Hudson Institute and the Partnership for a Secure America presented

Perspectives on the Iranian Nuclear Challenge

July 13, 2011
The Iranian nuclear question was the focus of a panel discussion at the Hudson Center, in collaboration with Partnership for a Secure America and the Stanley Foundation, on July 13, 2011. The three nuclear security experts offered alternative perspectives and policy prescriptions regarding the Iranian nuclear challenge. Speakers were:

**Olli Heinonen**, a Senior Fellow at the Belfer Center for Science and International Affairs, Harvard Kennedy School and Former Deputy Director General of the IAEA delivered the first presentation.

**Christopher Ford**, Senior Fellow and Director of the Hudson Institute’s Center for Technology and Global Security, and Former United States Special Representative for Nuclear Nonproliferation.

**Peter Jones**, Associate Professor at the Graduate School of Public and International Affairs, University of Ottawa and Former Senior Analyst for the Security and Intelligence Secretariat, Privy Council of Canada.

**Katherine Gockel**, Deputy Director of the Partnership for a Secure America moderated and co-chaired the panel.

**Richard Weitz**, Senior Fellow and Director of the Hudson Institute’s Center for Political-Military Analysis co-chaired the panel.
PERSPECTIVES ON THE IRANIAN NUCLEAR CHALLENGE

OPENING STATEMENTS

The Current State of Iran’s Nuclear Enrichment Program

Dr. Heinonen began by providing the audience with a technical foundation for analyzing the issue. He presented a snapshot of where Iran’s uranium enrichment program and related activities currently stand and highlighted some key implications of this situation.

Iran has developed an ambitious nuclear program that is diffuse in the nature of its distribution of sites and coordinated in its approach to achieve nuclear weapons capability. As Iran continues to stockpile uranium that has been 20% enriched through centrifuges and as Iran has increased its enrichment capabilities, the outside world has come to know less about the scope and content of Iran’s nuclear program than when it was first discovered almost a decade ago. It has been several years since Iran has cooperated with the IAEA Additional Protocol, which gives the agency considerably more information about a country’s nuclear activities than the standard safeguards agreement. Nor does Iran provide early information about the construction of new facilities, which is required under its current safeguards subsidiary arrangements. Iran also continues to refuse to address the IAEA’s questions on the military dimensions of its nuclear program.

According to Dr. Heinonen, Iran’s nuclear program disturbingly has progressed much farther today than when the nuclear dossier was first brought to the IAEA Board of Governors’ attention in 2003. By then, Iran had two decades of clandestine nuclear experience. These unreported activities included uranium conversion and uranium enrichment with lasers and gas ultra centrifuges. Thanks to information supplied by an Iranian opposition group, the world learned in 2002 that Iran was secretly building a full-size enrichment plant in Natanz.

Iran’s uranium conversion facility in Esfahan has currently produced 371 tons (818 000 pounds) of UF6, which is feed material for uranium enrichment. The Natanz plant is an industrial-sized enrichment facility with 8,000 installed IR-1 centrifuges. Since 2007, the plant has produced a total of 4,400 kg (9,050 pounds) of low (3.5%) enriched uranium (LEU, which is suitable for powering nuclear reactors but not nuclear bombs). In February 2010, Iran began enriching 20% uranium—justified as necessary to power the Tehran Research Reactor, which uses this level of uranium fuel. In early June 2011, Mr. Abbasi Davani, the newly appointed President of the Atomic Energy Organization of Iran, announced that Iran would transfer production of 20% enriched uranium from Natanz to the new enrichment facility at Fordow, where Iran plans to triple production. The Fordow facility is another nuclear installation that Iran built in secrecy, until evidence of its construction surfaced in September 2009. Given current and planned production rates on its declared uranium stocks, Iran can be expected to possess 250 kg (or 550 pounds) of 20% enriched uranium by the end of 2012. Also important, tripling the production rate of 20% enriched uranium requires Iran to use about 120 kg (or 250 pounds) of 3.5% enriched UF6 feed each month, which is of the same order of magnitude as has been the recent production, or some 130 to 150 kg (280-330 pounds) monthly of low enriched UF6 that is still produced in Natanz.
These developments have important implications. To begin, the current known Iranian uranium enrichment program can now easily produce 20% enriched uranium. This 20% enriched uranium fuel cannot be used to generate electricity for light bulbs, which requires 3.5% enriched fuel. Also, the production of so much 20% enriched uranium means that Iran could have sufficient uranium stocks, if further enriched and converted, to produce 120 to 150 kg (or 275 to 330 pounds) of highly enriched uranium (HEU), which can be used to make nuclear weapons. Finally, Iran has no need to produce additional 20% enriched uranium. As a legacy of the Cold War, Russia now has available for sale at least 100 tons (220,000 pounds) of weapon-grade uranium available, after being downgraded to LEU, for civilian use.

