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No. 104



THE BEGIN-SADAT CENTER
FOR STRATEGIC STUDIES

**Armed and Dangerous:
Why a Rational, Nuclear Iran Is an
Unacceptable Risk to Israel**

Steven R. David

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Armed and Dangerous: Why a Rational, Nuclear Iran Is an Unacceptable Risk to Israel

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Armed and Dangerous: Why a Rational, Nuclear Iran Is an Unacceptable Risk to Israel

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EXECUTIVE SUMMARY

One of the most pressing issues facing policy-makers today, especially in Israel, is whether it is acceptable to allow Iran to develop nuclear weapons. Some argue that Iranian leaders can be deterred because they are rational, cost-calculating actors who would refrain from using nuclear weapons, like the US and USSR during the Cold War. They believe that efforts to halt Iranian nuclear weapons development should be modest and not involve military force.

Others disagree, arguing that Iranian leaders are religious fanatics who welcome a nuclear apocalypse as a precursor to the advent of an Islamic paradise. An Iran under leaders such as these would be undeterrable, since no punishment exists that would dissuade the Iranian leadership from initiating war. Therefore, a military strike is still preferable to allowing Iran to acquire nuclear weapons

Both sides in this debate are correct on some points, but ultimately miss the essence of the problem. In truth, the Iranian leadership is rational but under some conditions is likely to be willing to use nuclear weapons. History is full of examples of rational leaders who, when faced with the end of their regimes, did not hesitate to seek the mass destruction of all perceived enemies.

Israel cannot rely on deterrence and needs to emphasize policies that assume that Iran will not be deterred. Budgetary allocations, weapons developments, and plans for attack must reflect such a reality. Israel must be prepared to launch a military strike to prevent Iran from becoming a nuclear power. If that approach is rejected, Israel must focus on ballistic missile defense, give serious thought to disarming a nascent Iranian nuclear capability, and be ready to preempt an Iranian attack.

In the not too distant future, Israel may confront a nuclear-armed Iran whose leaders find themselves with nothing to lose and everything to destroy. Whether Israel can meet this challenge may well determine whether it continues to thrive as a state, or perishes in a hail of nuclear warheads.

The arguments and conclusions of this essay have not been changed by recently elected President Rouhani's softer tone. Unless and until Iran matches Rouhani's rhetoric with actions that deprive Iran of the capability of producing nuclear weapons, the threat of a nuclear armed Iran behaving recklessly remains.

Armed and Dangerous: Why a Rational, Nuclear Iran Is an Unacceptable Risk to Israel

Steven R. David

INTRODUCTION

One of the most pressing issues facing policy-makers today, especially in Israel, is whether it is acceptable to allow Iran to develop nuclear weapons. Some argue that Iranian leaders can be deterred because they are rational, cost-calculating actors who know that launching nuclear weapons against Israel would be suicidal – and the Iranians do not wish to die. As such, a nuclear-armed Iran would refrain from using nuclear weapons just as the United States and the Soviet Union chose not to come to nuclear blows during the Cold War. In their view, efforts to halt Iranian nuclear weapons development should be modest and should not involve military force. Better to allow Iran to get nuclear weapons – and let deterrence work its magic – than to launch a military strike unleashing needless mayhem.¹

Others disagree, arguing that Iranian leaders could well be religious fanatics who welcome a nuclear apocalypse as a precursor to the advent of an Islamic paradise. Rather than fearing death, they embrace it. An Iran under leaders such as these would be undeterrable, since no punishment exists that would dissuade the Iranian leadership from initiating war. This would be a far cry from the situation prevailing during the Cold War, when American and Soviet leaders, despite their profound differences, recognized that nuclear conflict would serve neither of their interests. Therefore, a military strike – with all its horrific consequences – is still preferable to allowing Iran to acquire nuclear weapons.²

