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How the Iran Deal Could Complicate U.S. Efforts to Prevent a Nuclear Breakout

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President Obama has often stated, regarding Iran's potential nuclear weapons ambitions, that “[all options are and will remain on the table](#)” and that the United States would be able to deal with such an eventuality because “[we preserve all our capabilities ... our military superiority stays in place.](#)” Administration officials have likewise claimed that the inspection regime agreed to in the nuclear deal with Iran [would increase America's insight into Iran's declared nuclear infrastructure](#), [greatly enhancing the effectiveness of a military strike](#) should it someday be deemed necessary.

Further scrutiny, however, raises questions regarding whether political and military dynamics set in train by the nuclear deal with Iran will in fact make preventive military action an even more problematic, and therefore unlikely, option for the United States.

This could influence Iran's future proliferation calculus. The nuclear deal, if implemented fully, could place major constraints on Iran's ability to undertake a breakout from declared, or possible covert, facilities for 10 to 15 years. But as these constraints are lifted (or circumvented before then by Iran), the temptation to pursue a breakout could be strengthened. Several factors will influence Iran's decision-making on this matter; [foremost among these is Iran's assessment of the risk of attempting a breakout.](#)

Because [it is unclear how the sanctions “snapback” mechanism might work in practice](#), it is especially important that the nuclear deal be backstopped with a threat of force if it is to be viable. Iranian doubts about the credibility and efficacy of the U.S. military option could, however, undermine the long-term sustainability of the agreement. So what impact will the deal have on this option?

Political Calculations, Military Assessments

The political context created by the nuclear deal will have a major impact on Washington's calculations regarding the use of force in response to an attempted Iranian nuclear breakout. The Obama administration, perhaps its successors, and key U.S. allies are likely to become deeply invested — politically and economically — in Iran, and will be loath to abandon this path. Open-ended diplomacy will be the preferred option of the European Union, the P5+1, and much of the international community in response to perceived Iranian violations. If forced to choose, most will likely rather choose to live with an Iranian bomb than risk the political and economic consequences of military action.

A preventive strike could therefore jeopardize America's relationship with key allies and broad segments of the international community, though the context surrounding an attempted Iranian breakout will have a significant effect. And if Iran's actions take the form of ambiguous or incremental actions (i.e., a “[crawllout](#)” or a “[sneakout](#)”), military

action will be even harder to justify internationally.

Historically, the United States has tended to prioritize avoiding war over its nuclear nonproliferation commitments. This was certainly the case regarding the Soviet Union, China, and North Korea. It remains to be seen whether this will be the case with Iran. The U.S. invasion of Iraq — justified in part by concerns about nuclear proliferation — is the exception that proves the rule, as America's post-invasion hangover would seem to make another preventive war over weapons of mass destruction less likely.

Such political considerations and priorities are likely to weigh at least as heavily as military considerations on any future decision regarding preventive military action. Regarding these military considerations, the picture is decidedly mixed.

While the nuclear accord with Iran may provide invaluable insights into its declared nuclear infrastructure, Tehran is more likely to attempt a nuclear breakout using undeclared covert facilities. Here, the contribution of the nuclear deal may be far less significant than what is claimed by administration officials.

Moreover, while the nuclear deal — the Joint Comprehensive Plan of Action (JCPOA) and United Nations Security Council Resolution (UNSCR) 2231 — confers advantages and creates opportunities for the United States (and its allies), it also complicates future non-kinetic and kinetic military options vis-à-vis the Islamic Republic's nuclear program.

An Increasingly Complex Intelligence Picture

An attempted Iranian nuclear breakout would most likely use covert facilities, and not the declared facilities inspected by the International Atomic Energy Agency (IAEA). Accurate and timely national intelligence would be needed to detect movement toward a breakout, and to direct IAEA inspectors to suspect sites. What is the likelihood that these intelligence capabilities will “stay in place” in the years to come?

New Collection Opportunities

The opening of Iran to foreign visitors and businessmen and the likely increase in Iranian trade delegations traveling outside the country will create intelligence recruitment and collection opportunities for U.S. and allied intelligence agencies. One key question is how willing the United States and its P5+1 partners will be to accept risk in conducting sensitive intelligence operations directed against Iran's nuclear program, under the new circumstances created by the nuclear deal. Even if Washington proves unwilling to engage in high-risk operations, allies not constrained by the nuclear accord will likely be more active, and will share their findings. Iranian counterintelligence will certainly recognize this, however, and counter it with denial and deception operations to confound foreign intelligence services.

Sustaining Focus

U.S. intelligence assets (and policymakers) are now focused intensely on Iran, and this is likely to remain the case, especially if Iran continues with its destabilizing regional behavior. But the United States has finite intelligence resources, and future crises in the Ukraine, East Asia, or elsewhere might force Washington to divert assets to respond to what may be considered more immediate needs in accordance with the priorities of the day — especially if Iran seems to be complying with the nuclear accord. Similar dynamics paved the way for past intelligence and policy failures, including Iraq's 1990 invasion of Kuwait and the post-2011 rise of the Islamic State in Iraq and the Levant. Much will depend on Iran's policy choices, the international security environment, and the foreign policy priorities of future U.S. administrations.