Iran has announced that it would construct up to 10 new enrichment sites, but it has not provided details about these plans or the locations of these facilities. The possibility of secret nuclear facilities existing in parallel with the publicly known reactors presents a deeply troubling scenario. Iran is also moving ahead, albeit with delay, on its heavy water reactor program. A likely scenario is that Iran can use this program to produce weapons-grade plutonium sufficient for powering one nuclear explosive device per year from 2014 onwards.

Moreover, Iran has yet to address the IAEA’s concerns regarding its suspected studies of using nuclear technologies and materials for military purposes. These reported military studies include special neutron sources without civilian applications, high explosives with precision timers, and missile re-entry vehicles. Worries about these reported military studies are deepening due to unresolved accusations about the procurement, design, and manufacturing of nuclear related equipment by Iranian military entities. These activities could provide Iran with the means to develop nuclear weapons based on this alleged military research.

Dr. Heinonen acknowledged that there are many opinions and views regarding how to deal with the present Iranian nuclear situation. Nonetheless, he believes that the international community needs to understand that it must make Iran’s intransigence costly. It must make comprehensive efforts to continue to strive to learning more about the past and current aspects of Iran’s nuclear program despite any obstacles. The UN Security Council should increase its pressure on member states to provide information on Iran’s current and past proliferation activities, including reported military sites and personnel. The Council should also step up enforcement of its sanctions resolutions and punish their violators.

An Iranian Nuclear Weapon and risks to U.S. Security Interests

The second speaker, Christopher Ford, identified eight key U.S. security interests at risk should Iran develop nuclear weapons.

Primarily, the US must prevent the use of nuclear weapons against the United States, U.S. military forces, or U.S. friends and allies. According to Dr. Ford, experts disagree about how seriously to take the inflammatory rhetoric periodically heard from Iranian officials such as President Mahmoud Ahmadinejad, however, if Iran acquires nuclear weapons, there will necessarily be some danger that Tehran will use them. One can argue over how “deterrable” such
use would be, but even if Iran can be dissuaded from direct use, it is impossible to rule out unauthorized or inadvertent use. The Iranian Revolutionary Guards Corps (the IRGC, or Pasdaran) will be given nuclear weapons stewardship. The IRGC is a notably radicalized organization even within the radicalized Iranian government and has defied Iran’s political authorities in the past and might do so again, especially in a crisis. We also know precious little about Iran’s likely command, control, and communications (C3) system for nuclear weapons. How much autonomy would be available to IRGC commanders in the field in a crisis? How reliable would its procedures be for preventing unauthorized use or screening out false alarms? What would the launch posture be for Iranian nuclear weapons, and what dangers of overreaction or error might be inherent in Iran’s C3 system? Even “deterred” Iranian weapons surely present some very real dangers.

The United States must also prevent terrorist acquisition of Iranian nuclear weapons, material, or technology. Given the scope and depth of Iran’s involvement with international terrorist groups, terrorist acquisition of nuclear weapons, material, or technology could be either deliberately or inadvertently acquired. Iranian officials may even permit one or more terrorist organizations such access. Such a scenario might prove unlikely, but it might prove to be a more “deniable,” and thus attractive, alternative to direct nuclear use. At the very least, potential terrorist access may be an effective risk-manipulation tool for Iran in order to dissuade outside involvement in Tehran’s foreign affairs. And one cannot rule out the possibility of nuclear transfer occurring without top-level Iranian authorization. Iran has developed a rich network of black or grey market ties around the world for the acquisition of dual-use and weapons-related nuclear technology, not only to the A.Q. Khan proliferation network, but also to Russian scientists who both for work on the Bushehr reactor and reportedly on more sinister projects, such as nuclear detonator technology. Iran also has a network of contacts it uses secretly to acquire weapons-grade nuclear material abroad. This web of illicit contacts and transnational nuclear smuggling networks coexists with Iran’s equally murky relationships with terrorist groups. Contact and cross-pollination between these dangerous shadow worlds is a possibility.

