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# US Nuclear Policy, 1945–68

## Lessons from the Past for Dealing with the Emerging Threat from Iran

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The United States faces a potential transition in the balance of power and a growing concern over the threat of nuclear proliferation. The bipolar balance of power during the Cold War, though often tense and dangerous, kept states in check, thus maintaining a relatively stable international security environment with limited, or at least controlled, proliferation of nuclear technology. The current focus on the dynamics of international power, the threat of terrorism, and worries about nuclear proliferation calls for an examination of aspects of the post–World War II world and the early history of nuclear weapons. Such a review may provide insight into US policy options for addressing Iran's pursuit of nuclear technology.

The United States established the strategic nuclear policies in effect from 1945 to 1968 primarily to counter what the West perceived as a growing communist threat led by the Soviet Union. US policy makers of the time based this course of action on the technical developments, national interests, and dynamics of the international situation present in the security environment. This article describes and analyzes US nuclear policy from 1945 to 1968, uses the rational actor model to assess US actions during that period, and recommends a future nuclear policy that draws on our Cold War experience to deal with an emerging threat from Iran. By addressing lessons from the past, the article seeks to present a logical, yet likely controversial, course of action for the future.

### Nuclear Policy, 1945–68

Four general strategic concepts characterize US nuclear policy between 1945 and 1968: strategic bombardment, massive retaliation, limited war (graduated deterrence), and mutually assured destruction. US nuclear policy originated with the decision to drop the atomic bomb on Hiroshima, Japan, in 1945—the first use of atomic weapons in the history of mankind. The bomb's devastating power leveled the city, killed roughly 66,000 people, and wounded an additional 69,000.[1]

Initially, some commentators viewed the atomic weapon as just another option in the American arsenal: more powerful, complicated, and expensive but nevertheless simply a bomb that the United States could employ in pursuit of strategic objectives.[2] The Air Force led the way in developing concepts for such employment, emphasizing strategic bombardment. From the Air Force's perspective, it could use strategic bombardment (especially with atomic munitions) to cripple an enemy in a relatively short time, thus enabling the fulfillment of aviation's grandest wartime promise: victory from the air. This vision became unrealistic, however, as scientists learned more about the bomb's long-term effects and as the United States lost its monopoly

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on atomic weapons to the Soviets in 1949. As noted by both Pres. Harry Truman and Adm Chester Nimitz, no weapon has ever been created for which a countermeasure could not be developed.[3] The effectiveness of strategic bombardment would likely suffer at the hands of heavy resistance from aircraft flying defensive counterair missions and from ground-based antiaircraft elements, as well as from the large, dispersed nature of targets within the Soviet Union.

Strategic bombardment eventually gave way to the doctrine of massive retaliation under Pres. Dwight Eisenhower. Based on the New Look strategy, this doctrine of deterrence called for the United States to respond to any act of aggression by the Soviets (or another adversary) with an even greater exertion of military force, up to and including the use of nuclear weapons.[4] National Security Council Report 68 had determined that the absence of arms control restraining the spread of nuclear technologies made necessary an assertive policy of rapid expansion of atomic weapons to build an arsenal that would deter aggression until the United States and its allies could develop a more robust conventional force.[5] Thus, the Eisenhower administration made nuclear weapons a formal option for any given conflict in order to counter what it considered growing communist aggression around the globe.

As the number and power of strategic nuclear weapons increased, it became increasingly clear that the consequences of a strategy of massive retaliation would prove too costly for the United States to bear. This perception led to development of the concept of limited nuclear war, which offered a counterstrategy to total war by allowing for the employment of lower levels of force in order to obtain limited objectives. Such a notion, however, ran contrary to most strategic thinking of the day and required more robust conventional alternatives to nuclear warfare—alternatives more expensive and time consuming to develop and field than nuclear weapons. Entering the discussion at this point, graduated deterrence asserted the acceptability of limited wars fought with tactical nuclear weapons—smaller weapons designed for use at the battlefield level. This scenario allowed for escalation according to the course of the action/counteraction cycle that develops on the battlefield or the nature of the conflict's objectives. Unfortunately, research and development during the early days of the Cold War did not give priority to small nuclear weapons; rather, the nuclear devices of the time were large, requiring heavy bombers or missiles for delivery. The incorporation of smaller battlefield nuclear weapons would enable deterrence through the threat of their use at the tactical level of warfare.

Toward the end of this period, the idea of mutually assured destruction—predicated on the assumption that nuclear-armed states must possess both a first- and second-strike capability—came to define the nuclear relationship between the United States and Soviet Union.[6] The range and accuracy of American delivery systems such as bombers, intercontinental ballistic missiles, and submarines assured the United States' first-strike capability. Moreover, US weapons deployments that exceeded Soviet capabilities to negate them completely in a first strike—as well as the survivability of submarines, hardening of missile silos, and round-the-clock airborne alert of bombers—guaranteed a second strike. The lethality, survivability, and visibility of the US nuclear triad ensured strategic nuclear readiness and served as a deterrent throughout the Cold War. Specifically, despite suffering an initial attack, either country could still respond in kind with enough force to deliver a significant counterblow, a prospect that kept them both in check. This tense yet stable balance of nuclear power prevented full-scale war between the two superpowers for the remainder of the Cold War.

## Policy Analysis

Nuclear policies formulated by American leaders during the first part of the Cold War followed a pattern consistent with the tech-

nical developments, national interests, and dynamics of the international situation in effect at the time. From a technical perspective, as weapons grew more powerful and abundant, they became part of US war plans. Initially, two factors pushed atomic bombs to the forefront of American policy: the increased efficiency of bomb designs, which enabled us to produce more weapons from a given amount of fissile material, and development of the first long-range bomber, the B-36.[7] All other policies stemmed from the technical means that made them possible and a desire to be the first to field the latest technology in order to prevent an adversary from creating a capability gap that would destabilize the balance of power. In terms of national interests, the United States consistently produced additional nuclear weapons and delivery systems to meet what it perceived as a growing Soviet threat, or to respond to shifts in strategy. (For example, the United States developed hydrogen bombs to counter Soviet production of bigger bombs and to respond to an increased number of Soviet conventional forces in Europe.) Finally, as the international situation shifted and communism seemed ascendant in some areas (e.g., China, Korea, and Vietnam), the United States further emphasized its nuclear forces to increase the cost of communist expansion to unacceptable levels.

## Application of the Rational Actor Model

A theoretical paradigm used for analyzing organizational behavior, the rational actor model examines behavioral choices in terms of cost/benefit analysis of the expected outcome.[8] This model deems governments rational if they pursue policies that generally maximize reward while minimizing cost. Graham Allison asserts that rational states must (1) act in a unitary manner, (2) calculate the risks and benefits of actions prior to engaging in them and then choose the most beneficial option, (3) recognize the reality of an anarchical international system, and (4) pursue security through power.[9] All of these traits are consistent with US nuclear policies from 1945 to 1968.

Specifically, the US government acted unitarily throughout the period by following a singular course of action once the president established a formal policy, despite internal debate among politicians, scientists, and military personnel. For example, even though the decision to develop the hydrogen bomb proved contentious, all government agencies moved to develop, produce, and field this weapon.[10] Additionally, policy makers consistently evaluated actions in terms of cost/benefit analyses. Economic, strategic, and technical factors all played a part in the development of US nuclear policies as well. For example, the decision to deploy tactical nuclear weapons in Europe was driven in part by the excessive cost to the United States and its North Atlantic Treaty Organization allies of fielding a conventional force to counter the Soviet presence there. Recognizing the inability of other states to provide for its national security throughout the Cold War, the United States established nuclear policy that reflected the development and deployment of more powerful and numerous nuclear weapons to ensure security in the face of growing threats from international powers such as the Soviet Union and China. Finally, the United States' efforts to secure international diplomatic, economic, and military power hinged on its nuclear arsenal. European and Asian allies relied heavily on America for their defense, thus creating a system of dependence that gave us considerable leverage around the globe.

The previous discussion shows that the United States acted in a rational manner to perceived threats posed by communism and nuclear proliferation from 1945 to 1968. From a contemporary perspective, not all decisions may appear the best possible, but political leaders made them with the most pertinent information available at the time. We must now address the question of whether the United States can make better nuclear policy decisions today, based on

lessons learned and an increased amount of information regarding the motivations, capabilities, and strategies of former adversaries. Can we apply such lessons to problematic states (e.g., Iran, North Korea, and Pakistan) to stabilize the international order, prevent war, and control nuclear proliferation? To answer that question, this article turns its attention to Iran.

## Future Application

The United States frequently overestimated the Soviet Union's capabilities, portraying that country as a greater threat than it actually was.[11] Such thinking led to concerns about bomber and missile "gaps" as well as costly military spending to close them, generally fueling a greater degree of animosity than the reality of the situation warranted. Are we making the same mistake today with a state we suspect of pursuing nuclear weapons? More specifically, are the United States and its allies overestimating the threat that a nuclear-armed Iran would pose? Although the United States and Iran have a history of conflict and cooperation analogous to that of the United States and Soviet Union, Iran significantly lags the latter in terms of industrial, technical, and military capacities. Despite Iran's pursuit of nuclear technologies and the possibility of its fielding an operational nuclear weapon (or a viable option for one) in the near future, it is unlikely that Iran will pose a threat similar to that represented by the Soviets during the Cold War. The United States might consider a radical departure from its nuclear policy by following a line of thought proposed by Kenneth Waltz that actually allows Iran to acquire nuclear weapons. From Waltz's perspective, nuclear weapons enhance international stability by prohibitively increasing the cost of war.[12] A nuclear-armed Iran would acquire the international prestige, security, and regional leadership it desires yet would probably find itself unable to employ nuclear weapons effectively against the United States or a regional rival such as Israel; furthermore, the threat of nuclear retaliation would prevent it from transferring them to intermediaries (terrorist organizations).[13]

Throughout the Cold War, US nuclear forces and policies (the possible first use of nuclear weapons to counter Soviet conventional forces) created a credible deterrent to Soviet aggression in Europe.[14] The United States could likely produce the same deterrent effect on Iran, provided it makes its policies of reprisal for attack and defense of allies perfectly clear, and provided it maintains a healthy, robust, and credible nuclear deterrent capability.[15] By adding to these assumptions the development of an effective nuclear forensics apparatus to identify sponsors of nuclear-armed terrorists and the issuance of an unambiguous threat of retaliatory strikes against them, the United States should enjoy protection from both direct and indirect Iranian nuclear attacks.[16] We should apply to Iran the lesson which tells us that deterrence works but that overestimating or misunderstanding the enemy drains national treasure, pollutes the environment, and risks inadvertent war. Just as the Soviets seemed arguably more concerned with an invasion of their homeland from Europe than with the pursuit of global domination, so would Iran likely have more interest in acquiring prestige and security than in going to war with the United States. Western media widely publicizes Iranian president Mahmoud Ahmadinejad's derogatory comments about Israel (e.g., his statement that "Israel must be wiped off the map") and the regime's support for spreading Shiite revolutionary ideals (e.g., its founding of Hezbollah), but do such statements and behavior differ appreciably from Nikita Khrushchev's radical outbursts decrying capitalism and Western society?[17]