Cyber-spying

The JCPOA envisages the possibility of assistance from the European Union and P5+1 countries (China, France, Russia, the United Kingdom, the United States, plus Germany) to Iran to protect its nuclear infrastructure against

sabotage (Annex III, paragraph 10). This may help Iran entice world-class information technology (IT) consultants, firms, and state entities to help it thwart the kind of cyber-spying that is a prerequisite of offensive cyber operations (although the employment of foreign IT specialists also entails risks for Iran). Indeed, it was a Belarus-based firm working for an Iranian state entity that discovered the Stuxnet malware. The JCPOA may thus enable Iran to more effectively counter foreign cyber-spying, greatly complicating U.S. and allied efforts to detect future Iranian clandestine nuclear activities. This may also deny the United States and its allies of offensive cyber options — perhaps the most potent non-kinetic means of disrupting an attempted Iranian breakout, at a time when U.S. kinetic options may be narrowing (see below).

Industrial “Clutter”

Covert above-ground facilities “hidden in plain sight” may be more difficult to detect and characterize in the future due to the lifting of sanctions and the consequent proliferation of large infrastructure and industrial projects. Many key facilities tied to Iran’s former clandestine nuclear program were located above ground, including the Kalaye Electric centrifuge research and development facility and the Parchin explosives test site. Iran is likely to continue this practice for practical reasons, as it would be too expensive and troublesome to locate all of its covert nuclear facilities underground. (This would not be unprecedented: The United States had suspected for well over a decade that North Korea had a uranium enrichment program but [did not know about its centrifuge plant at Yongbyon — a closely watched site — until the plant was shown to a delegation of former U.S. officials](#) in 2010.) The presence of numerous civil industrial projects near possible covert nuclear facilities also raises the potential for civilian casualties, including foreigners, a possibility that would likely constrain U.S. military action.

Inspection No-Go Zones

If the United States or other countries obtain information regarding possible covert facilities in Iran, it will be necessary to conduct inspections to verify these reports. The elaborate procedures outlined in the JCPOA for visits to suspicious sites could create substantial obstacles to timely access. And by repeatedly stating that IAEA inspectors will not be allowed to visit military sites, Iran has set a very high bar for access. Consequently, the United States and the IAEA will likely demand access to such facilities only rarely, given the potential for friction and tension this could entail, creating sanctuaries where proscribed activities can occur beyond the prying eyes of inspectors.

The ability of the IAEA to follow-up on intelligence reports regarding clandestine activities will be greatly diminished if disunity or diverging interests among the European Union and the P5+1 undermine the efficacy of the monitoring arrangements described in the JCPOA. For instance, in the event that IAEA inspectors are denied access to a site, five of eight members of the Joint Commission established by the JCPOA need to agree on a means to resolve the IAEA’s concerns (Article 78). If they are unable to do so, due to political differences, the inspection effort will likely languish. [This is what happened in Iraq in the late 1990s](#), when diverging interests among the P5 eventually hamstrung United Nations weapons inspections and efforts to resolve remaining questions about Iraq’s possible residual weapons of mass destruction capabilities (i.e., possible stocks of the chemical agent VX).

Enhanced Defense and Retaliatory Capabilities

The JCPOA will almost certainly enable Iran to strengthen its defenses and its retaliatory capabilities.

Strengthened Air Defenses

In April, Russian [President Vladimir Putin signed a decree](#) authorizing the sale of the S-300 surface-to-air missile system to Iran, and following the passing of UNSCR 2231, [Russian officials stated that Moscow will go forward with the deal](#). The transfer of the S-300 would make a preventive strike by the United States or Israel against Iran a more complicated, risky, and potentially costly undertaking. However, the S-300 is in the inventory of several U.S. partners and allies, and presumably the U.S. military is therefore well acquainted with its capabilities and vulnerabilities.

Broader Proxy Options

The infusion of cash that will occur following the lifting of sanctions will also enable Iran to broaden and deepen its ties to its Lebanese, Syrian, Iraqi, Afghan, Pakistani, and Yemeni Shiite proxy militia allies, potentially expanding its retaliatory options using members of these groups. In the future, Western intelligence agencies will need to focus not only on Iranian and Hizballah operatives, but on the entire array of actors that now make up Tehran's "foreign legion."

Larger Missile Forces

UNSCR 2231 calls on Iran not to undertake activities involving ballistic missiles designed to be capable of delivering nuclear weapons for eight years, though existing sanctions and the Missile Technology Control Regime have been, by and large, ineffective in preventing Iran from making progress in this area. At any rate, [Iran has stated that it does not consider these restrictions to be binding](#). Thus, Iran will likely continue producing short- and medium-range ballistic missiles (SRBMs and MRBMs) at its current production rate of around 50 a year for the latter, which means that in the next 10 to 20 years, Iran could more than double the size of its [current inventory of about 800 missiles](#). This will stress regional missile defenses and dramatically increase the size of an Iranian retaliatory strike. Iran, moreover, is free to continue its development and production of land attack cruise missiles, which are not addressed directly in the deal. Given these trends, the threat posed by Iran's missile forces may eventually outstrip the capabilities of missile defenses in Israel and the Gulf.

Harder, Deeper Underground Facilities

If Iran opts to once again build covert nuclear facilities in the future, it may hide some "in plain sight" in industrial areas or on military bases, while locating key facilities in underground sites. Iran's approach to protecting critical nuclear infrastructure has evolved from relying on [above-ground facilities protected by heavy air defenses](#) (such as the research reactor at Arak), to shallow [cut-and-cover type underground facilities](#) protected by an overhead concrete burster slab (such as the enrichment facility at Natanz), to more [deeply buried facilities](#) (such as at the enrichment facility built into a mountain at Fordow) located about 300 feet below the surface. Future underground facilities are likely to be located at sites that are even better protected and deeper than the current underground facilities at Natanz and Fordow, and while such a significant undertaking would be difficult to hide, it should be kept in mind that the United States missed the construction of major nuclear facilities elsewhere in the past.

Defeating the Massive Ordnance Penetrator?

Fordow probably represents the outer limits of what America's current generation of conventional deep penetrator munitions can take on. Indeed, [the original Massive Ordnance Penetrator \(MOP\) had to be redesigned as initial assessments reportedly concluded that it would not be effective against Fordow](#), and the Air Force has requested funding for an additional round of MOP upgrades. Moreover, Fordow is hardly the deepest underground nuclear facility that has been built. In the 1960s, China started work on [Project 816](#) — an underground plutonium production reactor built 450-600 feet below the surface of a mountain in Szechuan province and designed to withstand nuclear strikes and magnitude eight earthquakes. Work on the project was halted before it was completed, however, due to the ebbing of the Soviet threat.

Shell Games, Hardening, and Burrowing

Iran has multiple options when it comes to hardened and buried sites. It has hundreds of general-purpose underground bunkers and facilities that it could use for clandestine nuclear activities, playing a shell game with foreign intelligence services, which would have to determine which ones are being used for proscribed purposes. Or it could burrow deeper, building special-purpose, hardened, deeply buried facilities. Because Iran is an earthquake zone, [it is a world leader in the development of ultra-high performance \(super-hard\) concrete](#), and it has a great deal of expertise and experience in building underground facilities (perhaps with help from North Korea, another leader in this area).

Future covert facilities could be protected by super-hard concrete, and located at much greater depths than Fordow,

placing them beyond the reach of existing conventional penetrator munitions such as MOP. It took nearly a decade to develop MOP. Therefore U.S. decision-makers should view the next generation hard deep buried target defeat munition as an urgent priority. Whether such munitions, enabled by precision placement, nanotechnologies, hypersonic penetration velocities, and innovative fuze designs, will be able to defeat future hard deep buried targets remains to be seen. It would be imprudent, however, to simply assume that they will be able to do so; [future buried facilities may be so deep, and hardened to such a degree, that current and future penetrators will be rendered ineffective](#). In the near term, technology trends pertaining to burrowing and hardening technologies appear to favor the bunker builders.

A major unknown in dealing with hard deep buried targets is whether it would be necessary to penetrate underground facilities to disable or destroy them, or whether the massive shock wave created by penetrator munitions would functionally disable delicate equipment in an underground enrichment plant or reactor or render the facility unusable. To a great extent, this could depend on intangibles and unknowns, such as the real-world performance of the munitions, the nature of the geological structures located over the facilities, and the degree to which Iran is able to successfully dampen these underground facilities to absorb or mitigate shock and vibration. (For instance, the former NORAD headquarters in Cheyenne Mountain, Colorado sits on giant springs that were intended to absorb shock waves from nuclear strikes).

What Does the Future Hold?

The political context created by the nuclear accord will have a decisive impact on any future debates regarding preventive action and would likely deter the U.S. from undertaking military action, though military-technical trends are also likely to greatly influence the U.S. decision calculus, if Iran were ever to move toward or attempt a nuclear breakout.

The foregoing assessment shows, however, that in the military arena, as in other competitive domains, nothing ever “stays in place.” Thanks in part to the nuclear accord, 10 to 20 years from now, America’s ability to detect and ferret out a clandestine Iranian weapons program may be improved in some areas, but diminished in others. Preventive action will likely be more complicated, risky, and costly. And future Iranian covert underground facilities may be beyond the reach of the current generation of conventional penetrator munitions such as the MOP, though new means of defeating deep buried facilities are undoubtedly being developed. Whether these will be game changers, remains to be seen.

The nuclear deal with Iran could therefore complicate U.S. efforts to deter, detect, and prevent a future Iranian nuclear breakout, while buying Iran time to counter some of America’s most potent capabilities. This could have a decisive impact on Iran’s nuclear decision calculus, and affect America’s ability to deter a future Iranian nuclear breakout. The Obama administration should be concerned about this, though in its zeal to sell the nuclear deal with Iran, it shows no sign of acknowledging the significant risk inherent in its Iran policy, which future administrations and future generations of Americans may have to live with.

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