It is also important for the United States to prevent Iranian domination of the Middle East, and in safeguard the security of our friends and allies. Though much has been said and written about the purported role of U.S. nuclear weaponry in creating Iran’s own interest in such tools, Dr. Ford believes that the real explanation for Tehran’s nuclear ambitions is likely to be threefold: (1) the clerical regime desires a tool with which to intimidate its neighbors as part of a strategy of advancing both the Iranian Revolution and the country’s neo-Persian dreams of regional hegemony; (2) the regime desires weaponry with which it feels it can “immunize” itself against outside military intervention, thus taking “off the table” any external check upon Iran’s regional ambitions; and (3) Iran wants nuclear weaponry in hopes of demonstrating its “arrival” as a world power. Through this prism, the most likely danger is how Iran will behave if and when it feels that such weapons allow it to indulge its regional pretensions and its broader ambitions within the Islamic world or beyond without fear of regime-ending consequence. The United States has a further interest in keeping the Middle East at peace—not least because of the impact that conflict there could have on the international oil market and thus upon fragile economies around the world. In the past, Iran’s conflicts with its neighbors have led to attacks on shipping in the Persian Gulf and the planting of sea mines in or near the Straits of Hormuz.
The United States is interested in preserving both the perception and the reality that a security relationship with the United States can be counted upon when the going gets tough. We have strong security relationships with a number of states in the region that are threatened by Iran’s ambitions to regional hegemony and pursuit of nuclear weaponry. In this era of U.S. skittishness about the visible exertion of power overseas and embarrassment about asserting claims to global leadership, coupled with crippling federal deficits at home and continuing economic malaise, the U.S. geopolitical stock is not at a high point. Amidst widespread assumptions of American global decline, the United States must preserve the idea that an alliance with Americans means something. Of course, it is uncertain how Middle Eastern countries would respond to Iran’s acquisition of nuclear weaponry. It is possible that many or most of them will choose to follow classical balance-of-power prescriptions and engage in “balancing” behavior in the face of Iranian threats, banding together in countervailing regional alliances. An alternative scenario, however, might see them concluding that there really isn’t any point in fighting the inevitable – a conclusion that would lead, instead, to “bandwagoning” behavior, with states scrambling to cut deals with the rising Iranian hegemon. The likelihood of each type of behavior will be conditioned in part by regional impressions of the degree to which we can be counted upon to remain a strong and committed regional player, and a good ally to those in need. If we send the wrong signal, it will not be overlooked. Such a dynamic would not have implications only for the Middle East. After all, that region is not the only area of the world where U.S. allies face a potentially threatening regional hegemon, and look to Washington’s anticipated strategic direction and intestinal fortitude in deciding whether to “balance” or to “bandwagon.” No one wants to risk fighting a losing battle against a rising power alongside a tired and vacillating ally. Much may hinge on how reliable a partner we are perceived to be – and our earliest test could easily come in the Gulf.

If this is to fail, the United States must prevent a “cascade” of proliferation in the Middle East. Dr. Ford notes that many experts have warned that Iran’s acquisition of nuclear weapons could lead some other regional states to embark on nuclear weapons programs themselves – either simply for self-protection, or out of a sense of rivalry with Iran for regional leadership. Regional leaders such as the Saudis have long advocated US destruction of Iran’s nuclear program. If the US or the Israelis do not do this, they will not allow Iran to possess nuclear weapons alone. In fact the Saudis sent such a message just last month, and the Egyptians did so a year ago. Meanwhile, Iran and Turkey have their own regional rivalry, also with potential nuclear implications. Because Saudi Arabia, Egypt, and Turkey have now all expressed the desire to develop ambitious nuclear power infrastructures, this is no idle concern.

Iran’s acquisition of nuclear weapons would adversely affect political trends in the Arab and broader Islamic world. In particular, the ongoing “Arab Spring” presents both threats and opportunities for Iran. It is a threat, of course, in that the clerical regime – which faced its own, harshly suppressed “Green Revolution” in late 2009 – could lose everything if democratization really took hold in the region. But the Arab Spring is also an opportunity for Iran, in that it may provide Tehran chances to hasten the demise of some regional regimes that had staked out positions against Iran’s regional pretensions, chances to build ties to more radicalized religious (and especially Shi’ite) elements that may be empowered by political shifts within regional countries, and chances to exploit the IRGC’s skills at subversion and the stoking of conflicts abroad. Whoever prevails in the “Arab Spring” will have to deal with Iran in one way or another.
How the Arab Spring develops, therefore – and where the Arab world goes next – may be conditioned in part by the degree to which Iran is perceived to be a “coming power,” or, alternatively, one past its apogee. As Hudson Institute scholar Lee Smith has pointed out, Arab politics have finely-tuned antennae for nuances of waxing or waning power. Iran’s nuclear trajectory thus matters for the United States in this respect as well.

Future Options in Containing Iranian Nuclear Development

In terms of U.S. policy approaches, Dr. Ford thinks the game is also gradually changing. For the moment, we’re still in the prevention and dissuasion business – that is, to keep Iran from developing a nuclear weapons capability, either simply by negation of opportunity or by dissuasion. As time goes by, however, we’re beginning to move into a new game: mitigation. Part of this is the job of deterring Iranian use or transfer of nuclear weapons, material, or technology – and ensuring that Iran does not feel that outsiders are so “deterred” from taking steps against it that Tehran has been “immunized” against outside military pressure and can do whatever it likes in its region. But part of the mitigation game is also making sure that the right signals are sent to future would-be proliferators who might be keen to follow Iran’s example. The narrative we don’t wish to see prevail is one in which an underdog wins a signal victory against a dominant power, thereby establishing for itself an enviable “place in the sun.” That narrative needs to be crushed early. Instead, it should be our broader objective to ensure that a constructive counter-narrative prevails – one in which even if Iran does end up winning a tactical victory by acquiring the nuclear weaponry it desires, it will be seen to have suffered a strategic defeat. Flouting nonproliferation obligations as Iran has done needs to be seen as a road not to a country’s geostrategic rise but rather to a squalid and dangerous future of economic impoverishment, diplomatic isolation, and worsened military and regime change pressures as outsiders and neighbors alike band together in the face of worsening threats. If we cannot keep Iran from “winning” by getting nuclear weapons, in other words, but it must be seen to lose the bigger game.