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Both sides in this debate are correct on some points, but in the end, each misses the essence of the problem. The first school of thought is correct in arguing that any Iranian leadership will be rational, in that they recognize that launching a nuclear strike makes no sense and should not be carried out. But it fails to understand, for a whole host of reasons, that there is a real possibility that an Iran armed with nuclear weapons would use them, even if its leaders are as rational as the leaders of the superpowers during the Cold War. The comforting reassurances of deterrence that seemingly worked so well during the Cold War do not apply to a nuclear-armed Iran in the twenty-first century. Critics of this approach are correct that a nuclear-armed Iran poses an unacceptable risk to its neighbors and the wider world community, but they are wrong to base their objections on their assumption that the Iranian leaders are religious zealots. Instead of focusing on whether the Iranian leadership is fanatical, it is better to concentrate on what can be done to prevent a rational – yet undeterrable – Iran from wreaking havoc.

This task is addressed in three parts. The first section argues that Iran poses an existential threat against Israel. The second section explains why Iran, even under a rational leadership, presents an unacceptably high risk of attacking Israel with nuclear weapons, emphasizing the prospect of what might happen should the Iranian leadership find itself on the brink of collapse. The study concludes with suggested policies that Israel needs to follow in order to cope with an undeterrable Iran that is on its way towards developing nuclear weapons.

THE THREAT OF A NUCLEAR IRAN

Israel's fears about Iran stem from statements made by Iranian leaders calling for the Jewish State's destruction. At a speech delivered at the 2005 "World Without Zionism Conference," then-Iranian President Mahmoud Ahmadinejad declared that "the occupying regime [Israel] must be wiped off the map."³ That Ahmadinejad famously denied that the Holocaust ever happened – a view shared by many in the Iranian regime – only underscores the fervent hatred the Iranian leadership holds for the Jewish State. Other Iranian leaders have also weighed in with incendiary comments. In December 2001, former Iranian President Akbar Hasemi Rafsanjani said:

If one day, the Islamic world is also equipped with weapons like those that Israel possesses now, then the imperialists' strategy will reach a standstill because the use of even one nuclear bomb inside Israel will destroy everything. However, it will only harm the Islamic world. It is not irrational to contemplate such an eventuality.⁴

Newly-elected President Hassan Rouhani lost no time declaring Israel a "wound for years on the body of the Muslim world," calling into question his "moderate" reputation.⁵ He thereupon went on a "charm offensive," declaring Iran's peaceful intentions and vowing that Iran would never develop nuclear weapons. Only time will tell whether he is sincere or not. Even if is sincere, however, Rouhani operates under the authority of Iran's Supreme Leader, Ali Khamenei, whose desire to destroy Israel is abundantly clear. In 2000, Khamenei reportedly told José María Aznar, the former prime minister of Spain, that "Israel must be burned to the ground and made to disappear from the face of the Earth."⁶ In February 2012, Khamenei declared that "the Zionist regime is a cancerous tumor and...will be removed."⁷ Other political and military leaders have made similar statements. These remarks, along with crowds routinely chanting "Death to Israel" (along with "Death to America"), suggest that many in Iran do indeed wish to eradicate Israel from the face of the earth.

Iranian actions also suggest a desire to destroy Israel. Iran is a chief sponsor of Hamas and Hizballah, two organizations that openly call

for Israel's eradication. Along with financial support, Iran has supplied thousands of missiles to Hamas and Hizballah, many of which were used against Israel in conflicts in southern Lebanon in 2006 and Gaza in 2009. Iran has also backed terrorist actions against Jewish targets, including the blowing up of the Jewish community center in Buenos Aires in 1994, which killed 85 people. There is also little doubt that Iran was behind the 2012 attacks on Israeli diplomats in India, Georgia, and Thailand.⁸ In word and deed, Iran seems determined to eliminate Israel.

If Iran seeks to destroy Israel, it is rapidly gaining the means to do so through the development of nuclear arms. The most difficult step in making nuclear weapons is amassing sufficient quantities of fissile material, either plutonium or highly enriched uranium (HEU), both of which require major efforts to be made bomb ready. There is strong evidence that Iran is pursuing both paths, seeking to acquire enough plutonium or HEU to make nuclear bombs.

Plutonium is not found in nature; it is produced as a byproduct in nuclear reactors. One needs a nuclear reactor to create the plutonium and a reprocessing plant to separate the plutonium from the uranium rods. Russia completed a large nuclear power reactor for Iran at Bushehr in the summer of 2010. Although this reactor can produce enough plutonium for several nuclear bombs, it is not yet a cause for major concern; it is under International Atomic Energy (IAEA) safeguards and the Russians have promised that all the spent fuel on the nuclear rods will be returned to them. Nevertheless, for Iran to have a reactor under its control producing large amounts of plutonium, some of which could be clandestinely diverted, is worrisome. Of much greater concern is Iran's heavy water nuclear reactor at Arak, which uses natural, not enriched uranium as a fuel, making it easier for Iran to operate the reactor without outside oversight. The Arak reactor would have the capability to produce fissile material for one to two bombs per year, provided that Iran also builds a separation plant – something well within Tehran's capability.⁹

While Iran's pursuit of a plutonium-based bomb is troubling, the principal path Iran has chosen for developing a nuclear weapons capability is through the enrichment of uranium. The path chosen by the Iranians is to convert natural uranium to a gas (uranium hexafluoride) and then funnel

the gas through thousands of centrifuges, gradually separating the lighter U-235 isotope from the heavier (and much more prevalent, but non-fissionable) U-238 isotope. Uranium enriched to around 3 percent (low enriched uranium, or LEU) can be used as fuel in most power reactors, while uranium enriched to 20 percent (medium enriched uranium, or MEU) is used in special reactors – one of which Iran has – such as those that make medical isotopes. For a nuclear bomb, uranium has to be further enriched to around 90 percent U-235. A key complication is that the same centrifuges used to enrich uranium for peaceful uses of nuclear energy can be employed to provide additional enrichment for a nuclear bomb; hence, there is no clear way to distinguish a peaceful enrichment program from one that is designed to make nuclear explosives. Medium enriched uranium is especially worrisome, as the gap between 20 percent and 90 percent enriched uranium is trivial and can be bridged in a very short time. By maintaining large quantities of low and medium enriched uranium along with a large numbers of centrifuges to further enrich the uranium, Iran could develop bomb quality uranium in a very short time, all the while asserting it is just making fuel for peaceful purposes.¹⁰

There is no question that the quantity of fissile material that Iran currently possesses is massive, placing it ever closer to building a nuclear weapon. Iran has two known enrichment facilities, in Natanz and Fordow, the latter embedded deep in a mountain. Iran has already installed over 17,000 centrifuges in the two locations, with “firm plans” to deploy over 27,000 centrifuges, including over 3,000 of the advanced IR-2m centrifuges, which enrich uranium fuel much more quickly.¹¹ More than half of these centrifuges have been installed in just the past two years, demonstrating Iran’s commitment to plow ahead, even in the face of sanctions and sabotage.¹²

Adding to the suspicions that Iran seeks to develop nuclear weapons is its obstructionist behavior towards IAEA inspections. As a signatory to the IAEA, Iran was required to have declared its enrichment facilities to the IAEA, but did not do so. Iran acknowledged their existence only after they were revealed by other countries, including the US and Israel. In addition, Iran has consistently interfered with IAEA inspections, most notably at the Parchin military research facility, where it is suspected of testing explosives for use in nuclear weapons.¹³ The refusal of Iran

to allow inspectors into the Parchin facility was especially powerful in discrediting a 2007 US National Intelligence Estimate that Iran had halted work on nuclear arms in 2003.¹⁴ There is now little doubt that Iran is developing the capability to make nuclear weapons quickly, if the decision to move ahead is undertaken.

Once having developed nuclear weapons, Iran would have few difficulties launching them against Israel. Iran reportedly has several dozen Shahab-3 ballistic missiles, with ranges over 1,000 miles, enabling them to hit virtually any target in Israel.¹⁵ Iran is working on other ballistic missiles with even greater ranges and payloads enhancing its ability to strike at Israel. It is not yet known whether Iran has the capability to fashion a nuclear warhead that would fit on a ballistic missile, but such a challenge is not beyond its capabilities.¹⁶ Iran is also developing cruise missiles that could be launched from ships off of Israel's coast and from ground sites near Israel. Although cruise missiles are slower than ballistic missiles, they still fly at close to the speed of sound while hugging the ground, making interception very difficult. Russia has supplied Iran with long-range bombers, each of which could carry nuclear bombs to Israeli targets.¹⁷ The prospect of smuggling nuclear arms into Israel, especially crudely-made large devices, cannot be discounted, either.

Israel would be especially vulnerable to a nuclear attack because it is so small, with a highly concentrated population. Israel's area is only a little more than 8,000 square miles, around the size of the state of New Jersey. More than 75 percent of its Jewish population is wedged in a narrow coastal strip from Ashkelon to Nahariya. Jerusalem, Tel Aviv, and Haifa alone make up nearly half the population and the economic, political, and cultural heart of Israel. Only a handful of nuclear weapons of sufficient yield would be enough to end Israel's existence as a Jewish state. While a nuclear strike against any country would be a calamity, few match Israel's susceptibility to a state-ending strike. Japan survived the destruction of Hiroshima and Nagasaki to go on to become an economic powerhouse. The destruction of Tel Aviv and Jerusalem, on the other hand, would fatally wound Israel in way that would call into question its ability to ever recover.¹⁸

In sum, Iran openly calls for Israel's destruction while it is rapidly gaining the means to do so. Not everyone, however, accepts the view

that a nuclear-armed Iran poses much of a threat to Israel. Why they are mistaken is critical for understanding how Israel needs to react to the prospect of an Iran with nuclear weapons.

THE DANGERS OF A NUCLEAR IRAN

Despite Iran moving closer to becoming a nuclear weapons state, there are those who argue not to worry. They assert that there is nothing to worry about from a nuclear-armed Iran, because its leadership, like the leaders of all states, is rational. Being rational for the Iranian leadership means they are sensitive to costs, i.e. they want to survive, and recognize that launching a nuclear strike against Israel would be suicidal. The Iranian leadership knows it cannot disarm the 75 to 200 Israeli nuclear weapons – many contained in invulnerable submarines – in a first strike, and must be certain that any nuclear attack against Israel would precipitate a massive nuclear retaliation against the Iranian state and its leaders.¹⁹ In their view, deterrence – persuading someone not to do something they are capable of doing by threatening them with unacceptable punishment if they do it – will work with Iran. Deterrence will prevail just as it did during the US-Soviet confrontation during the Cold War, and just as it has with other “rogue” states such as Maoist China and present-day North Korea.²⁰

According to such a view, fears of a nuclear Iran are similarly overblown. Iran will not behave more aggressively, once it has nuclear weapons, because nuclear arms are essentially defensive.²¹ While the acquisition of nuclear weapons by Iran may push other states (such as Saudi Arabia and Turkey) to acquire nuclear weapons, there is no certainty this will happen. Even if it does, the essentially stabilizing effect of nuclear arms will apply to them as well. They dismiss the idea that Iran would transfer nuclear weapons to others, as this would place their fate in the hands of groups who they could not control. The Iranian leaders, like leaders of all nuclear weapons states, would recognize the immense power of their new arms and would take care to ensure that accidents and unauthorized launchings would not occur. In a world where power is meant to be balanced, it to be expected and welcomed that Iran would seek to

counter Israel's nuclear arms with nuclear weapons of its own. Economic sanctions and other efforts to stop Iran from becoming a nuclear state will not work and are not needed. The consequence of Iran acquiring nuclear weapons would not be nuclear war or regional conflict, but a balance of power producing peace and stability.²²

Before explaining why this school of thought is mistaken in dismissing the dangers of a nuclear-armed Iran, it is worth noting where it is right. It is almost certainly correct that Iranian leaders are not religious fanatics, but rather rational actors who are sensitive to costs. To be sure, there are those who believe that Iranian leaders cannot be deterred because they are so driven by extreme religious beliefs that they would destroy Israel if they could, even if it meant their own destruction. The notion of Iran as a "suicide nation" has its roots in the view of many Iranian leaders who believe in the Hidden Imam, the last of the twelve Imams, who did not die and is waiting to return to earth. Before his return, however, the world has to undergo a cataclysmic struggle, after which the Imam will create a Paradise for believers, while condemning the infidels to a horrific fate. The fear is that Iranian leaders who subscribe to this view might precipitate a nuclear war with Israel, believing that the resulting destruction would hasten the Imam's return. Prominent believers in the Hidden Imam include the Basiji, a militia that sent children across minefields during the 1980's war with Iraq – while wearing keys to get them into Heaven – and is a potent political force in Iran today.²³

Despite these concerns, supporters of this position are correct that the notion that Iranian leaders are irrational fanatics is difficult to accept. It is true that the Iranian leadership is deeply religious, but so are many American and Israeli leaders. Few argued that George W. Bush, a devout Christian, should not be trusted with nuclear weapons out of fear that he would unleash a nuclear Armageddon in the hopes of ushering in the Second Coming. While Iranian rhetoric is disturbing, though less so now under Rouhani, Iranian actions have proven to be much more pragmatic and restrained. Iran has been careful to avoid "red lines" with Israel and the US and has not transferred biological or chemical weapons to its proxies in Lebanon and Gaza. During Israel's 2006 war with Hizballah and its war with Hamas in 2009, Iran talked a good game but pointedly stayed on the sidelines as its allies were pummeled. Despite hints to the

contrary, Iran refrained from closing the Straits of Hormuz following the European Union's imposition of an oil embargo in 2012, knowing that such action would provoke war.²⁴ Where Iran has acted recklessly, such as the destruction of the Argentinian Jewish Center, it has always preserved a degree of deniability. This pattern of heated statements combined with restrained behavior has been remarkably consistent in Iranian foreign policy and does not suggest a leadership acting irrationally.

This school of thought is also correct in its dismissal of the possibility that Iran would transfer nuclear weapons to others, such as Hamas and Hizballah, in an effort to avoid retaliation against itself. Giving nuclear arms to groups you cannot control and who have behaved recklessly in the past makes no sense. Iran would be placing its future in the hands of those it could not control and does not trust. Moreover, the notion that Iran could avoid an Israeli attack by having others do its dirty work is unconvincing. Israeli leaders know full well that Hamas and Hizballah are incapable of producing nuclear weapons. If a nuclear weapon is used by either, or some other terrorist group, Israel would certainly assume the source of the attack was Iran and would respond accordingly.

Finally, this school of thought feels that a nuclear-armed Iran would not necessarily behave more aggressively. The history of nuclear-armed states during the Cold War and beyond provides compelling evidence that nuclear weapons, while useful in deterring nuclear attacks and large-scale conventional war, play a much smaller role in "compellence," i.e. forcing countries to act in certain ways.²⁵ An Iran free from the fears of being attacked may be more assertive around the margins, but the nuclear arms are essentially a defensive weapon. If Iran did openly become a nuclear state, the US would almost surely extend its nuclear umbrella to Persian Gulf countries seeking protection. The notion that these countries would nevertheless "bandwagon" to a nuclear-armed Iran, placing their security in the hands of a threatening adversary, is probably groundless.²⁶

Thus far this viewpoint makes a strong case that a nuclear-armed Iran should not be feared. It is almost certainly correct that the Iranian leadership is rational in the sense that it wishes to survive and recognizes that attacking Israel would result in the country's destruction. The assertion that Iran would not transfer nuclear weapons to others or act

more aggressively as a nuclear power is plausible. It is also correct that neighboring states would likely continue to balance against an Iranian hegemony whether it had nuclear weapons or not. Nevertheless, even if all of these arguments are accepted, there is good reason to believe that a rational Iran with nuclear weapons may still be undeterrable, thus posing a mortal threat to Israel and others.

THE LIMITS OF DETERRENCE FOR A NUCLEAR IRAN

The central flaw in the theory presented above is the belief that the US-Soviet Cold War experience, where nuclear deterrence did indeed work, can be applied to a nuclear-armed Iran. There are a range of circumstances in which it is all too easy to see how an Iranian leadership – rational, cost calculating, moderate, and prudent as it may be – would still present a very real possibility of using its nuclear weapons against Israel in the face of credible threats of retaliation. What all of these circumstances have in common is that each is more likely to push Iran to launch a nuclear attack than was ever the case for the US or Soviet Union during the Cold War. These circumstances include the more familiar possibilities of unauthorized launchings, accidents, inadvertent escalation of a conventional conflict, and the risks of a region with many nuclear-armed states. Most important, and often ignored, is how deterrence could unravel if Iran’s leaders, armed with nuclear arms, faced the prospect of imminent overthrow. This dire – but all-too-likely – threat is explored next.

Breaking Bad: Why an Iran Falling Apart Undermines Nuclear Deterrence

The “rationality” debate regarding a nuclear-armed Iran is most irrelevant when considering what would occur if Iran went the way of its Middle Eastern neighbors and began to fall apart. It is easy to imagine a situation in which, following massive domestic unrest, the Iranian leadership found itself on the brink of being toppled from within. Facing the end of their rule and possibly their lives, Iranian leaders, fully rational but with nothing to lose, might choose to lash out against Israel in a parting shot for posterity.

To see how a nuclear-armed Iranian regime might behave under duress, we need to consider how other leaders, especially those with access to weapons of mass destruction, have acted in the face of threats to their rule. Studying Fidel Castro during the Cuban Missile Crisis, Saddam Hussein after the first Gulf War, and Bashar al-Assad's current stand in Syria can open our eyes to the seemingly irrational behavior that can occur when powerful people who are used to having their way begin to believe their days are numbered. None of this is good news for Iran's neighbors – especially Israel – all of whom must contemplate the possibility of nuclear weapons in a country that is far from immune from the waves of protest that have already toppled several regimes in the region. It could well be that Iran's aborted "Green Revolution" from 2009-2010 will find a second and more powerful wind.

Cuba, 1962

The long-held view that almost any leader would refrain from the use of nuclear weapons against a nuclear-armed state because it would be suicidal is called directly into question by Fidel Castro's actions during the Cuban Missile Crisis. There is little apart from that crisis itself in Castro's personal history to suggest he was irrational or even especially extreme in his behavior. He led a disciplined guerilla army for years, succeeded in overthrowing Cuban dictator Fulgencio Batista in January 1959, successfully defied an American embargo, and went on to become one of the longest-serving leaders of modern times.

Yet, Castro's actions during the Cuban Missile Crisis illustrate how even shrewd leaders can behave recklessly when faced with the prospect of losing power. As is well known, the US discovered in October 1962 that the Soviets had placed nuclear missiles in Cuba capable of reaching much of the continental United States. The crisis ended when Soviet Premier Nikita Khrushchev, following an American naval blockade of Cuba, agreed to remove the missiles in exchange for a US pledge not to invade Cuba and a secret agreement to remove American Jupiter missiles from Turkey. What is less well known is that Castro, during those remarkable thirteen days, argued for a nuclear strike against the US – an action that could easily have provoked a global nuclear war and the complete annihilation of Cuba.

As the crisis peaked on October 26, with Soviet ships bearing down on the American blockade, Castro sent a letter to Khrushchev imploring him to launch a preemptive nuclear strike against the US. The letter, which has since been published, argued that an American attack against Cuba was imminent “within the next 24 or 72 hours,” making it imperative that the Soviet Union attack the US first.²⁷ A horrified Khrushchev responded by urging patience and by reminding Castro that a nuclear exchange would not only set back the course of socialism but also devastate Cuba. For Castro, however, the survival of his regime was more important than the survival of millions of his people, to say nothing of the populations of the Soviet Union and the United States. Even more alarming, Castro sought a nuclear holocaust, even in the event that it could not have saved his regime. Nuclear war would have gained him nothing except the destruction of the US (and the Soviet Union) for the temerity of bringing him down. What saved the world was not the restraint or rationality of Fidel Castro, but the fact that he lacked the ability to start a nuclear war.

Iraq, 1991

In August 1990, