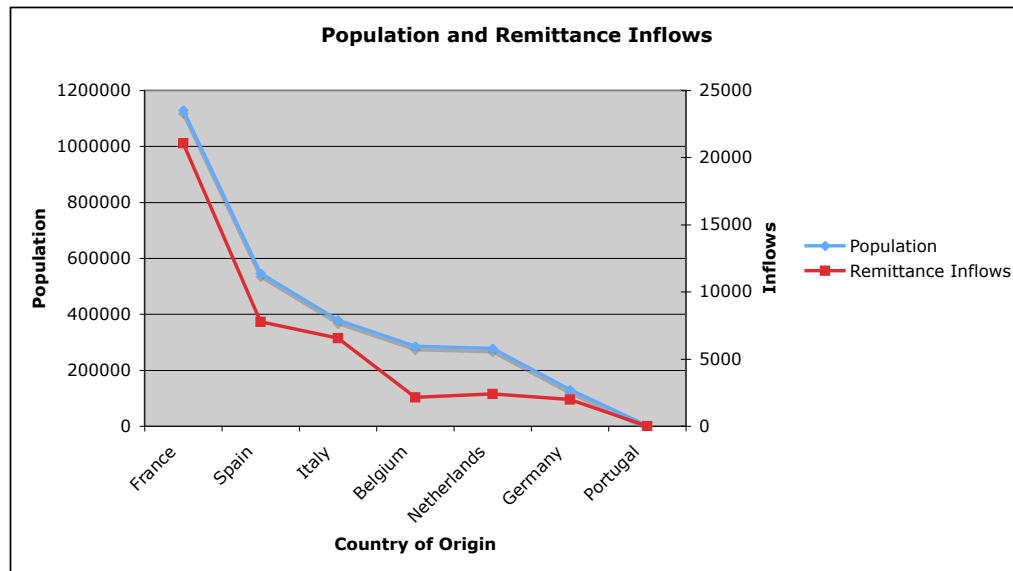


Chart 3: Moroccan Diaspora in Western Europe and Remittance Inflows to Morocco

Due to strong bilateral relations between France and Morocco, lawful emigration, language acquisition, and ease of assimilation provides less of a challenge for migrants seeking a higher quality of life. Aspects of French culture remain pervasive throughout Morocco's urban cities and contribute to the strong bilateral relations between the nations. As a consequence, French nationals largely contribute to Morocco's booming tourist industry. Moroccan emigrants in Italy and Spain, however, are shown to have a disproportionately lower level of education, at approximately 77%, than the average Moroccan living abroad, 59%.¹⁶ This naturally results in migrants having to take on low-skilled occupations within these countries, generating lower income. However, as unemployment within Italy and Spain arose, ethnic Italians and Spanish began seeking the low-skilled positions formerly occupied by Moroccan migrants.

Secondly, Morocco has long been considered one of the most moderate and liberalized Muslim-majority countries across the Middle East and North Africa. The international community has perennially commended Morocco and its Maliki Islamic school of Sunni jurisprudence for its tolerance of other cultures and religions. The Kingdom of Morocco was the very first nation to recognize American independence and has since acted as a reliable friend of the West. Moroccans have simply gained greater exposure and have even assimilated traits of Western society. Furthermore, Moroccan Muslims tend to be less conservative, and are thus less likely to feel disenfranchised by French laws that increasingly target its conservative Muslim contingent.

¹⁶ MPC Migration Profile: MOROCCO, 1-2.

The absence of Moroccan individuals in jihadi terrorist plots in France may also be explained by history. Algerian and Moroccan governments have had tense relations since Algeria gained independence after a bloody struggle against France in 1962. Tensions between Morocco and Algeria initially erupted after a brief border skirmish in the October 1963 Sand War. However, relations reached a point of seemingly interminable animus during the subsequent POLISARIO insurgency in the Western Sahara, for which the Algerians continue to provide support. Between 2001 and 2014, France witnessed 15 jihadist terror plots, eleven of which were attributed to the GSPC, AQIM, or al-Qaeda – terrorist organizations in which Algerian jihadists constitute a large contingency.

Although there were no Moroccans involved in jihadist terrorist incidents against France in the time frame indicated by the dataset, there are some indications that the Moroccan contingent in France may be reversing the anomaly. Many French-Moroccans are suspected to have traveled to Iraq and Syria to join the conflict. According to the French Interior Ministry, up to 800 French nationals are currently participating.¹⁷ In a startling report published in November 2014, *Morocco World News* stated that 20 French female students of Moroccan origin have traveled to the region in order to marry ISIS fighters.¹⁸ As of June 2014, Moroccans represented the third greatest foreign fighter contingent in Syria and Iraq, behind Tunisians and Saudis.¹⁹ Western European countries increasingly fear that radicalized foreign fighters may return to their countries of origin to conduct terrorist attacks.

The Moroccan government has participated in many initiatives with the United States and member states of the European Union in order to strengthen cross-border security and counterterrorism capabilities. As the foreign fighter contingent of European citizens of Moroccan origin becomes of increased concern, initiatives to engage the Moroccan diaspora have increased. For example, the Moroccan Council of Ulemma for Europe has provided spiritual guidance, participates in the training and supervision of European imams, promotes moderation and tolerance, and guides the youth against extremism abroad. Established in 2007, the Ministry of Moroccans Living Abroad engages the expatriate community by encouraging integration in the European social, economic, cultural, and political domains.²⁰ By addressing the perceived grievances of jihadists, the Kingdom of Morocco has taken significant action on its part to mitigate the threat of radicalization within Europe.

¹⁷ “French-Moroccan ‘jihadist’ detained at Charles de Gaulle,” *French 24*, August 3, 2014, Accessed at <http://www.france24.com/en/20140802-french-moroccan-jihadist-detained-charles-gaulle-airport-cdg/#>

¹⁸ Aziz Allilou, “20 Moroccan Students Left French Universities to Join the Islamic State,” *Morocco World News*, November 5, 2014, Accessed at <http://www.moroccoworldnews.com/2014/11/143283/20-moroccan-students-left-french-universities-to-join-the-islamic-state/>

¹⁹ Richard Barrett, “Foreign Fighters in Syria,” *The Soufan Group* (June 2014), p. 12. Accessed at <http://soufangroup.com/wp-content/uploads/2014/06/TSG-Foreign-Fighters-in-Syria.pdf>

²⁰ Özge Bilgili and Silja Weyel, “Diaspora Engagement in Morocco: Understanding the Implications of a Changing Perspective on Capacity and Practices,” *Maastricht Graduate School of Governance*, Migration Policy Brief No. 10, December 2009, 21.

Conclusion

The complete absence of terrorist incidents/plots by persons of Moroccan origin in France, the host of the largest Moroccan migrant diaspora, provides tremendous insight to this study. Evidence supports the proposition that incidents of terror in Western Europe by individuals of Moroccan origin are diminished in the presence of qualitative factors such as a high quality of life and the ease of assimilation. Morocco's historic ties with the French, combined with its unique Maliki tradition of Islam, may have produced a standard of living in France in which jihad was unattractive to Moroccan migrants. The current foreign fighter trend in Iraq and Syria suggests that Moroccan radicalism may produce a reversal of the anomaly in French-Moroccan jihadist terrorism. Regardless, the idea that there are no known reports of Moroccans involved in a jihadist terrorist plot in France between 2001-2010 is significant. One must take caution upon purporting a causal explanation for any social phenomenon.

Historical ties seem to play a large role in providing an explanation for the anomaly and have been given special treatment in the study. France and Morocco have for decades enjoyed strong bilateral relations resulting in mutually advantageous political and economic ties. Indeed, Morocco is considered to be a friend of the West in general, as it maintains significant economic and security agreements with both the United States and nations across the EU. Moroccan collaboration has resulted in greater exposure to the West that has mitigated culture shock while enabling socialization of migrant communities. Contrastingly, as Algerians struggle to forgive the French for their brutal post-war counterinsurgency operations, Algerian jihadist cells of AQIM continue to operate within France. Certainly, a multitude of factors play a role in radicalization and incidents of terrorism in Western Europe, but history appears to play a significant role.

Aside from nationalist explanations, terrorist incidents in Western Europe appear to be a function of the mere exposure to extremist cells. As noted, a large majority of jihadist terrorism cases involving Moroccan migrants were made up of several individuals, whereas "lone wolf" attacks represented only three cases. In fact, terrorist activity most frequently arose from extremist cells, which contributed to the most significant terrorist threats or attacks. The results also showed that radicalization most often occurred from within Western European host countries - in only one case did the suspect self-radicalize. Therefore, one may explain the lack of correspondence between migrant population size, remittance rates, and cases of terrorism by the exposure to radical Islamic teachings within Western Europe. Although the causes of Moroccan migrant participation in jihadist terrorism in Western Europe are indeed vast and complex, this study offers insights for what does and does not contribute.

Jeffrey Palmer is a first-year graduate student at Georgetown University's Security Studies Program focusing on Salafi jihadism, terrorism, and security in North Africa. Jeffrey became interested in international security during his Peace Corps service in Morocco, where he witnessed firsthand the unrest that swept the region in 2011.

Appendix

Data set of incidents of jihadist terror plots (disrupted, failed, or executed) by individuals of Moroccan origin from 2001-2013

<u>NO.</u>	<u>Date</u>	<u>Name</u>	<u>Location</u>	<u>Target</u>	<u>Category</u>	<u>Outcome</u>	<u>Weapon</u>
1	Feb-02	US Embassy in Rome	Italy	Diplomatic	2	Disrupted	Poison
2	Oct-02	Milan cell	Italy	Diplomatic	2	Disrupted	Unknown
3	Jan-03	Rovigo cell	Italy	Military(NATO)	2	Disrupted	Industrial explosives
4	Oct-03	Hofstad Group	Portugal	Individual	2	Disrupted	Unknown
5	Oct-03	Milan underground and church in Cremona	Italy	Urban transport system; Religious	1	Disrupted	Industrial explosives
6	Mar-04	Madrid train bombings	Spain	Train system	1	Executed	Industrial explosives
7	Jun-04	Hofstad Group plot	Netherlands	Aviation, State security	2	Disrupted	Homemade explosives
8	Sep-04	Yehya Kadouri (Lone wolf)	Netherlands	Individual	1	Disrupted	Homemade explosives
9	Oct-04	Martyrs for Morocco	Spain	State sec.	2	Disrupted	Industrial explosives
10	Nov-04	Hofstad Group (Theo van Gogh assassination)	Netherlands	Individual	1	Executed	Firearm
11	Nov-04	Hofstad Group plot	Netherlands	Individual	1	Disrupted	Unknown
12	Jun-05	Hofstad Group plot	Netherlands	Individual	1	Disrupted	Firearm
13	Jul-05	Hofstad Group plot	Netherlands	Unknown	2	Disrupted	Homemade explosives
14	Oct-05	Hofstad Group plot	Netherlands	Individual, State sec.	1	Disrupted	Unknown
15	Dec-06	Operation Duna	Spain	Public Place	2	Disrupted	Explosives
16	Dec-08	Milan military barracks	Italy	Military	2	Disrupted	Explosives

17	Nov-10	Sharia4Belgium	Belgium	Unknown	3	Disrupted	Unknown
18	Apr-11	AQ-trained bomb plot	Germany	Public Place	1	Disrupted	Explosives
19	Mar-12	Attack on Shi'a imam	Belgium	Religious institution	3	Executed	Fire
20	Feb-13	Individual jihad Valencia	Spain	Individual, State sec.	2	Disrupted	Explosives and firearms
21	Jun-13	Sharia4Italy	Italy	Public Place	2	Disrupted	Explosives

The Sino-American Airpower Competition: A Net Assessment

JAMES P. NOLAN

This article seeks to determine where the U.S. stands vis-à-vis China's airpower capabilities over the next 15 to 20 years. It employs the net assessment framework, drawing from open source data and existing literature currently available on both militaries. This analysis concludes the United States will continue to hold an advantage in the air for the next 15 to 20 years.

While there are multiple competitive military fronts between the United States and China, the capabilities race in the air domain has become one of the most rapidly growing parts of the competition over the last decade—and will likely continue to be for the next 15 to 20 years. China's military, the People's Liberation Army (PLA), has become increasingly skeptical of U.S. intentions in the Asia-Pacific region, expressing concern in its biennial defense white papers of an encroaching adversary that threatens China's peaceful economic expansion. American analysts have indicated that China sees the United States as “a revisionist power that seeks to curtail China's political influence and harm China's interests.”¹ At the same time, the United States sees China pursuing hegemonic policies under the guise of self-defense, rapidly modernizing its military to prepare for potential conflict with Taiwan and projecting military power to threaten U.S. interests in Asia and the global commons.² As scholar Aaron Friedberg summarized, “...if China's power continues to grow, and if it continues to be ruled by a one-party authoritarian regime, its relations with the United States are going to become increasingly tense and competitive.”³

Outright military competition with the PLA is not a foregone conclusion. Despite recent tensions between the two states over China's relations with its neighbors,⁴ military and political leaders from both sides of the Pacific have made efforts to reach out and present the appearance of cooperation. As U.S. Air Force Chief of Staff General Mark Welsh said, “In recent years, growing distrust and increasing misperception have made the need to improve lines of communication between our two governments and militaries all the more urgent.”⁵ However,

¹ Andrew J. Nathan and Andrew Scobell, “How China Sees America: The Sum of Beijing's Fears,” *Foreign Affairs* 91 (September/October 2012): 32.

² U.S. Department of Defense, “Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2013”: i, under http://www.defense.gov/pubs/2013_china_report_final.pdf.

³ Aaron L. Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery in Asia* (New York: W.W. Norton & Company, 2011), 38.

⁴ BBC News, “US warns Beijing on South China Sea tensions,” May 13, 2014, <http://www.bbc.com/news/world-asia-27387425>.

⁵ General Mark A. Welsh III and General Hawk Carlisle, “Strengthening Understanding and Engagement with China's Air Force,” *Air & Space Power Journal* 28 (January-February 2014): 4.

recent actions belie more cooperative language. The recent movement of more U.S. air assets into the Pacific theater as part of the 'rebalance' to Asia only increases the likelihood of continued military competition over the next 15-20 years, as an emerging security dilemma between the United States and China drives a potential arms race to build military superiority in the Pacific.⁶

Analysts have struggled to understand the complexity of this competition with China. Rather than focusing solely on emerging Chinese military capabilities, as open source analysts have to date, this article seeks to diagnose where the United States stands *vis-à-vis* China's military over the next 15 to 20 years. A comprehensive assessment of military competition in the air domain is crucial to discerning the future of this competition as a whole and evaluating what opportunities the United States may seek to gain an advantage in the overall competition. Open source analyses to date have too often focused on Chinese air force modernization at the expense of assessing the overall strategic airpower competition between the two states.⁷ This study surveys U.S. and Chinese open source data and existing literature on U.S. and PLA airpower capabilities to arrive at this assessment.

An analytic framework known as net assessment serves to guide analysts to a comprehensive assessment of strategic military competition between two nations, yet to date has not been applied in open sources to diagnose the current standing and future outcomes of U.S.-Chinese airpower competition. This paper fills the void in existing literature and provides military planners a long-term outlook on the competition with the goal of identifying future pitfalls and opportunities.