## Iranian Rationality

Existing theories of deterrence depend upon the rationality of the parties involved; therefore, if Iran is not a rational actor, then

those theories may not represent an accurate framework from which to develop courses of action for dealing with that country. Considerable debate within the international community concerns Iran's perceived efforts to acquire nuclear weapons and the possible ramifications of such a move. Granted, Iran has a history of provocative action and confrontation with the West, but one can reasonably explain its acquisition of nuclear technologies (civil or military) in terms of normal state behavior, assuming a rational Iran and assuming the emergence of a multipolar world order in which rising states will attempt to cut into America's current share of international power. This changing world order will affect Iran because it will challenge the current balance of power, perhaps giving that country a greater span of influence within the Middle East than its Sunni rivals and Israel, all of whom have benefited from the United States' current status as the world's only superpower. By considering both sides of the argument regarding Iranian rationality and by recognizing the emergence of a new balance of power in the international community, one can objectively assess the potential threat that Iranian nuclear weapons might pose to the United States, in the event Iran successfully develops and fields such weapons.

One might question the rationality of any theocratic regime, especially one known for its support of international terrorism and labeled a member of the "Axis of Evil." Although this article cannot address any debate that this issue might instigate, it is interesting to note that domestic and foreign policy often trumps Iran's religious ideology. Certainly, Iran—like many other Islamic republics—has a worldview that differs from that of the West. Leaders draw on worldviews in assessing rationality and making decisions. In short, rationality becomes a relative matter because the costs and benefits of a given action depend upon one's worldview. Since Iranians' worldviews differ from Western ones, their actions may not appear rational to us; analyzed from an Iranian perspective, however, they become clearer.[18]

Despite its ideological commitment to Shiite Islam and Islamic revolutionary rhetoric, Iran is also a rational actor that will examine policy in terms of a cost/benefit analysis. Provocative statements from Iran serve to inflame the Arab street and weaken Sunni regimes hostile to Iran, while rallying the Muslim masses by presenting the country as defending Islam against Zionism and Western interference. According to Shlomo Ben-Ami, Israel's former foreign minister, "In my view this [rallying the Arab street] remains, even with this nuclear thing, the main purpose of Ahmadinejad's incendiary rhetoric. . . . If the discourse in the Middle East is an Arab discourse, Iran is isolated. If it is an Islamic discourse, then Iran is in a leading position. And always with the view of protecting Iran and the Iranian revolution, which is why they tried all the time to oppose the peace process."[19] This insight is critical to any attempt to predict the course of action Iran will pursue if it acquires nuclear weapons—or to any development of deterrence strategies for dealing with Iran.

Fariborz Mokhtari offers additional insight into Iranian national security motivations:

> Without allies or surrounding protective oceans, Iran's security must therefore be based on deterrence. . . . Iran's deterrence must of necessity be self-generated and self-reliant. A conventional force based on domestic resources, technology and industrial capacity, could not overcome the above security challenges. A credible nuclear deterrence with a reliable missile technology could, and is relatively inexpensive and probably within reach.[20]

The area surrounding Iran is inherently unstable. Given the troubled states of Iraq, Afghanistan, and Pakistan; the ongoing Israeli-Palestinian conflict; and challenges to the unipolar status of the United States; Iran occupies a unique position for obtaining a greater place not only on the regional stage but also on the world stage. More than likely, Iranians' foreign policy decisions will follow a course of action designed to increase national influence and status rather than undermine stability and increase the division between themselves and the regional and international community. Indeed, Henry Kissinger reminds us that

"nations have pursued self-interest more frequently than high-minded principle."[21] Iran is a theocratic state with a deeply ingrained Shiite perspective, but it is also a modern nation-state that must calculate its actions carefully or fade into oblivion. Therefore, such issues as national pride and prestige, pursuit of great-power status, negation of perceived threats to national security, and domestic political agendas of social elites probably motivate it more than religious zeal or mischievous intentions.[22]

Even many Israelis acknowledge the rationality of Iranian foreign policy decisions despite the rhetoric often portrayed to international audiences—an interesting perspective, considering Ahmadinejad's radical comments regarding the Holocaust and Israel's right to exist. Israeli television journalist Ehud Yaari notes that "people [in Israel] respect the Iranians and the Iranian regime. They take them as very serious, calculating players."[23] Additionally, Ephraim Halevi, former director of the Mossad and head of the Israeli National Security Council, asserts, "I don't think they are irrational, I think they are very rational. . . . To label them as irrational is escaping from reality and it gives you kind of an escape clause."[24] Trita Parsi, president of the National Iranian American Council, captures the underlying concern in the Israeli-Iranian rivalry: "Israel and Iran's fear that the creation of a new order in the region would benefit the other is acute precisely because the Middle East lacks a geopolitical basis for its frail order."[25] Parsi even goes so far as to cite "several Israeli decision-makers" who state that "the [Israeli] Labor Party exaggerated the Iranian threat for political reasons."[26]