The last speaker, Peter Jones, began by warning that the West was unlikely to get all it wants. Dr. Jones considered the four options he believes are most readily available to the Western powers. Ultimately, he concluded that military force would prove counterproductive, and that a combination of diplomacy, sanctions, and indirect actions would work best though probably not entirely satisfactorily. He argued that Western governments should try to define an Iranian nuclear program and Iranian nuclear policies that they can live with and try to effect diplomacy around those rather than push overly ambitious and absolute goals that are unlikely to work.

In terms of the first policy option, Dr. Jones argued that a military attack would undeniably set the program back, but would lead the Iranians to want nuclear weapons more than ever while rallying the people of Iran behind a currently unpopular regime. An attack would also allow the hardliners to take over in Tehran, to an even greater extent than they presently have and to shut down any prospect of political opposition re-emerging in Tehran. The Iranians would also end all cooperation with the IAEA and the program would become more secretive than ever. Finally, the Western powers would find the lengthy military campaign that would be required to destroy and
keep down Iran’s extensive nuclear assets would prove impossible to sustain diplomatically or domestically.

In Dr. Jones’ view, sanctions have the problem in that the timeline in which sanctions could be agreed upon and implemented does not intersect well with the more rapid timeline for Iranian nuclear weapons development. Sanctions have been hurting Iran but not enough to compel Tehran to cease its uranium enrichment activities. Economic sanctions already imposed by the United States have caused self-reliance in the Iranian economy, have allowed the government to take control even more of the economy than it previously had, and have given a scapegoat to the new Iranian economic reform which has left many in hard times. More can be done against the Iranian banking system, Dr. Jones believed. But the biggest problem is the high price of oil, which gives the regime most of its revenue. The most effective sanction would be some kind of agreement by the international community to stop buying Iranian oil but China would never go along. In fact, China has been using the current sanctions against Iran for leverage in order to make some favorable bilateral deals with Tehran.

The third option consists of indirect actions that disrupt the Iranian nuclear activities through clandestine means like sabotage. The less alarmist stance of the Israelis in recent months may be due to the assassinations of Iranian nuclear scientists, malicious computer programs used to infect the Iranian nuclear program, and other indirect actions which have had effect in slowing the program. Such actions also raise the costs the Iranians must pay to continue to pursue nuclear technologies with potential military application. But indirect actions will not stop the Iranian program by themselves. Although some people may believe that the MEK (People’s Mujahedin of Iran, an Islamic-socialist organization that has conducted armed attacks against the clerical regime in the past) may help promote regime change in Iran, Jones considered this unlikely because most ordinary Iranians oppose the MEK, seeing it as an agent of foreign influence.

The last policy instrument is diplomacy. Jones stressed that diplomacy is a very frustrating and slow path, but was an essential component of any approach toward the Iranian nuclear program. Effective diplomacy requires the international community to seek dialogue based not just on redlines but also on possible overlapping interests.

In his view, the regime wants to survive above all else. They are motivated by a cost-benefit analysis even if they calculate the equations differently than we do. Conversely, while Iranians perceive themselves as “the center of the world”—today’s middle kingdom—they also see themselves as victims of foreign machinations through history designed to keep Iran weak and deprive it of its wealth. The past matters to Iranians. They have a way of thinking about history that the West is unfamiliar with in terms of connecting perceptions of past events with the present. Furthermore, Dr. Jones warned that treating the Iranians as if they were “crazy” would simply strengthen their paranoia. Trying to intimidate them only, without also giving them a diplomatic path out of their problems, will lead the Iranians to defiantly become more demanding since appearing weak in the face of outside pressure is fatal in the brutal world of Iranian politics.

The current Iranian regime will probably fall, but not very soon. It survived a brutal revolution, a vicious insurrection and guerilla war, and a protracted war with Iraq, which it fought largely
alone. This is a tough regime. It is not susceptible to external pressure to the extent we might want it to be. Even when it does eventually collapse under the weight of its internal contradictions, there is no guarantee that its successor will pursue policies more advantageous to Western interests. It almost certainly would be no less interested in acquiring a nuclear option because in many ways the nuclear option is not seen as Islamic. It is seen as a hard rational choice made by them based on their history and their geostrategic situation.

Given the limited effectiveness of these options, Jones warned that the West may have to accept some degree of uranium enrichment capacity since Iran was unlikely to surrender its achievements in this area. Stopping the program in its tracks or rolling it all the way back to zero is not possible, so the Western countries should find an Iranian nuclear program that they can live with and find ways to contain it. Whatever foreign preferences, the Iranians will define their own interests. We may not think that Iranians need civilian nuclear power – Jones shares that assessment – but for us to begin the process of negotiations by telling them that will prove counterproductive. Ultimately there is really no alternative to realizing that it is going to be a long and frustrating haul, and that stopping the program in its tracks and rolling it back is probably not in the cards. Instead we should aim to find an Iranian nuclear program that we can live with, and construct the diplomacy around this objective.

A few years ago there was an offer made to contain Iran’s enrichment at a very low level. Some believe that that was a ruse that would never have been serious, but we’ll never know because it was never picked up and negotiated. The territory of diplomacy could be something like; what are the agreed capabilities that Iran will have in this respect, and what are the rules governing it? We also need to do away with regime change as a policy option. The Iranians continue to perceive clandestine action going on, and they also say that there are no guarantees beyond the term of the Obama Administration. While the regime may fall for its own internal reasons, overt attempts to link regime change to the nuclear issue only enhance the regime’s credibility, and that of the nuclear capability.

**DISCUSSION SESSION**

**Question:** How well would we be able to identify a return address on a nuclear device detonated in an American city?

**Peter Jones:** It is likely our forensics would enable us to make a pretty good guess as to where such a thing came from and the political situation under which it was exploded would also provide strong clues. However, I do not believe that the Iranian regime wouldn’t take that risk. They have proven that they are profoundly risk adverse. The Iranian Mullahs are great believers in martyrdom; but they believe it is an honor that should be bestowed upon everybody else but themselves. They have never shown a great interest in committing suicide, and such concerns are overstated. With regard to the question of their aiding those who are killing U.S. soldiers in Iraq and Afghanistan, they are certainly supporting some people who are doing that. They said they would if the United States invaded Iraq, and they regard such actions as being somewhat justified in terms of resisting what they believe is an invasion of their neighborhood.
**Christopher Ford:** If a nuclear weapon was detonated one would hope that we would, under those circumstances, not insist upon beyond reasonable doubt that so many in the diplomatic community seem to have asked in response to concerns raised about whether Iran is engaged in a nuclear weapons program. One of the frustrations of diplomatic work on the Iranian nuclear question has been the problem of making people actually admit the obvious when confronted with an extraordinary array of both direct and indirect circumstantial evidence.

**Question:** Suppose the Iranians detonate a nuclear weapon in Germany (a non nuclear weapons state). They say if there is any retaliation they will send the world economy into a tailspin by, for example, destroying the Saudi Arabian and Gulf oil fields. What response do you think the West would be able to credibly make in such an instance?

**Peter Jones:** The first response would be the one we make before the scenario even unfolds, which would be to let the Iranians know that a bomb going off under suspicious circumstances is going to be blamed on them and bring about a very devastating response. As to its effect of destroying the world economy, one must wonder why the Iranians would wish to do that? They would like to be more involved in that economy than they are now, so a catastrophic drop in the demand for oil which would accompany a huge worldwide recession would not do the Iranians much good.

**Question:** Are there still impediments to Iran actually building and testing a nuclear weapon? And if our intelligence is indeed deteriorating, how can we know what we think we know about the Iranian program? Can we know that they actually are pushing toward a weapon, or is it just the ominous stockpiles of enriched uranium that give us pause?

**Olli Heinonen:** As to the specifics of where they are today, it is difficult to say precisely, but here we must also consider what we mean by ‘nuclear capability’. There is quite a lot of confusion as to what this means. If you really want to have a nuclear weapon capability it also implies possessing a delivery system. The first stage of the process – the ability to produce fissile material – represents a kind of latent nuclear weapons capability, where a country has not yet developed a nuclear weapon. And this is where we should stop. We should not go to the next stage, which is the assembly of a nuclear device. Then at the third, and ultimate, stage you acquire the ways and means to deliver the device with, for example, ballistic missiles. People talk about different kinds of clandestine delivery systems, but if a state really wants to do something it is a very uncertain mechanism. As for Iran, the genie is already out of the bottle, but the genie is not yet wandering around. They may test their P1’s and P2’s, but it may go the way of many other nuclear programs that just slowly faded away after confidence was built, and other interests came into the picture. Iran has a lot of other interests, but time is of essence.

**Question:** With respect to uncovering still hidden sites in Iran, are there lessons from the UNSCOM IAEA experience with the Iraqis in the 1990s? What is the importance of verification in any future deal with Iran, especially since Tehran is not adhering to the Additional Protocol?

**Olli Heinonen:** There is a very simple rule: trust and verify. Very often we hear, particularly in relation to the Syrian debate, people question why we should bother with the details if the Syrian nuclear reactor is gone? Why not just commence a normal monitoring system? The United States
and the IAEA, point similarly to the termination of the Iranian nuclear weapons program in 2003/2004. It is gone so why not proceed with verification? The regime and trust building must start with a clean table. And this will be the case here. Whatever will be done, first we must address the remaining questions. Where are they now? What were the actions, and has the equipment been dismantled in a verifiable way? Then you proceed to build trust.

**Question:** According to the IAEA’s report, Iran’s nuclear activities went on beyond 2004, while the 2007 National Intelligence Estimate (NIE) suggests Iran stopped its specifically military program in 2003. Do you perceive there to be some contradiction between these reports?

**Olli Heinonen:** It comes down to how you define a nuclear weapons program or related activities. It is likely those organizations and individuals involved with those activities in 2003 and 2004 continued some of these activities – whether they were directly associated with nuclear weapons development, or whether it was to maintain expertise remains to be seen.

**Christopher Ford:** There is much disagreement over its suspension, and the degree to which and when it was restarted. It’s also worth pointing out with the 2007 assessment that subsequent qualifications and clarifications that were offered by US intelligence officials even at the time. Even if one accepts the particular conclusions about a temporary halt in weaponization related activities, the bigger picture is that it’s not Natanz and the enrichment aspect or the heavy water program. These are not things that would be done in a vacuum. They would be done secretly as part of an overall weapons effort that included weaponization. The broader point that most commentaries miss about the NEI assessment is that all of these elements were in fact part of Iran’s nuclear weapons effort. Their production of fissile material never actually stopped at all, and one needs to keep that in perspective.

**Question:** What is the threshold at which individuals will concede that negotiations have failed? Will that be when Iran acquires nuclear technology and starts threatening their neighbors?

**Peter Jones:** There is obviously a threshold where one would say we failed to stop them from getting a nuclear weapon. However, negotiations would still go on. We negotiated for many years with countries which we did not like and which possessed nuclear weapons. This idea that there will come a day when we all wake up and realize that they are bad people, they are trying to get a bomb so we’ll just stop talking to them is very juvenile. Diplomacy is about talking to people you do like and people you don’t like, and so some sort of negotiation will continue.

**Question:** Assuming the United States can maintain credible deniability, the strategy of indirect action is something the American public will likely tolerate. Can the strategy be further exploited and what measures do you think can be considered next?

**Olli Heinonen:** You cannot bomb the unknown. If there is an unknown element in the nuclear program you cannot take military action against it because you don’t know what it is or where it is. The same goes for indirect action. If you don’t know where to go, or how, this is a no win situation. So this cannot ever be a sole solution, but it can cause delays.
Christopher Ford: The target need not necessarily be only the nuclear program. The tougher challenge is how to add additional pressures to the broader strategic decision making calculation. In some respects, Iranian paranoia may even be an advantage. Even if an entirely locally caused industrial actions shut down a major refinery they would probably blame that on us. Causing a few issues, and ratcheting up the level of paranoia so they begin attributing things incorrectly to outside intervention, could add to the perception that the costs are mounting and that maybe this is not a tenable course over the long term. I would suggest that indirect actions against both the program itself and broader economic interests might be a more saleable and plausible approach than military action.

Question: Assuming we are confident about what Iran might have done in the past, what technical arrangements would you need to be confident about a future Iranian enrichment capability of either declared or undeclared facilities? Additionally, what other institutional arrangements or political agreements would you want to be able to move forward?

Olli Heinonen: Starting from a clean slate is going to be difficult because it will mean involving the military and their sites. However, this was possible in South Africa and elsewhere, so it should be possible in Iran. This is going to involve confidence building measures similar to the lap-to-lap cooperation adopted between U.S. and Soviet scientists at the end of the Cold War. Then comes the mechanistic part which involves the IAEA inspections to confirm the absence of undeclared sites and undeclared activities. It’s a very difficult job to confirm the nonexistence of something. Here we need to enforce the Additional Protocol. That will on the one hand clear the atmosphere. On the other, the risk of getting caught is fairly high, and once you are caught no excuses can be made.

Christopher Ford: The IAEA was fairly candid about admitting that, if they were to do their job in Iran properly, they would need more authority than the Additional Protocol could provide. Additionally, the technology has not been moving in a very encouraging direction. If you look to classified U.S. NIEs from the 1960s you can observe that people were worried about proliferation principally in terms of the plutonium route. The potential for the proliferation of enriched uranium drew less caution because the technology for doing so was incredibly expensive, space consuming and quite obvious. Unfortunately, what we see now is the proliferation of uranium dual-use technologies, which are much easier to conceal, distribute and protect than ever before. This raises considerable verification challenges. This is especially the case if the government in question already has a stock of 20% HEU. It is much harder to get to 20% HEU than it is to get from there to weapons-grade. Moreover, what you can do with that 20% to get it to bomb grade is something that can be done in a much smaller, more concealed cascade. There is also the broader question of the ‘seizure option’. The more technologies, materials and capabilities sitting around, the more there is an option for the host government to commandeer it. The IAEA is certainly not going to arm its inspectors to defend little bunkers around their monitoring equipment. The seizure option is always there, and the more stuff there is in situ, the more dangerous that option becomes.

Olli Heinonen: There is also good news with respect to monitoring. These centrifuges are very special pieces of material that require special tools to manufacture. You can select there what are called ‘choke points’. Points within the equipment made with very special materials and of
which there are very few existing. Thus, there are very few manufacturers in the world who make that precision. If you are able to have assurance that you have those machines under your control, you begin to build some degree of confidence.

**Question:** Can you elaborate on the current domestic political situation in Iran, and its implications for their government’s ability to negotiate? On the basis of that, could you outline some elements of what is possible to achieve in terms of negotiations?

**Peter Jones:** It is very difficult to understand the domestic political situation in Iran. It’s very fluid and very fractionalized. How this swirling mass of politics affects the possibility for negotiations on the nuclear issue really depends upon whether the various factions can come together around the idea of negotiations as a way out of a problem. This will depend upon what sort of “deal” is being discussed. If the deal is zero enrichment then the answer will likely be no. We have to look back to the issue of the Tehran research reactor deal and take some hard lessons from that. One of the observations we make is what happens when one faction tries to increase its own standing within the Iranian body politic. We learned that that’s not going to work and that all factions must come along to some degree. That, of course, raises the level of complexity dramatically. If we attempt small steps leading towards the building of confidence, in concert with pressure from sanctions and other indirect actions, then it may be possible.

**Question:** What do you think a military option would look like and what do you think its consequences would be?

**Christopher Ford:** There are big strategic calls to be made. For example, is destroying what we know about really worth the cost of the greater conflict that it might ignite? Clearly there’s a long list of things that we know about from the public record, but we don’t know what it is they (the White House) think they know about the scope of the program. Where are these locations? Can you destroy them? The Iranians have gone to some trouble to put this embryonic enrichment facility near Qom inside a mountain. We’re not without means to do that sort of thing, but it’s not easy. Presumably the idea is not to simply elicit a delay, but to be able to have that delay for a purpose. What programs or policies or approaches are likely to be used to delay or prevent reconstitution, or perhaps to ensure that by the time a reconstituted nuclear program does bear fruit maybe there are other people in charge of what to do with it.

**Question:** If Iran decided that it wanted to have a nuclear warhead for a medium range ballistic missile like the Sajjil-2 now under development, would they feel that they would need to conduct a nuclear test for that device? If so, can you walk us through how they would make that pivot to a rhetorical and a policy position?

**Olli Heinonen:** In the 1950s and 1960s nuclear tests were designed to ensure your nuclear device works while simultaneously demonstrating your capability. Today there is less emphasis on the first because of the available information. Is it their own design, or is there know-how from somewhere of which they can take advantage?

**Peter Jones:** It’s likely they will do a lot to try to avoid testing. However, if they did then the rhetoric would be as self righteous as you can imagine. They would bluster and say they were
forced into this by the aggressive outsiders – primarily the United States and Israel – and that they were acting in the interests of the Islamic world. But I don’t think the world, and particularly the Arab world, would buy it for a second.

Christopher Ford: According to newspaper stories, the Khan Network was in the business of handing out what was reported to be Chinese nuclear weapons design information to clients around the world. There’s widespread suspicion that the Iranians have got hold of not just paper copies but actual electronic designs. If the reports are to be believed these are in some sense a set of pretested designs floating around, and if you should happen to have a delivery system that is capable of delivering those particular devices, then it’s your call how confident you wish your engineers to be.

Question: At which level of attack proficiency would Iran have the kind of leverage that really concerns the United States? At what point do we lose leverage with Iran and other potential proliferators?

Olli Heinonen: The first stage is concerning because the key here is to be able to produce fissile nuclear material, or HEU. If we look to the example of North Korea in the early 2000s, senior officials offered reassurances that they were not seeking to develop nuclear weapons, but then events took a different course and they ended up with two nuclear devices. Consequently, it is important to try to stop it here when there is still a chance. And fissile material is still easier to detect compared to some R&D related to nuclear weapons development.

Christopher Ford: There isn’t a point prior to which one doesn’t have any ability to use actual, or incipient, nuclear weapons for strategic purposes, and after which one can’t. We have already seen the Iranians take advantage of the latency they have. We’ve heard all sorts of commentary stating that you can’t attack them because you wouldn’t get it all, and that would encourage them to acquire even more. That’s a form of deterrence right there from a program that hasn’t arrived at that point yet. All along this continuum there are ways to leverage one’s closeness to nuclear weapons. As you move from distant latency, to near latency, to hovering on the brink of a capability, to actual possession, you have different degrees of leverage one can exert. The Iranians are already doing it. This is just a process that they wish to turn the pressure up on.

Question: To the extent an economic crackdown could adversely affect the economic standing of the civilians on the ground, how do we balance our strategic interests with ethical values supporting the economic human rights of Iranians already suffering from poverty?

Christopher Ford: To what degree of reasonable answer there is differs depending on the circumstances. To put it crudely, in moral terms it may make a difference how close to the capability one is in terms of determining the cost it is unfortunately necessary to live with. Of course there is also the hope of being able to do things in ways that minimize those costs. There is no crisp answer. It’s precisely the challenge of moral leadership and risk balancing between very unpalatable alternatives.

Question: What is it that the P5+1 or the United States can offer Iran to induce the various factions within the government to come together work on a deal? If such a deal is reached, how
do we then prevent third parties from sabotaging the deal by continuing to provide Iran with the technology?

**Christopher Ford:** Apparently, nuclear power is not it. The diplomatic interlocutors have been pretty forward leaning about offering all kinds of goodies. The theory being, that you say they want a nuclear power program so here is a deal: stop doing X and in return we will give you access to the most sophisticated and effective purveyors of such things in the world, and we'll cease sanctions. Apparently that is not the answer. Some of those factions seem not to want any kind of a deal which we could possibly imagine ourselves agreeing to.

**Peter Jones:** It is not likely that the dynamic will be that we will come along with some silver bullet offer. The internal political situation in Iran is horrendously complicated, and the structures of the Iranian government have really taken the checks and balances idea to town. There are some elements of the government that probably don’t want it. If the Supreme Leader and the primary factions that are represented on the Supreme National Security Council decide that it is in their interest to begin moving down a certain path, there are perhaps things one can do to entice them down that path. What is the silver bullet offer we could make? There isn’t one. It’s going to be a process.

**Question:** There is a perceived power benefit of being a nuclear nation, but Iran’s potential to develop one weapon a year is comparatively small compared to other nuclear nations. How worrisome is this potential capability?

**Christopher Ford:** Americans need to exercise caution to avoid coming at these sorts of questions solely through this sort of intuitive prism that we acquired thinking about nuclear postures during the cold war. If you assume that Iran only wants nuclear weapons from the perspective of planning some sort of elaborate nuclear use campaign, then maybe one a year isn’t all that useful. But the bigger question is for what purposes are these things used? Secondly, that’s not necessarily an obstacle. If one wants these to deter outside intervention, to provide some kind of regime insurance policy to over awe one’s neighbors no one’s going to be all that enthusiastic about being hit by even by one. Don’t allow our Cold War mentality prevent us from understanding how these things might work in practice.

**CLOSING COMMENTS**

**Olli Heinonen:** When you look back from 2001 to today, you find that the justification for Iran’s nuclear program has constantly changed. At this point it appears that the program is designed purely to produce 20% enriched uranium, which contradicts all the earlier statements made in 2003 and 2004. There is still time and this time should be used to negotiate, and the numbers should not deter us. Finally, we must look at the history. Turn the clock back twenty or thirty years and Spiritual Leader Khomeini was the president of Iran. He was the one who participated in the decision to initiate this enrichment program. His prime minister was Mousavi who is now leading the Green Revolution. He is one of the founding fathers of the Iranian nuclear program. The only difference is their vision for this nuclear stick.
Christopher Ford: There’s always a temptation when dealing with a problem like Iran to approach the problem as if it is a country specific challenge. We think about Iran as a very specific country and challenge, but we must not forget the message we send to those tempted to follow Iran’s path in the future. What message do we send about the efficacy of the non-proliferation regime? About the meaningfulness of non-proliferation obligations and about the strength and assurances of the kinds of commitments that countries make to each. About the effectiveness of multilateral approaches versus other kinds of approaches? It’s not just about Iran.

Peter Jones: Despite our worst fears, the lesson of the nuclear era is that proliferation is not the norm. Years ago some very clever people thought that there would be 30-40 nuclear weapons states in the world, but it hasn’t happened. So fears that an Iranian nuclear capability will automatically lead to a “cascade” across the Middle East need to be examined carefully. We have research and experience which shows that most countries that think about going nuclear ultimately don’t. Another lesson we can take from this accumulated experience is that very often the decision to renounce a nuclear capability was the result of a change in the regional situation. That is unlikely to happen anytime soon in the Middle East, nor in Iran. What can be done in the interim is to try to slow the Iranian program down by means of sanctions and indirect action, and perhaps begin to roll it back over time through these means and also diplomacy. We need to ask ourselves what they would want from us in order to do that even as we establish what we want and can live with. Ultimately, we must recognize that this will be a process and a long-term one.
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