The Net Assessment Framework

The Department of Defense (DoD) has employed net assessment since the early 1970s to analyze global military competitions and provide comprehensive, long-term, diagnostic assessments to the Secretary of Defense. Defense analyst Andrew Marshall pioneered the framework, and formalized use of the analytic methodology by founding the Office of Net Assessment in 1972.⁸ The Office continues to provide objective analysis on U.S. standing in the world directly to the Secretary of Defense, charting much of the DoD's strategy over the last forty years.⁹

Net assessment is defined as "the craft and discipline of analyzing military balances."¹⁰ By looking at the holistic strategic environment and identifying the most important trends and asymmetries in a given military competition, net assessments aim to diagnose long-term U.S. competitive standing compared to an adversary. These assessments identify key features of the

⁶ Adam P. Liff, G. John Ikenberry, "Racing toward Tragedy? China's Rise, Military Competition in the Asia Pacific, and the Security Dilemma," *International Security* 39, no. 2 (Fall 2014) 52-91.

⁷ E.g. U.S. Department of Defense, "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2014": 9-10, http://www.defense.gov/pubs/2014_DoD_China_Report.pdf.

⁸ Mie Augier, "Thinking about War and Peace: Andrew Marshall and the Early Development of the Intellectual Foundations for Net Assessment," *Comparative Strategy* 32, no. 1 (2013): 1.

⁹ Paul A. Gigot, "Cohen Decides Pentagon Needs Fewer Good Men," *The Wall Street Journal*, November 14, 1997.

¹⁰ Eliot A. Cohen, "Net Assessment: An American Approach," *Jaffee Center for Strategic Studies*, Tel Aviv University, JCCS Memorandum no. 29 (April 1990): 4.

future environment while steering clear of subjectively prescribing policy solutions to solve the competition. While the form of each assessment evolves depending on the competition to which it is applied, Marshall's early writings still guide the basic elements that should be included in every net assessment: a basic assessment of the competition, key trends, competitive asymmetries, major uncertainties, and a discussion of emerging problems and opportunities. Additionally, net assessments typically avoid complex systems analysis and modeling that often characterize modern analysis, and focuses on intangibles such as adversary strategy, doctrine, and training.¹¹ The framework goes beyond traditional intelligence analysis, which limits itself to evaluating specific adversary capabilities and intentions while steering clear of discussing U.S. capabilities and assessing U.S. standing in a given competition.

Net assessment is the ideal framework to employ for a comprehensive analysis of the competitive airpower balance between the United States and China because of the framework's emphasis on taking a holistic approach to determine long-term trends. A net assessment on this topic may also serve as a primer for military analysts looking for baseline understanding of U.S.-Chinese competition in the air domain before branching out more detailed analysis in specific elements of the competition, such as integrated air defense systems or electronic warfare. While there are many intelligence gaps on both U.S. and Chinese airpower capabilities and intentions in unclassified data, analysts can extract many important data points from openly published sources and public statements from U.S. and Chinese military leaders.

To accomplish this open source net assessment, I examine the military and airpower strategies that China has employed to date and the U.S. response to these strategies; trends and asymmetries in the airpower competition; and future uncertainties and opportunities for the U.S. to exploit.

Background and Strategy of the Competition

Airpower competition is any capability and intention to affect an adversary's freedom of action in the air domain. This definition includes traditional components of offensive and defensive air capabilities, including integrated air defense systems—air surveillance, battle management and weapons control—as well as aircraft; surface-to-air missiles; command and control; and intelligence, surveillance, and reconnaissance (ISR). Competition in the air domain also extends to some land-based capabilities that might hold air force bases and enablers at risk, such as precision strike weapons and electronic warfare. While China has emphasized cross-domain integration of assets and a 'system of systems' approach as part of its modernization efforts,¹² this analysis will focus less on enabler assets that operate primarily in other domains (e.g. space and cyberspace). To limit the scope of this assessment, space and cyberspace are regarded as separate domains but acknowledged as important enablers of warfare in the air domain. Focusing primarily on the air domain allows for greater detailed analysis on airpower-

¹¹ Paul Bracken, "Net Assessment: A Practical Guide," *Parameters* 36 (Spring 2006): 99-100.

¹² Ministry of National Defense, The People's Republic of China, "China's National Defense in 2010," Information Office of the State Council, April 2011, <http://eng.mod.gov.cn/Database/WhitePapers/2010.htm>.

specific capabilities and strategies that would be overlooked if taking a multi-domain approach to this assessment.

A discussion of competition in the air domain must begin with the underpinning grand strategy employed by both countries. The PLA's 2010 defense white paper described four national defense objectives: (1) "safeguarding national sovereignty, security and interests of national development"; (2) "maintaining social harmony and stability"; (3) "accelerating the modernization of national defense and the armed forces"; and (4) "maintaining world peace and stability."¹³ Despite these seemingly global strategic goals, the PLA's 2012 white paper appears to take a strong stance against expanding influence in Asia or beyond, stating "China will never seek hegemony or behave in a hegemonic manner, nor will it engage in military expansion... China advocates a new security concept featuring mutual trust, mutual benefit, equality, and coordination..."¹⁴ However, analysts such as Larry Wortzel have pointed out that China's rapid military modernization and aggressive actions towards its neighbors have belied this rhetoric, raising questions of underlying expansionist intentions not published in defense white papers.¹⁵ While the debate about China's strategic ambitions may continue for decades, China continues to expand its economic interests beyond its mainland and it will likely take an increasing role in projecting some form of national power to defend those interests.

To understand competition with China in the air domain, it is important to examine how China's overall defense strategy has evolved their view of the air domain. Mao's concept of 'People's War,' which historically focused on defending China's mainland through geographic, demographic, and strategic culture advantages,¹⁶ has evolved to the theory of 'Active Defense' as China has economically expanded and modernized its military over the last decade.¹⁷ 'Active Defense' states that strategic defense is achieved through deterrence, stemming from a strong offensive posture.¹⁸ Experts such as Roger Cliff have described Active Defense as preparing simultaneously for offensive and defensive efforts in the conduct of war.¹⁹ The Active Defense strategy employs a Chinese concept called *weishe*, which Dean Cheng has described as a combination of deterrence and compellence that has shaped much of China's thinking on modernization efforts.²⁰ *Weishe* calls for a combination of military, economic, diplomatic and

¹³ Ibid.

¹⁴ Ministry of National Defense, The People's Republic of China, "The Diversified Employment of China's Armed Forces," Information Office of the State Council, April 2013, <http://eng.mod.gov.cn/Database/WhitePapers/index.htm>.

¹⁵ Larry M. Wortzel, *The Dragon Extends Its Reach: Chinese Military Power Goes Global* (Washington, DC: Potomac Books, 2013), xi.

¹⁶ Michael D. Swaine et al., *China's Military & The US-Japan Alliance in 2030: A Strategic Net Assessment* (Washington, DC: Carnegie Endowment for International Peace, 2013): 36.

¹⁷ Roger Cliff et al., *Shaking the Heavens and Splitting the Earth: Chinese Air Force Employment Concepts in the 21st Century* (Santa Monica, CA: RAND Corporation, 2011): 53.

¹⁸ Anthony H. Cordesman, Ashley Hess, and Nicholas S. Yarosh, *Chinese Military Modernization and Force Development: A Western Perspective* (Washington, DC: Center for Strategic and International Studies, 2012): 54.

¹⁹ Cliff et al., *Shaking the Heavens*, 53.

²⁰ Dean Cheng, "Chinese Views on Deterrence," *Joint Forces Quarterly* no. 60 (2011): 92.

political means to dissuade or persuade an opponent to do something in support of accomplishing a given political goal.²¹

As a subset of the ‘Active Defense’ strategy, the anti-access, area-denial operational (A2/AD) concept has become a foremost concentration for military planners focusing on the Pacific. Dating from the mid-1990s, the U.S. DoD has melded A2/AD concept as an integral part of the Active Defense strategy, describing the latter as “asymmetric, network-centric warfare and A2/AD capabilities that are intended to deny elements of the modern battlespace to potential enemies.”²² The DoD has summarized Chinese A2/AD capabilities as “...measures to deter or counter third-party intervention, particularly by the United States,” which are manifested in a multilayered offensive capability to conduct long-range attacks against adversary military forces in the Western Pacific.²³ This operational concept has crucial implications for military competition in the maritime and air domains. China will continue to use the A2/AD concept to build an offensive capability that could potentially close off access to the Western Pacific and deny U.S. forces the ability to defend allies and interests in the Pacific.

China may ultimately not seek parity in manned aircraft capability under the A2/AD concept; rather, it may leverage long-range strike capability to keep the United States at arm’s reach in the Pacific, while using manned aircraft to intimidate regional adversaries. Instead of striving for outright air superiority, China may seek to deny U.S. access to portions of the West Pacific to enable freedom to maneuver and achieve superiority in other domains of warfare (such as space and cyber). Regardless of how China seeks to use the air domain to support its grand strategy, this domain is certainly an important variable for potential A2/AD-driven contingencies involving Taiwan and territorial disputes in the Western Pacific that might draw the United States into conflict with China. U.S. military planners cannot afford to ignore China’s emerging airpower capabilities.

This situation creates several implications for U.S. military planners. James Thompson and Evan Montgomery have suggested the primary goal for the U.S. in the next decade should be to encourage China’s continued investment in A2/AD capabilities, which will in turn draw the PLA away from the development of a power projection capability and thus keep its power contained to the Western Pacific.²⁴ While the debate as to the proper competitive strategy for countering China lies outside the scope of this paper, there has been some progress toward U.S. military operational planning reforms in response to China’s A2/AD concept.

The DoD has identified an operational concept known as “Air-Sea Battle” (ASB) to counter some of these A2/AD threats to the Western Pacific and the global commons. The Chief of Staff of the Air Force and Chief of Naval Operations identified ASB as “designed to assure access, defeat anti-access capabilities, and provide more options to national leaders and military

²¹ Ibid.

²² U.S. Department of Defense, “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2011”: 22, http://www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf.

²³ U.S. Department of Defense, “Annual Report 2013”: 32.

²⁴ James P. Thompson and Evan Braden Montgomery, “Developing a Strategy for A Long-Term Sino-American Competition,” in *Competitive Strategies for the 21st Century*, ed. Thomas G. Mahnken (Stanford, CA: Stanford Security Studies, 2012), 257-274.

commanders.”²⁵ While ASB was developed to counter any global A2/AD threat—and has been applied to other geographic examples such as the Strait of Hormuz and international waters near North Korea—the concept appears most applicable to a potential scenario in which the United States must defeat Chinese capabilities in the Strait of Taiwan. United States expert Jan Van Tol said, “...[ASB] should be considered as helping to set the conditions at the operational level to sustain a stable, favorable conventional military balance throughout the Western Pacific region.”²⁶

ASB was the subject of some criticism, as the concept is often not clearly defined in open sources. U.S. analysts have summarized ASB as a two-stage concept that first calls for disruption of adversary command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) networks. The second stage requires defeating the adversary’s long-range ISR and strike systems and proceeding to a conventional conflict at more advantageous standoff ranges to mainland China.²⁷ The overall goal of the ASB concept in a Taiwan Strait scenario would be “rolling back” Chinese A2/AD efforts that would potentially create difficult standoff distances for U.S. weapons systems operating in the Western Pacific.

Both the Chinese A2/AD doctrine and U.S. ASB operational concept make it clear that airpower competition is a key variable that will determine the overall outcome of a potential conflict between China and the United States. A clear assessment of the trends and asymmetries in this domain will identify future uncertainties and opportunities that will drive U.S. success in future conflicts.

Key Trends and Asymmetries

When viewed through the lens of net assessment, I conclude that despite China’s airpower modernization efforts, the United States is clearly leading the competition and will likely continue to dominate the global air domain for the next 15-20 years. China’s ability to close this capabilities gap depends primarily on its ability to build indigenous technological and industrial bases that will allow it to develop next-generation capabilities to compete with the United States.

To derive this assessment of trends and asymmetries in the air competition, this article will proceed by examining PLA structure in the air domain, and how that structure supports their strategy; what trends have developed in PLA capabilities and training, and what those capabilities mean for the United States; and finally, what Chinese research and development (R&D) efforts have supported ongoing modernization in the air domain and the implications of those developments for the United States.

²⁵ Adm. Jonathan Greenert and Gen. Mark Welsh, “Breaking the Kill Chain: How to keep America in the game when our enemies are trying to shut U.S. out,” *Foreign Policy*, May 16, 2013, http://www.foreignpolicy.com/articles/2013/05/16/breaking_the_kill_chain_air_sea_battle.

²⁶ Jan Van Tol, *AirSea Battle: A Point-of-Departure Operational Concept* (Washington, DC: Center for Strategic and Budgetary Assessments, 2010): xi.

²⁷ *Ibid.*, xiii.

PLA Airpower Force Structure.

The PLA has historically been a ground-centric military, with the PLA Air Force (PLAAF) operating in the shadow of the larger and more powerful Army. Until 2000, the PLAAF was considered primarily a defensive force supporting ground forces on mainland China, with the PLA Navy (PLAN) tasked with coastline defense.²⁸ However, as the aforementioned PLA doctrine evolved, the PLAAF has modernized and taken on new capabilities and mission sets, requiring operations at greater distances from home bases and increasingly entailing overwater operations. Additionally, the PLAAF is beginning to transition into the PLA's premier C4ISR force, improving airborne sensors and electronic warfare capabilities.²⁹ Amidst those ongoing reforms, the PLAAF simultaneously undertook a massive cut to personnel and aircraft, re-focusing on quality over quantity. Over the last decade, the PLAAF alone has cut 100,000 personnel (a quarter of its total force), and halved its number of fighters to roughly 1,100.³⁰ What has remained is a far more capable fighting force of 398,000 personnel³¹ with far higher quality training standards and improved operational performance.³² The PLAN has retained a comparatively limited force of 311 aircraft and has focused on maritime surveillance, anti-ship and anti-submarine warfare, and coastal defense missions.³³ There is no equivalent capability in the PLAN to match the U.S. Navy or Marine Corps aviation that supports ground and amphibious forces in a variety of mission sets.

Along with an evolution in organizational structure, the PLA has pursued a physical shift in its force structure. China has shifted basing from the interior of the mainland to the coastline over the last decade, with the PLAAF focusing on both defensive and offensive operations and the PLAN shifting from coastal defense to 'near-seas' defense.³⁴ This shifting of capabilities to the coastline in support of long-distance operations has led U.S. analysts such as Michael Swaine to believe the PLA aims to conduct offensive and defensive capabilities up to 1,500 nautical miles (NM) off its coastline, up to and including the so-called first island chain (including the main Japanese islands, Taiwan, Philippines, and Indonesia).³⁵

What remains uncertain is China's intention to project power in the air domain beyond the first island chain in order to potentially support and defend their economic interests around the globe. While China's official defense white papers have claimed no military ambitions beyond their borders, other Chinese defense analysts have called for considering a global power

²⁸ Wayne A. Ulman, "China's Military Aviation Forces," in *Chinese Aerospace Power: Evolving Maritime Roles*, ed. Andrew S. Erickson and Lyle J. Goldstein (Annapolis, MD: Naval Institute Press, 2011), 38-49.

²⁹ Ibid., 40.

³⁰ David Shlapak, "Equipping the PLAAF: The Long March to Modernity," in *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities*, ed. Richard P. Hallion et al. (Washington, DC: National Defense University Press, 2012), 192.

³¹ Ministry of National Defense, The People's Republic of China, "China's National Defense in 2010."

³² Cliff et al., *Shaking the Heavens and Splitting the Earth*, 3.

³³ Wortzel, *The Dragon Extends Its Reach*, 55.

³⁴ Swaine et al., *China's Military*, 41.

³⁵ Ibid.

projection capability, with some calling for eventual overseas basing.³⁶ However, in a 15 to 20 year timeframe, China is unlikely to pursue PLAAF projection capabilities or overseas basing that might distract them from their regional ambitions. Since China enjoys a structural asymmetry of “home field advantage” for a conflict against the United States in the Western Pacific, there is little incentive for the PLAAF to pursue a long-range projection capability before it has modernized to the point of being able to support their regional A2/AD doctrine.

Integrated Air Defense System (IADS) Capabilities

Despite the emphasized shift to offensive capabilities, a robust air defense is still a mainstay mission of the PLAAF and is arguably one of its foremost technology advances of the last decade. In 2000, the PLAAF’s surface-to-air missile (SAM) force was a mere four battalions of Russian-made SA-10Bs (with a maximum effective range of 48 NM³⁷), with the remainder of the force consisting of 1950s-era SA-2 systems (with a maximum effective range of 19 NM³⁸).³⁹ Over the last decade, the PLAAF has doubled its SAM inventory to create one of the largest IADS capacities in the world, of which the majority of systems are the advanced Russian-imported SA-20 and the indigenously designed HQ-9.⁴⁰ China continues to pursue acquisition of Russian SA-21 SAM systems, which could push its integrated air defense system range to well over 200 NM off the Chinese coastline, and continues to develop a modified HQ-9 with a range over 100 NM.⁴¹

Air surveillance modernization efforts have also become an important part of the IADS overhaul. Xinhua News Agency announced in 2007 that the PLAAF completed a countrywide “air intelligence radar network” to complement its growing coastal SAM force.⁴² This air surveillance network is an important cueing mechanism for the advanced targeting radars used with the SA-20 and HQ-9 systems, and it simultaneously serves as an important element of the PLA’s overall C4ISR capability by adding to China’s ability to maintain situational awareness in the Western Pacific.

These long-range SAM systems pose increased risk to U.S. mission performance during a potential conflict in the Western Pacific. High-value C4ISR and aerial refueling assets that would normally be operating at high altitudes off China’s coastline would operate further off the coastline.⁴³ Cruise missiles launched from U.S. bombers would have decreased effectiveness when launched further away from the conflict area, and fighters would need to accept larger risk when operating within a SAM missile engagement zone. U.S. Air Force (USAF) planners will be challenged to build sufficient suppression of enemy air defense fighter capacity to combat

³⁶ Ibid., 42.

³⁷ IHS Jane’s, “S-300P”, <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

³⁸ IHS Jane’s, “S-75 family (SA-2 ‘Guideline’)”, <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

³⁹ Roger Cliff, “Chinese Military Aviation Capabilities, Doctrine, and Missions,” in *Chinese Aerospace Power*, 243-254.

⁴⁰ Cliff et al., *Shaking the Heavens and Splitting the Earth*, 4.

⁴¹ U.S. Department of Defense, “Annual Report 2013,” 35.

⁴² Cliff et al., *Shaking the Heavens and Splitting the Earth*, 4.

⁴³ Shlapak, “Equipping the PLAAF,” 206.

advanced SAM systems in the capability and quantity as China may grow to in the 15-20 year time horizon. China's robust ground-based air defense capability appears to hold U.S. air forces at risk if operating during a conflict in the Taiwan Strait in the near term, although those systems would not be a factor for air operations during a contingency farther off the coast, such as in the Strait of Malacca or the Spratly Islands.⁴⁴ Continued integration of SAMs on naval vessels may extend air defense range further, albeit in a more limited capacity than ground-based systems.⁴⁵

Fighter Capabilities

China has made great strides increasing capabilities of its fourth-generation fighter fleet, while continuing to make R&D progress toward a fifth-generation capability. This modernization has not come without cost. Between 1990 and 2010, nearly 3,500 older aircraft—representing 70% of the PLAAF—were retired, and more fourth-generation capabilities were imported from Russia. What remained was the third-largest fleet of advanced fighters in the world, behind the United States and Russia. The percentage of the PLAAF fleet containing fourth-generation fighter-bomber aircraft grew from roughly 2% in 2000 to nearly a third of the fleet in 2013.⁴⁶

The USAF and PLAAF fourth-generation fighter fleets (primarily the USAF F-15C and PLAAF J-10 and J-11) are roughly on par when comparing standard fighter performance metrics such as weight-to-thrust ratio and wing loading. In an air superiority fight involving beyond-visual-range weapons, a PLAAF J-10 or J-11 employing a PL-12 air-to-air missile would be a technologically comparable capability to a USAF F-15C employing an AIM-120-C5.⁴⁷ China continues to advance in air-to-air missile technology, as the PLAAF modernizes the PL-12 missile and corresponding increasing range threatens current U.S. air-to-air beyond-visual-range missile capability.⁴⁸ However, the U.S. outweighs the PLAAF in quantity of modern fighter aircraft available for combat by nearly 400%.⁴⁹

Beyond fourth-generation aircraft, the PLAAF has looked to build a fifth-generation capability that would attempt parity with the USAF in an air superiority competition over the next 15-20 years. China has continued attempts to acquire the export variant of Russia's advanced Su-35 fighter, which would be a natural follow-on to the PLAAF's existing Su-27-derived fourth-generation fleet.⁵⁰ The PLAAF unveiled the domestically-produced J-20 in 2011, which is designed to compete with the USAF F-22. The J-20 is the PLAAF's first apparent foray into integrating low observable (LO) characteristics, internal weapons bays, and "supercruise" flight into an air superiority fighter.⁵¹ While there are numerous open source intelligence gaps

⁴⁴ Ibid., 207.

⁴⁵ Ronald O'Rourke, "PLAN Force Structure: Submarines, Ships, and Aircraft," in *The Chinese Navy: Expanding Capabilities, Evolving Roles*, ed. Phillip C. Saunders et al. (Washington, DC, National Defense University Press, 2011), 155-156.

⁴⁶ Shlapak, "Equipping the PLAAF," 192-3.

⁴⁷ Ibid.

⁴⁸ IHS Jane's, "PL-12 (SD-10, SD-10A)", <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

⁴⁹ Shlapak, "Equipping the PLAAF," 192.

⁵⁰ U.S. Department of Defense, "Annual Report 2013": 51.

⁵¹ Shlapak, "Equipping the PLAAF," 197.

regarding the performance of the J-20 and how it will compete with the F-22, the PLAAF is clearly attempting to match the USAF on a platform-by-platform basis in the fighter sector. As the USAF continues developing the F-35 as the follow-on to the multi-role F-16 fighter, China continues to play catch-up to match its capabilities. In October 2012, China flight-tested a multi-role F-35 look-alike tentatively called the J-31 by some analysts.⁵² While open source assessments of the J-31 contain mostly speculation based on limited photographs and sightings of the aircraft, it is clear that the PLAAF continues R&D efforts to bolster their fighter capability in support of an A2/AD strategy.

Despite these increased Chinese platform capabilities, the United States enjoys a sizable advantage in quality of fighter pilot training. Much of this gap is due to the lag time in the PLA fielding fifth-generation capabilities. As Dennis Blasko pointed out, even if the J-20 proves to be equivalent to the F-22 in performance capabilities and reaches its initial operating capability around 2020, PLAAF pilots will lag USAF F-22 pilots by some 15 years of operational experience.⁵³ Chinese military leadership appears aware of this gap, as Chinese Defense Minister Liang Guanglie attested in 2012, “I also firmly believe that in terms of the level of modernization of the PLA, we can by no means call ourselves an advanced military force. The gap between U.S. and that of advanced countries is at least two to three decades.”⁵⁴ Furthermore, a sizable capabilities gap also stems from a lack of joint training and integrated A2/AD exercises across the services.⁵⁵ In contrast, U.S. service chiefs regularly emphasize joint tactical fighter training⁵⁶ and perform some of the world’s largest joint and combined air exercises with its allies—such as RED FLAG, held annually in Nevada and Alaska. Revelations in late 2013 showing that U.S. Air Force annual flight hours had dipped below that of China⁵⁷ is likely a short-term trend due to sequestration cuts in late 2013 and will likely reverse over the next two to three years as the U.S. budget environment stabilizes.

However, there are structural asymmetries that weigh in China’s favor, despite its lag in fighter platform capabilities and training. Similar to the case of air defense, China enjoys an increasing asymmetric advantage the closer the potential conflict may be to its coastline. Distance may be the largest asymmetry working against U.S. ability to employ fighters in a Taiwan scenario. The PLAAF currently has 500 combat aircraft within unrefueled range of Taiwan and has continued to grow that order of battle as part of the larger A2/AD strategy.⁵⁸ Conversely, as terrestrial basing is pushed further out from China’s mainland due to missile

⁵² IHS Jane’s, “SAC Shen Fei”, <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

⁵³ Dennis J. Blasko, “Technology Determines Tactics: The Relationship between Technology and Doctrine in Chinese Military Thinking,” in *China’s Emergence as a Defense Technological Power*, ed. Tai Ming Cheung (London: Routledge, 2013), 69.

⁵⁴ Ibid.

⁵⁵ IHS Jane’s Sentinel Security Assessment, “China – Armed Forces”, <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

⁵⁶ Greenert and Welsh, “Strengthening Understanding and Engagement.”

⁵⁷ Michael Auslin, “US Air Force Pilots Fly Less than China’s Do,” National Review Online, entry posted December 20, 2013, <http://www.nationalreview.com/corner/366872/us-air-force-pilots-fly-less-chinas-do-michael-auslin>.

⁵⁸ U.S. Department of Defense, “Annual Report 2013,” 8.

threats, sortie limitations for U.S. fighters becomes problematic.⁵⁹ With Japan more than 800 NM and Guam nearly 1,500 NM away, U.S. aerial refueling capabilities would be unable to support a fighter fleet within striking distance of Taiwan's airspace.⁶⁰ Despite the United States holding a nearly 400% advantage in the number of modern fighters, it may find operational distance as a challenge that must be overcome in an A2/AD fight. Rather than attempting to out-compete China in a tit-for-tat race of fighter aircraft capabilities over the next two decades, the United States may achieve air superiority in the future battlespace by planning to defeat Chinese air defense capabilities via domains such as cyberspace.

Unmanned aerial systems

While China has developed a considerable amount of unmanned aerial system (UAS) platforms for R&D purposes, very few have become operational as the PLA continues to test and evaluate emerging UAS technology.⁶¹ A recent development in the industry is Chengdu Aircraft Industry's *Yi Long* UAS, which appeared in 2012 for marketing to developing countries and potential PLA use.⁶² The *Yi Long* looks remarkably similar to the USAF MQ-1 and MQ-9, following a similar design trend as with the J-20 (also manufactured by Chengdu) and J-31 in the fighter category. Also in late 2012, a weaponized stealth UAS called the *Lijian* ("Sharp Sword") completed taxi tests and conducted its first flight test in mid-November 2013. Open source reporting describes the *Lijian* as appearing similar to the Northrop Grumman's X-47B in design and mission.⁶³

The U.S. military is also undergoing a rigorous R&D program with UAS platforms to support the ASB concept, while simultaneously stepping down its use of MQ-1 and MQ-9 platforms that have been a mainstay of the wars in Iraq and Afghanistan due to decreased operational requirements as those wars conclude. Despite continued focus on UAS R&D, the Air Force Chief of Staff has expressed that his focus throughout this transition is primarily on the capability that the aircraft brings to the force, rather than focusing on whether or not the platform is manned or unmanned.⁶⁴

Given the high risk of platform attrition in an A2/AD versus ASB conflict, both China and the United States are likely to aggressively pursue UAS R&D and acquisition in the next 15-20 years. Except for platforms that require a high rate of human input for their mission—such as fighters and aerial refueling aircraft—both countries are likely to focus on unmanned aircraft that will increase platform range and endurance, while lowering the risk associated with losing a pilot when the platform needs to penetrate 'contested' airspace. The Chinese asymmetric advantage of short flight distance from operating bases may cause the U.S. to re-think its reliance on manned aircraft with limited endurance as sortie duration becomes a factor for aircraft based

⁵⁹ Jeff Hagen, "The U.S. Air Force and the Chinese Aerospace Challenge," in *Chinese Aerospace Power*, 470.

⁶⁰ Cliff et al., *Shaking the Heavens and Splitting the Earth*, 239.

⁶¹ Shlapak, "Equipping the PLAAF," 199.

⁶² U.S. Department of Defense, "Annual Report 2013," 3.

⁶³ IHS Jane's Defence Weekly, "China's Sharp Sword UCAV makes maiden flight," <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/Grid.aspx>.

⁶⁴ C-SPAN, "Budget Hearing – United States Air Force," C-SPAN Web site, embedded video player, 01:57, <http://www.c-span.org/flvPop.aspx?id=10737439611>.

further out in the western Pacific. It may be too early to tell the overall role of UAS in near-term competition, although the U.S. technological advantage will remain ahead of the curve in UAS development over the next 15-20 years. Integration of UAS into the cross-domain operational concept is key to success for both China and the United States.

Precision Weapons

A crucial area of investment to support the Chinese A2/AD doctrine has been in precision weapons. China has kept pace with the global trend of increasing R&D in cruise missiles, and it has built a formidable capability that is crucial for an A2/AD fight. In addition, China has developed some of the world's most advanced precision ballistic missile capabilities that the PLA's Second Artillery would employ as an integral part of any large-scale conflict in the Pacific.⁶⁵

China has developed several air-launched cruise missiles variants, including anti-ship cruise missiles (ASCM) and land-attack cruise missiles (LACMs). The PLAAF has imported supersonic ASCMs from Russia while simultaneously developing its own advanced ASCMs, known as the YJ-series.⁶⁶ These ASCMs employ alternative targeting methods, such as inertial navigation systems in combination with radar and electro-optical sensors, which decrease reliance on space-based precision navigation and timing and increase reliability.⁶⁷

Of even greater concern to U.S. planners is the ongoing Chinese testing of the DF-21D anti-ship ballistic missile (ASBM), a variant of the CSS-5 medium range ballistic missile that has entered active service over the last three years. The DF-21D reportedly has a range exceeding 800 NM and employs increased precision techniques in the terminal phase.⁶⁸ China is also equipping the DF-21D and other theater ballistic missiles with highly maneuverable reentry vehicles with radar or infrared seekers to enable accuracy on a target as small as a naval vessel.⁶⁹ Employed as part of an A2/AD conflict, these ASCM and ASBM assets could hold entire U.S. Navy carrier strike groups at risk, and affect the range of naval air assets launched from carriers in the Pacific.

The PLA's growing LACM capability is a crucial component of the A2/AD doctrine's emphasis on standoff precision strike. In combination with short-range ballistic missiles and medium-range ballistic missile launches, the PLA would employ LACMs as the precision arm of choice to hold U.S. terrestrial basing in the Pacific at risk, forcing military planners to reconsider aircraft launch locations. With ongoing development of an H-6 bomber variant that can reportedly employ LACMs out to a 1,600 NM range, China would be in range of striking Guam

⁶⁵ Thomas G. Mahnken, "China's Anti-Access Strategy in Historical and Theoretical Perspective," in *China's Emergence as a Defense Technological Power*, 21.

⁶⁶ Andrew S. Erickson and Jingdong Yuan, "Antiaccess and China's Air-Launched Cruise Missiles," in *Chinese Aerospace Power*, 277.

⁶⁷ *Ibid.*, 276.

⁶⁸ U.S. Department of Defense, "Annual Report 2013," 6.

⁶⁹ Mahnken, "China's Anti-Access Strategy," 21.

— the first time the PLA would be able to strike targets on U.S. territory with conventional missiles.⁷⁰

Conventional ballistic missiles are a strength for the PLA, and have been written in as a vital component of A2/AD doctrine.⁷¹ While not a direct threat to assets operating in the air domain, ballistic missiles would play a vital role in any conflict in the Pacific and would hold aircraft at risk before they departed their forward basing. PLA Second Artillery commands more than 1,100 coastline-based short-range ballistic missiles,⁷² which underscores the importance of China's ability to saturate the battlespace and deny the United States access early in a conflict.⁷³ The United States can counter this onslaught of precision weapons by a combination of offensive and defensive capabilities. In the offensive realm, the United States has its own precision standoff strike options in the AGM-158 JASSM (Joint Air-to-Surface Standoff Missile), for which an extended range variant (in development) enables bombers to hold targets at risk out to 500 NM. In addition, the AGM-129 Advanced Cruise Missile employs low observable technology with a range beyond 1,800 NM.⁷⁴ In the defensive realm, the United States will have to rely on the naval Aegis Combat System and deployed MIM-104 Patriot missile defense batteries to identify, track and destroy incoming missile threats. However, Chinese planners are studying saturation techniques to overwhelm Aegis defenses and will likely increase their precision and saturation targeting capabilities in the 15-20 year time frame.⁷⁵ U.S. air bases in the Pacific will need to rely on passive defenses and camouflage, concealment and deception techniques, which may deceive Chinese targeteers and impose an increased cost burden on the PLA missile inventory. The trend of increasingly precise and long-range missile technology is likely to continue growing exponentially as it has in the past decade, and there appears to be few asymmetries in this realm for either China or the United States to exploit for competitive advantage.

Aircraft Carriers

Exhibiting what some analysts view as a harbinger for future 'blue water' power projection capabilities,⁷⁶ China has made ventures into aircraft carrier technology over the past decade. After two failed attempts with other aging imported carriers, the PLA finally achieved success in converting a decommissioned Ukrainian carrier into service, naming it the *Liaoning* and commissioning it to service in 2012.⁷⁷ The *Liaoning* will likely employ the PLAN J-15 fighter, although recent open source reports have claimed that the J-15 might be suffering range-limiting

⁷⁰ Michael S. Chase, "Strategic Implications of Chinese Land-Attack Cruise Missile Development," in *Chinese Aerospace Power*, 296.

⁷¹ Cliff et al., *Shaking the Heavens and Splitting the Earth*, 210.

⁷² U.S. Department of Defense, "Annual Report 2013," 5.

⁷³ James R. Holmes, "Integrated Chinese Saturation Attacks: Mahan's Logic, Mao's Grammar," in *Chinese Aerospace Power*, 407.

⁷⁴ Cliff et al., *Shaking the Heavens and Splitting the Earth*, 242.

⁷⁵ Erickson and Yuan, "China's Air-Launched Cruise Missiles," 278.

⁷⁶ Wortzel, *The Dragon Extends Its Reach*, 52.

⁷⁷ *Ibid.*, 56.

weight restrictions when launching from the *Liaoning*.⁷⁸ China has reportedly expressed that its carrier fleet could eventually include two non-nuclear and two nuclear-powered aircraft carriers by 2020,⁷⁹ although recent struggles with fielding the *Liaoning* indicate that this timeline may be pushed out into the next decade. The *Liaoning* most recently completed sea trials, although the extent of its operational capability remains debated in open sources.⁸⁰

With 11 carrier strike groups in the U.S. Navy, the U.S. military will clearly maintain an asymmetric advantage in naval airpower projection capability for the next 15-20 years. Although serving as an important signal to the United States, which has long questioned China's power projection intentions, Chinese aircraft carrier technology is not likely to play a significant role in the air domain of an A2/AD scenario in the coming decades. China is much more likely to leverage their 'home field advantage' and operate air assets off their coastline during a Taiwan Strait scenario, rather than putting an aircraft carrier at risk of attack in an open conflict.

C4ISR and Electronic Warfare

The crucial enabler for all the aforementioned air capabilities is C4ISR. Learning from the 1996 Taiwan Strait crisis in which two U.S. carrier strike groups appeared in the strait with minimal early warning, China has put considerable investment in C4ISR and counter-ISR capabilities. Building integration and redundancy into these systems, China is attempting to leverage early warning as an asymmetric advantage to trigger their operations plan. As discussed in previous sections, the PLA has built a robust over-the-horizon air surveillance network that mitigates early weaknesses and presents a challenge for USAF stealth assets that might seek to operate in the Pacific. PLAAF airborne early warning capability has also evolved over the last decade with ongoing improvements to the KJ-2000 program.⁸¹

On the national level, the PLA has reportedly constructed a robust data-exchange and target-location common operating picture architecture to support the PLAN, PLAAF, and PLA Second Artillery.⁸² At the theater level, an automated C4 system, known as the *Qu Dian*, links General Staff Department headquarters with every link on the chain of command down to the subordinate major organizations. While shore-based, fiber-optic networks have numerous built-in redundancies,⁸³ the system reportedly relies heavily on satellite communications that U.S. military planners could seek to exploit.⁸⁴

⁷⁸ David Cenciotti, "No Match for a U.S. Hornet: 'China's Navy J-15 More a Flopping Fish than a Flying Shark' Chinese Media Say," The Aviationist, entry posted September 30, 2013, <http://theaviationist.com/2013/09/30/j-15-critics/>.

⁷⁹ IHS Jane's Sentinel Security Assessment, "China – Armed Forces."

⁸⁰ Associated Press, "China's first aircraft carrier completes sea trials," The Washington Post, entry posted January 2, 2014, <http://www.theguardian.com/world/2014/jan/02/china-aircraft-carrier-completes-sea-trials>.

⁸¹ IHS Jane's All the World's Aircraft, "XAC KJ-2000," <https://janes-ihs-com.pentagonlibrary.idm.oclc.org/CustomPages/Janes/DisplayPage.aspx?DocType=Reference&ItemId=+++1344988&Pubabbrev=JAWA>.

⁸² Garth Hekler, "Chinese Early-Warning Aircraft, Electronic Warfare, and Maritime C4ISR," in *Chinese Aerospace Power*, 139.

⁸³ Ibid., 140.

⁸⁴ Wortzel, *The Dragon Extends Its Reach*, 36-37.

In addition to bolstering C4 networks, China has invested heavily in airborne electronic warfare (EW) platforms that may challenge the United States in conventional air-to-air engagements. The PLA has reportedly tested Chinese fighters with electronic counter measure pods employing advanced digital radio frequency memory jamming capabilities.⁸⁵ Other airborne-compatible capabilities include the BM/KZ 800 airborne electronic intelligence system and a variety of radar warning receivers.⁸⁶ Air and land-based jamming, as well as attacks in other domains, would likely weaken global positioning system, which U.S. air assets heavily depend on for precision navigating and timing.

While China is still well behind the technology curve in C4ISR development, its continued rapid development of these capabilities is integral for the success of its A2/AD doctrine. The PLA has numerous hurdles to overcome in their development of rapid ISR processing, exploitation, and dissemination (PED) capabilities, while the U.S. continues to re-orient its ISR enterprise towards rapid PED of sensors designed to operate in more contested environments. While the United States likely holds numerous classified capabilities to counter many Chinese C4ISR developments, PLA researchers have indicated that integrated, redundant C4ISR will be an important capability going forward. C4ISR is the foundation of a joint, integrated, cross-domain concept of warfare that both militaries espouse, and the U.S. advantage in this field is contingent on a continued R&D dominance in the field of sensors and datalink architectures.

R&D Efforts and Implications

China's civilian and military technology R&D effort is the linchpin for its success in the air domain and will continue to be an important touchstone of future capabilities *vis-à-vis* the United States. To date, China heavily relies on foreign technology development, and breakthroughs in other nations such as Russia have enabled Chinese military ventures into next-generation technology. Analysts are in agreement that foreign assistance is needed for China to continue its rapid pace of advanced technology development and keep it on a competitive footing with the United States in the air domain.⁸⁷

Domestic reforms in China are already underway. China has recently implemented a nationwide Civil-Military Integration policy to develop a dual-use technology sector, leveraging industry to fulfill both civilian and military requirements.⁸⁸ Tai Ming Cheung has indicated that the Chinese defense economy is taking broad steps toward improving its 'hard' innovation capabilities—improving R&D facilities, research institutes and universities, building human capital, and innovating manufacturing capabilities to improve technological development.⁸⁹ China's relationship with Russia's aviation industry has been a boon to importing innovative

⁸⁵ Hekler, "Chinese Early-Warning Aircraft," 138.

⁸⁶ *Ibid.*, 147.

⁸⁷ Shen Pin-Luen, "China's Aviation Industry: Past, Present, and Future," in *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities*, 266.

⁸⁸ U.S. Department of Defense, "Annual Report 2013," 12.

⁸⁹ Tai Ming Cheung, "The Chinese Defense Economy's Long March from Imitation to Innovation," in *China's Emergence as a Defense Technological Power*, 33.

industrial practices; although accusations of reverse engineering and intellectual theft, such as in the case of the J-11B being modeled largely on the Su-27, have strained that relationship.⁹⁰

Chinese ‘industrial espionage’ has allegedly given them the ability to catch up to technologically advanced military competitors while frequently frustrating allies. China’s leveraging of the cyber domain for espionage and open source research has earned it the reputation of what some scholars call a global “taker” of technology, rather than a “giver.”⁹¹ The knack for China’s aviation industry building aircraft that look shockingly similar to advanced U.S. and Russian aircraft is largely attributed to espionage and intellectual theft rather than mere coincidence.⁹² In addition to direct espionage, China often employs indirect, asymmetrical tactics to encourage technology transfer. For example, Chinese students have been found to be studying hard sciences in the U.S. at record high rates, and have created a sort of ‘postgraduate diaspora’ that feeds China valuable science and technology information at an immeasurable rate.⁹³ This trend is only likely to continue in the next 15-20 years as the Chinese economy becomes increasingly globalized and ease of technology transfer and proliferation become easier.

However, the U.S. technology base is a sizable asymmetric advantage that does not appear to be dwindling despite the slow crawl back from economic recession over the last five years. Because China most frequently relies on foreign aerospace technology in lieu of indigenous R&D, it will continue to be behind the power curve on developing the next greatest technology. If China’s economy slows down—as many analysts expect it will within the 20-year time horizon⁹⁴—the United States may see an increasing lead form over the PLA’s existing ability to quickly adapt other nations’ aerospace technologies to its military requirements.

Uncertainties And Opportunities

The preceding assessment raises several uncertainties about future Chinese capabilities and some opportunities for U.S. planners to gain a greater lead in the competition. Most prominent among intelligence gaps in open source analyses concern the nature of China’s fifth-generation fighter capabilities. Just how stealthy the J-20 and J-31 fighters may prove to be is highly debated among experts on the PLA,⁹⁵ and data on their integrated avionics suite may not become available in open sources until the aircraft is fully operational. Many analysts doubt the Chinese defense industry’s ability to master Active Electronically Scanned Array radar and advanced sensor technology needed for a true fifth-generation fighter—capabilities which China’s aviation

⁹⁰ Ibid., 34.

⁹¹ William C. Hannas, James Mulvenon and Anna B. Puglisi, *Chinese Industrial Espionage: Technology Acquisition and Military Modernization* (London: Routledge, 2013), 237.

⁹² Bill Gertz, “Top Gun takeover: Stolen F-35 secrets showing up in China’s stealth fighter,” *Washington Times*, March 13, 2014, <http://www.washingtontimes.com/news/2014/mar/13/f-35-secrets-now-showing-chinas-stealth-fighter/?page=all>.

⁹³ Hannas et. al, *Chinese Industrial Espionage*, 136.

⁹⁴ Swaine et al., *China’s Military*, 65.

⁹⁵ E.g. Feng Cao, “China Unveils More Capable Stealth Fighter Prototype,” *USNI News*, March 19, 2014, <http://news.usni.org/2014/03/19/china-unveils-capable-stealth-fighter-prototype>.

industry has fallen short on to date.⁹⁶ Given the U.S. defense industry's global lead on this technology, the U.S. military has the opportunity to continue to push the fifth-generation fighter competition to the next level and drive up the cost for the PLA to catch up. Many of the technology breakthroughs that have accompanied the development of the F-35 and F-22 can also be applied to the next-generation long-range ISR/strike aircraft, which is the next crucial component for building the United States towards future ASB capabilities.⁹⁷

A further uncertainty that the United States should monitor is the PLA's physical force structure and basing. In addition to further aircraft carrier development, a touchstone for power projection capability is foreign basing—which China has sworn off to date. However, many Chinese defense analysts have noted that foreign basing of PLA assets to defend economic interests is justified under China's "peaceful foreign policy and defensive national defense policy," and Chinese defense researchers have hinted at future foreign basing since at least 2006.⁹⁸ The aforementioned evidence indicates that the PLA is still far from establishing a power projection capability that would require overseas basing.

For the United States, the uncertainty about the military's role following the withdrawal from Afghanistan presents an additional opportunity for competition in the air domain. The 'pivot to the Pacific' combined with a decreasing budget environment presents a unique opportunity to make major force structure changes that may change Chinese thinking about how to best achieve regional hegemony and defend their interests beyond the Pacific. This transition period is the ideal opportunity to construct a cost-imposing strategy that will permanently set back China's ability to challenge the United States in the air domain.

The nature of China's A2/AD strategy requires the United States to diversify aircraft basing locations and hedge against Chinese capabilities that could hold both carrier and terrestrial-based air assets at risk. The next 15-20 years presents an opportunity for the United States to build a strong set of alliances with other Western Pacific nations that might serve as strategic air base locations in the event of a conflict. China's record of building alliances through combined, multi-lateral military exercises has been poor. While economic ties may bind China to a myriad of allies around the globe, the United States has an opportunity to emphasize partnership with a range of allies in the Pacific to diversify basing of air assets and confuse Chinese military planners' assumptions.

In sum, the next 15-20 years will see the United States continuing to hold the competitive advantage in the air domain when compared to China. The United States holds a clear technological and industrial advantage over China, which will continue to endure a lag time in developing next-generation platforms and adequately training their operators to maximize those capabilities. Although China may hold structural asymmetrical advantages in an A2/AD scenario due to its 'home field advantage,' the United States can continue to develop capabilities that will aid in overcoming distance challenges and leverage alliances to diversify their basing approach

⁹⁶ Cheung, "The Chinese Defense Economy's Long March," 38.

⁹⁷ Lieutenant General David A. Deptula (ret.), "The New Face of Long-Range Strike in the 21st Century" (lecture, Air Force Association Annual Air & Space Conference, National Harbor, MD, September 17, 2013).

⁹⁸ Michael Metcalf, *Imperialism with Chinese Characteristics? Reading and Re-Reading China's 2006 Defense White Paper* (Washington, DC: National Intelligence University, 2011), 19.

to an ASB scenario. The United States holds many opportunities to leverage asymmetries in the air domain to multiply advantages in other domains.

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