R. K. Ramazani points out that "the tension between religious ideology and pragmatism has persisted throughout Iranian history . . . [yet] the dynamic processes of cultural maturation seem to be shifting the balance of influence increasingly away from religious ideology toward pragmatic calculation of the national interest in the making and implementation of foreign policy decisions."[27] Iran's purchase of arms from the United States and Israel illustrates its rationality in foreign affairs. The transaction, which occurred during the Iran-Iraq War of 1980–88, took place via intermediaries in order to bolster Iranian forces while providing assistance to the United States and Israel in securing the release of hostages in Lebanon.[28] This scenario is similar to the United States' covert program to provide other military equipment to Iran in exchange for the release of American hostages seized following the Iranian Revolution—commonly known as the Iran-Contra Affair. If religious ideology lies at the heart of Iranian foreign policy, one wonders why Iranian leaders would make agreements with the "Great Satan." According to Ramazani, "When Iran's ideological and strategic interests collided, as they did in the 1980s, strategic considerations consistently prevailed."[29] Moreover, Iranian president Seyed Mohammad Khatami's first major political address, directed not toward Iranians but Americans, reflects calculation beyond theology in its attempt to build a bridge between the United States and Iran by highlighting similarities between the American and Iranian revolutions.[30] Khatami's administration worked to overcome impressions of Iranian radical fundamentalism in foreign policy, even going so far as to condemn the terrorist attacks of 11 September 2001 and to help the United States topple the Taliban in Afghanistan:

> The Afghan Islamists evinced visceral hatred for Shiites, fuelling Iranian fear and anger. Ousting them from power, increasing Iranian influence on its neighbour and returning the many Afghan refugees living in Khorasan province were the Islamic Republic's barely concealed wishes. As a result, Iran cooperated with U.S. military forces, providing substantial assistance to Operation Enduring Freedom.[31]

Unfortunately, these overtures—clear examples of rational state behavior—were forgotten as Pres. George W. Bush proclaimed Iran a member of the Axis of Evil. Interestingly, the Bush administration received a proposal from Iran (by way of Swiss intermediaries) to open a dialogue

regarding its nuclear program and reach a consensus (an offer that the United States flatly rejected):[32]

> From Iran's perspective, it was the ultimate reversal and betrayal. Tehran had worked with America to get rid of a dangerous adversary. Then, without warning, Washington turned around, branded it a member of [what President Bush called] "the axis of evil." In the meantime, the U.S. closed ranks with a country, Pakistan, that did precisely what Washington accused Iran of wishing to do: acquire a nuclear bomb, harbour terrorists and provide support to militants in a neighboring country, Afghanistan.[33]

If Iran is in fact a rational actor, then we can understand and deal with its reasons for possibly wanting nuclear weapons. From Iran's perspective, nuclear weapons may offer protection from regional and global forces that exert pressure to constrain its actions. Such pressures likely include Iran's perceived encirclement by the United States, the Israeli nuclear weapons program, the Pakistani nuclear weapons program, domestic political motivations, and the growing notion that to be a great power, a state must possess nuclear weapons.[34] Because Iran has lived under sanctions and threat of attack since the theocratic regime came to power in 1979, we might acknowledge that its leaders are acting logically when they seek a means of increasing their state's security and international standing through nuclear technology. Ultimately, we can explain Iranian efforts to develop a nuclear weapon in terms of countering real or perceived threats to the state, increasing state prominence in the international community, and attaining hegemonic power in the Middle East—rational actions to which we can apply theoretical models to assess their potential threat to the United States. This is not to deny that a nuclear-armed Iran will have other consequences: a regional arms race, a need for so-called nuclear umbrellas, and the actions of nonstate actors sponsored by Iran, to mention a few.[35] Concerns remain about America's ability to influence the region if Iran goes nuclear, however. A first strike against the United States or its allies or a Middle East arms race certainly gives cause for concern, yet the same risks existed during the Cold War. America's strategic readiness and commitment to the defense of its allies proved sufficient to manage the Soviet threat. The same is true today in the case of Iran: just as we kept the Soviet Union in check with a healthy, robust, and credible US nuclear deterrent, so can we contain Iran by employing similar nuclear policies.

## Conclusion

The United States established nuclear policies between 1945 and 1968 to counter a growing communist threat led by the Soviet Union. Policy makers took rational action based on technical developments, national interests, and the dynamics of the international security situation of the time. This point is important because by recognizing the underlying motivations of a given country's agenda for nuclear proliferation, one can better craft an approach that produces stability by rationally addressing the level of threat posed by the potential adversary. As demonstrated above, Iran has logical and rational motivations for acquiring nuclear technology; therefore, we can likely exert control by using deterrent philosophies similar to those we employed against the Soviet Union throughout the Cold War. However, we must temper these deterrent policies with an objective understanding of Iran's underlying motivations in order to avoid overestimating the threat or arousing unnecessary international antagonism. In short, as long as rising powers pursue nuclear technology that can facilitate weapons production, the United States should maintain a healthy, robust, and credible nuclear deterrent, complete with first- and second-strike capabilities. Such a strategy enables the United States to maintain its security and position, regardless of the actions of other states. ✪

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## Notes

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# Integration of Special Operations Forces and Airpower in Irregular Warfare

## Examining the "FACs"

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The rapid, decisive campaign conducted against the Taliban by US special operations forces (SOF) in conjunction with the Northern Alliance and supported by US airpower in the opening phases of Operation Enduring Freedom captured the attention of military professionals throughout the world—allies and potential adversaries alike. Enthusiastic proponents heralded the campaign as a template for future military transformation, and even the less sanguine observers were forced to acknowledge an impressive synergy and economy of force in the SOF-airpower combination. The manifest operational benefits of modern airpower's key characteristics of precision, persistence, and reach have combined with SOF's unique attributes to impart a strategically significant synergistic effect. Particularly in the context of its unique relationship with SOF, airpower constitutes perhaps the single most effective asymmetric US advantage in the operational environment of irregular warfare (IW). Despite revolutionary advances in modern airpower, however, at least one area has progressed less consistently, arguably even losing ground from its historical zenith: the doctrinal and organizational aspects of air-ground integration in support of special operations. Yet, ironically, this critical nexus of airpower and SOF, despite some degree of recent neglect, potentially offers perhaps the most return on investment in terms of operational effectiveness.

### Through the Past, Darkly: Integration of Special Operations Forces and Airpower in Military Assistance Command, Vietnam—Studies and Observations Group, 1964–72

As has often occurred throughout history—and perhaps military history in particular—a discriminating examination of the past may uncover keys that unlock future potential, though teasing out relevant lessons can become a deceptively daunting task, particularly if their historical context is conveniently forgotten. One such historical rose has bloomed in the thorny history of US counterinsurgency efforts in Southeast Asia: the highly successful integration of airpower in the operations of Military Assistance Command, Vietnam—Studies and Observations Group (MACV-SOG) during its secret eight-year war in Laos and Cambodia.

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In the wake of the aborted Bay of Pigs invasion of Cuba, Pres. John F. Kennedy appointed Gen Maxwell Taylor to lead a commission charged with analyzing the fiasco and making recommendations about avoiding a recurrence. Among other conclusions, the commission determined that Director William Colby's Central Intelligence Agency was increasingly engaged in operations beyond those of a purely intelligence nature.[1] Ultimately, it recommended assigning operational missions, including several ongoing operations in Southeast Asia, to the US military.[2] As a result, Secretary of Defense Robert McNamara directed MACV to establish a covert unit under the auspices of Operation Plan 34A to assume responsibility for certain ongoing Central Intelligence Agency programs in Southeast Asia, effective 1 February 1964.[3] Originally dubbed the "Special Operations Group," the name of the unit later changed to "Studies and Observations Group" in token deference to operational security. The unit included members of the US Army Special Forces, US Navy SEALs, and US Air Force Air Commandos operating loosely under the operational security umbrella of the 5th Special Forces Group in Vietnam. MACV-SOG's charter called for conducting strategic reconnaissance, sabotage, interdiction, and personnel recovery operations in Cambodia, Laos, and North Vietnam.[4]

On 2 November 1965, SOG's Reconnaissance Team Alaska entered Laos as part of Operation Shining Brass (code name for SOG operations in Laos, later changed to Prairie Fire).[5] US forces extracted the team after it made contact with a superior enemy force on the fourth day "in country," but the team's "One Zero" (team leader) later returned to the area in the right seat of an Air Force forward air controller's (FAC) O-1 "Bird Dog" aircraft in order to locate airstrike targets identified during Reconnaissance Team Alaska's mission.[6] SOG immediately recognized the utility of teaming a senior SOG operator with an Air Force FAC. Subsequently, SOG entered a formal agreement with Seventh Air Force, as described by former SOG operator Maj John Plaster:

> Each day a 20th Tactical Air Support Squadron FAC, with a USAF code name Covey, would fly over southern Laos to assist SOG; in return, SOG would detail an experienced recon man to ride with the FAC, to help look for targets, select LZs [landing zones], plan insertions and extracts, and stay in radio contact with the recon teams. Called "Covey Riders," *these SOG old hands saved many lives because they understood exactly what those on the ground were going through, resulting not just in an economy of language or effective use of air support, but an unanticipated psychological dimension that was hard to explain*.[7] (emphasis added)

On the other side of the cockpit, Maj Reginald Hathorn served as an Air Force FAC with the 23rd Tactical Air Support Squadron, operating from Nakhon Phanom Royal Thai Air Base in support of SOG's Prairie Fire and Heavy Hook (code name for SOG operations in North Vietnam) missions in 1968 and 1969.[8] Hathorn tells a similar tale regarding both the success of the special operator–FAC teaming concept and the Air Force's reciprocation of the commitment by assigning only the most skilled and experienced pilots to fly SOG support missions: "The 23rd's pilots who flew . . . for the 5th Special Forces under MACVSOG, were the most experienced pilots the 23rd had . . . as possibilities of engagement with NVA [North Vietnamese Army] forces was [*sic*] certain to be 100% over time. . . . Therefore, it was imperative that the 23rd FAC be a mature, highly experienced pilot and Forward Air Controller."[9] Clearly, special operators and their supporting FACs had reached a consensus regarding the operational value of the "covey rider" arrangement. Encapsulating the strategic impact of SOG operations in Southeast Asia, Plaster labels them "the most successful economy of force in US history," estimating that "at one point each American Green Beret operating in Laos was tying down six hundred NVA defenders, or about one NVA battalion per SOG recon man in

the field." Despite high losses, the SOG kill ratio rose as high as 150:1, as documented by MACV in 1969.[10]

Similarly, in his insightful study of the integration of close air support (CAS) among conventional forces, Maj Michael D. Millen, USAF, turns his attention to Southeast Asia, extensively surveying FAC (airborne) (FAC[A]) operations in the Vietnam War. He examines the role of the FAC(A) in the successful conduct of CAS, noting that "most importantly with regard to this research, the Air Force's methods of detailed integration in planning and Air Force and Army interaction were significantly different at the tactical level than they have been since." He further asserts that "in Southeast Asia, unlike conflicts since, the FAC(A) was assigned to a flying squadron, a Tactical Air Support Squadron, but attached to an Army maneuver unit as part of the TACP [tactical air control party]. *In this era, the FAC(A) truly was an extension of the ground commander, and since he planned alongside, and lived with, the supported unit, his planning was quite detailed and wholly integrated*" (emphasis added).[11] Millen's observations further lament the current failure to apply this integrated FAC(A) concept.

## Forward to the Present: Integration of the Forward Air Controller (Airborne) and Special Operations Forces

At present, each service that possesses tactical fixed-wing aircraft maintains a nominal FAC(A) capability.[12] The Air Force's capability resides primarily with the very able, purpose-built OA-10 but also extends to selected F-16 crews. The Navy retains a handful of FAC(A)-qualified aircrews in each of its two-seat F/A-18F squadrons, while the Marine Corps maintains FAC(A) capability in the AV-8B, UH-1N/Y, AH-1W/Z, and F/A-18A/C/D, considering FAC(A) a primary mission for its F/A-18D squadrons.[13] All aircrews flying FAC(A) missions designated by an air tasking order must be current and qualified in accordance with their respective service requirements, though the latter differ slightly. FAC(A)s from the various services have flown missions in support of SOF engaged in Operations Iraqi Freedom and Enduring Freedom, including a secretive joint Air Force and Navy task force based on shore that included Navy F-14 FAC(A)s in direct support of SOF Task Force 20 operators who conducted counter-high-value individual missions in Iraqi Freedom during March and April of 2003.[14] Although this arrangement evidently experienced success from an operational standpoint, Navy leadership appears to have resisted the precedent of basing the service's tactical aircraft ashore.[15] In any case, it has not recurred to date, nor has a service established any other habitual training or enduring operational support relationship between a FAC(A) and SOF unit. Nevertheless, individual SOF combat controllers and fire support officers have attempted, with varying success, to initiate relationships in-theater using liaison officers and unit standard operating procedures on a sporadic, ad hoc basis. Additionally, unofficial associations have developed between both the Air Force Weapons School and Navy Strike Fighter Weapons Schools and selected SOF units for the purpose of coordinating the development of tactics, techniques, and procedures.

## Role of the Forward Air Controller (Airborne): Past and Present

Millen's survey of Southeast Asian FAC(A) operations reveals broad consensus among his sources regarding the role of the FAC(A): "All made it clear that the FAC(A), and more specifically the slow FAC, . . . was the linchpin of CAS in South Vietnam. They attribute the FAC's success primarily to his ability to maintain an integral knowledge of the ground commander's plan and force ar-

ray, and to translate that knowledge and understanding into fire support in the form of CAS."[16]

According to the 2003 version of the joint doctrine manual for CAS, "the FAC(A) is normally an airborne extension of the TACP" and thus ultimately of the supported commander on the ground.[17] The 2009 version of that manual retained this longstanding definition of the FAC(A) role but augmented it with a more detailed enumeration of the roles and missions of the FAC(A), including radio relay, reconnaissance, control of indirect fires, asset coordination and deconfliction, battle damage assessment, target marking and designation, generation of coordinates, suppression of enemy air defenses, and terminal attack control.[18] That version culminates with the key observation that "the FAC(A) must be capable of executing the desires of the ground commander in day, night, and adverse weather conditions; integrating fires on the battlefield; mitigating fratricide; and conducting detailed planning and integration with the maneuver element."[19]

## Key Characteristics of Forward Air Controllers (Airborne)

Several attributes of FAC(A)s advantageously position them to fulfill this difficult but critical role. First and most obviously, they have an airborne perspective. FAC(A)s view the battlefield from the same vantage as the CAS aircraft they control: a decidedly macrolevel, two-dimensional, "bird's-eye" view (in contrast to the three-dimensional view of the ground joint terminal attack controller [JTAC], which is dominated by a limited horizon, vertical development, and microterrain). Moreover, FAC(A)s, usually experienced providers of CAS themselves, possess a deep knowledge of aircraft, sensor, and weapon system capabilities and limitations, as well as unmatched familiarity with ordnance-delivery profiles, weaponeering limitations, and the effects of air-delivered weapons. Second, FAC(A)s typically have more training and experience in the realm of the supported ground commander than typical aviators who perform CAS. Often, the best of the FAC(A)s have served as JTACs on the ground. The only service that institutionalizes this practice, the Marine Corps, includes FAC tours as mandatory elements of its aviator career path, although the other services can cite selected examples of such personnel. Interestingly, Navy FAC(A)s, whose program parallels that of the Marine weapons school—Marine Aviation Weapons and Tactics Squadron One—are the only current service FAC(A)s to date who must universally qualify as ground JTACs prior to commencement of the airborne portion of the FAC(A) syllabus. This requirement imbues them with at least some nominal appreciation for the JTAC's and ground commander's perspective. Derived from their unique position and experience, the ability of FAC(A)s to bridge the perspective/knowledge chasm between air and ground assures their enduring value.

## Integration and Beyond

Major Millen's superb study includes interviews with numerous FAC(A)s who had recent combat experience in Iraqi Freedom regarding their roles and responsibilities in facilitating the effective integration of CAS. His findings uncover a universal consensus that "FAC(A) requirements for detailed integration, both in planning and execution, are significantly different than for a simple CAS sortie."[20] Similarly, Millen identifies the tactical payoff for this increased requirement of the FAC(A): "As a general rule, the more detailed the FAC(A)'s knowledge, the less information he will have to pass to the CAS aircraft for them to employ effectively. This enables him to utilize more aircraft in a given time period, thereby striking more targets and increasing CAS efficiency and effectiveness."[21]

Millen's research then turns to investigating how the FAC(A) acquires such detailed knowledge. His subsequent analysis

of current joint organization and doctrine shows that existing allocation and tasking processes (air tasking order) and command and control architectures do not support attainment of the required level of FAC(A) knowledge for routine, detailed integration of these controllers into the supported ground commander's scheme of fire and maneuver, despite doctrinal acknowledgement of its necessity for the effective employment of FAC(A)s.[22]

One key point concerns sortie allocation.[23] Millen's study highlights a degree of continuity in FAC(A) tasking as a critical necessity for attainment of the requisite level of situational awareness. The majority of the study's respondents indicate a desire for repeated assignments to support the same maneuver units, or at least service the same area of operation on successive missions, in order to acquire the degree of familiarity and situational awareness they believe necessary for optimal effectiveness.[24] Coupled with adequate aircraft endurance, this continuity of allocation allows the FAC(A) to develop the high degree of situational awareness necessary to effectively control the delivery of ordnance in close proximity to friendly troops and civilians. Both Hathorn and Plaster recount numerous examples of FAC(A)s controlling fires within 100 meters of friendly forces in Southeast Asia (well within the "danger close" distances for the ordnance involved) with impressive regularity.[25] Given that they controlled unguided weapons exclusively, delivered from aircraft with a best-case 10-mil delivery accuracy, this feat represents an astounding degree of professionalism and nerve.[26] Despite revolutionary improvements in precision derived from technological advancements in modern aircraft and weapons, delivering ordnance at the desired place and time (i.e., on target) remains highly dependent upon the situational awareness of the fallible human who performs terminal control. As previously noted, in the case of the FAC(A), current doctrinal organization, allocation processes, and command and control architecture do not accommodate the degree of continuity in FAC(A) allocation necessary to ensure this level of situational awareness consistently.

If current doctrine and organization contain serious shortfalls in accommodating the doctrinally specified level of "detailed . . . integration" of the FAC(A) into the ground scheme of fire and maneuver, the cohesive human element of air-ground integration remains completely unacknowledged. Long ago, the US Army recognized the deleterious effect of its individual personnel-rotation policy upon unit cohesion and effectiveness. Nor are individual infantry platoons (let alone SOF units) routinely expected to play tactical "pickup games" in mission assignments with lives at stake. Yet, an analogous situation has, in fact, transpired with respect to doctrinal organization and allocation of FAC(A)s since the conclusion of the Vietnam War. In the case of SOF, which has already demonstrated that establishment of an organic, direct-support aviation arm with enduring training and operational relationships is both practical and inherently valuable, such a conspicuous oversight becomes all the more inexplicable.[27]

Beyond doctrinal roles and missions, the true value of FAC(A)s resides in their ability to bridge the operational domains of air and ground. More often than not, the crux of that bridge is a very human bond between aviators and Soldiers or special operators. The bridge must begin with a mutually firm, elemental grasp of the nature, objectives, capabilities, and limitations inherent in both environments. This part of the bridge is built through both parties' technical mastery of the tools of the trade and comprehensive knowledge of the tactics, techniques, and procedures comprising the tactical doctrine of both air and ground. Such a common understanding enables what is drily referred to in doctrine as *integration*. But to achieve its full potential, the bridge must ultimately rest upon a founda-

tion of that distinctly human element gained only through the continuity of relationships based on shared life-and-death challenges known as *trust*. Perhaps that is, in fact, the "unanticipated psychological dimension" which Major Plaster finds difficult to explain.

## Opportunity Knocks

The Air Force has received initial funding to support the fielding of 15 light attack armed reconnaissance (LAAR) aircraft in fiscal year 2011, 12 of which will be combat coded.[28] Specifications of the aircraft's armament include up to two 7.62 mm minigun pods, two 500-pound-class precision munitions, two 2.75-inch rocket pods, and the AGM-114 Hellfire missile, complemented by the LAAR's advanced avionics, communications, sensors, data links, and full-motion-video capability.[29] The aircraft must operate from austere forward locations and provide a nominal five-hour endurance with a range of 900 nautical miles, a ceiling of 30,000 feet, and an estimated operating cost of only $1,000 per flight hour.[30] Funded under the Air Force's OA-X program, the aircraft will conduct missions envisioned to include FAC(A). LAARs are scheduled to attain initial operational capability with a 24-aircraft squadron assigned to Air Combat Command as soon as 2013. Despite ongoing source selection, candidates currently include the Embraer EMB-314 Super Tucano (now successfully employed by the Colombian Air Force in the counterinsurgency role) and the Hawker Beechcraft AT-6.[31]

Longtime proponents of reviving a dedicated "slow FAC" platform from the storied lineage of the O-1, O-2, and OV-10, employed so successfully in Southeast Asia for counterinsurgency applications, no doubt are excited by the prospect of a modern version equipped with the latest avionics, sensors, and precision-guided munitions for possible counterinsurgency employment in Afghanistan and beyond. The LAAR program appears to signal a programmatic and cultural shift toward recognizing the value of a purpose-built light attack platform to the IW fight; however, there remains the greater question about whether the services will properly integrate this platform so that it provides optimal support to the customer.

## Recommendations

The Air Force and US Special Operations Command should seize the opportunity presented by fielding a purpose-built light attack aircraft tailored to IW; doing so will allow them to implement a parallel doctrinal reorganization that re-creates the successful relationship between SOF and Air Force FAC(A)s assigned to tactical air support squadrons in Southeast Asia. Lt Col Michael Pietrucha, USAF, envisions just such a successful outcome in which future hypothetical light attack detachments "gave aircrews direct exposure to the units they supported, raised the confidence level of participants, and facilitated the detailed integration and planning necessary for a successful air-ground team."[32]

The LAAR program represents a promising technological and programmatic step toward more effective SOF-air integration, but the organizational aspects of this integration are at least as critical to the operational performance and strategic impact of the SOF-air team. Accordingly, the Air Force and Special Operations Command should do the following:

- When a LAAR squadron attains initial operational capability, assign it to Air Force Special Operations Command to be attached under tactical control of a joint special operations task force operating in Afghanistan as soon as practicable in order to develop an effective concept of operations for optimal SOF-air integration. This would likely include a scheme of distributed "hub and spoke" operations that would capitalize on the LAAR's expeditionary field capability, facilitate integrated planning

with supported units, and improve on-station and response times.

- Assign only the most experienced volunteer FAC(A) aircrews to SOF support squadrons, thereby building both an experienced cadre and organizational trust.
- Initiate selective "closed loop" personnel assignment of designated SOF-support FAC(A) aircrews as SOF fire support officers during nonflying joint assignments as a means of enhancing FAC(A) understanding of and familiarity with SOF tactics, techniques, and procedures and requirements.

As for the Air Force Weapons School, it should reexamine the utility of FAC(A) sector operations as a way of leveraging the distributed operations capability of the LAAR to increase FAC(A) continuity and situational awareness in support of conventional general-purpose forces, with whom a unit-embedded FAC(A) organizational scheme might prove impractical.

## Conclusion

The complementary capabilities and characteristics of SOF and modern airpower represent a symbiotic relationship that affords a degree of synergy to IW, which, if properly leveraged, will contribute significantly to maximizing the strategic effectiveness of the US military's counterinsurgency operations in Afghanistan. Modern revolutions in the precision, persistence, and reach of airpower have further assured the innate effectiveness of the SOF-airpower team, but progress in one critical area of SOF-air integration has lagged technological advances: FAC(A) integration.

Historically, in both doctrine and practice, the FAC(A) has served as a critical nexus in the effective assimilation of SOF and airpower. Lacking until recently the prospect of a slow FAC platform tailored to IW operations, as well as the doctrinal command and control architecture and organizational relationships to facilitate the level of detailed integration into the ground scheme of fire and maneuver required for optimal effectiveness, SOF-air integration has fallen short of its full potential. The Air Force's LAAR program presents a unique opportunity to realize that potential, but only by properly implementing the organizational and relational aspects of its integration. In CAS—as in all human endeavors, from basic troop leading to statecraft—relationships matter. ✪

*Carlisle, Pennsylvania*

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### Notes

1. William Colby himself was a storied veteran of the Office of Strategic Services' Jedburgh covert operation, which organized resistance behind German lines in World War II.
2. John L. Plaster, *SOG: The Secret Wars of America's Commandos in Vietnam* (New York: Penguin Books, 1998), 22–23.
3. Ibid., 23.
4. Ibid., 23–24.
5. Ibid., 40.
6. Ibid., 41.
7. Ibid.
8. Reginald Hathorn, *Here There Are Tigers: The Secret Air War in Laos, 1968–69* (Mechanicsburg, PA: Stackpole Books, 2008), xii–xiii.
9. Ibid., 221.
10. Plaster, *SOG*, 355.
11. Michael D. Millen, "Improving Detailed Integration in Close Air Support Planning and Execution" (thesis, US Army Command and General Staff College, 2004), 16, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA428778&Location=U2&doc=GetTRDoc.pdf.
12. The term "forward air controller" (FAC) has become "forward air controller (airborne)" (FAC[A]) to distinguish it from the US Marine Corps' term for a naval aviator serving as a joint terminal attack controller on the ground.
13. Joint Publication (JP) 3-09.3, *Close Air Support*, 8 July 2009, I-3, http://www.dtic.mil/doctrine/new_pubs/jp3_09_3.pdf.

14. Tony Holmes, *US Navy F-14 Tomcat Units of Operation Iraqi Freedom* (Oxford, UK: Osprey Publishing, 2005), 69–75.

15. Ibid., 69.

16. Millen, "Improving Detailed Integration," 17.

17. JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)*, 3 September 2003, II-14, accessed 24 August 2010, http://www.bits.de/NRANEU/others/jp-doctrine/jp3_09_3(95).pdf.

18. JP 3-09.3, *Close Air Support*, 8 July 2009, I-3.

19. Ibid., III-38.

20. Millen, "Improving Detailed Integration," 30.

21. Ibid.

22. Ibid., 30–60.

23. Ibid., 51.

24. Ibid.

25. Hathorn, *Here There Are Tigers*, 222; and John L. Plaster, *Secret Commandos: Behind Enemy Lines with the Elite Warriors of SOG* (New York: Penguin Books, 2005), 280.

26. One mil equals one meter of weapon dispersion per 1,000 meters of slant range to the target.

27. Both the Air Force's 1st Special Operations Wing and the Army's 160th Special Operations Aviation Regiment exemplify this type of direct-support aviation arm with established organizational and habitual training relationships.

28. Marcus Weisgerber, "The Light Attack Aircraft," *Air Force Magazine* 93, no. 1 (January 2010): 58, http://www.airforce-magazine.com/MagazineArchive/Documents/2010/January%202010/0110aircraft.pdf.

29. "USAF Receives First Funding for LAAR Aircraft Programme," *airforce-technology.com*, 11 December 2009, accessed 4 August 2010, http:/www.airforce-technology.com/news/news72193.html.

30. Ibid.

31. Ibid.; and Eric Palmer, "Funding for USAF's Light Attack Armed Reconnaissance Aircraft," ELP Defens(c)e Blog, 9 December 2009, accessed 4 August 2010, http:/ericpalmer.wordpress.com/2009/12/09/funding-for-usafs-light-attack-armed-reconnaissance-aircraft/.

32. Lt Col Michael W. Pietrucha, "Seeing the Whole Elephant: Envisioning a Successful Light Attack Program for the US Air Force," *Air and Space Power Journal* 24, no. 3 (Fall 2010): 48.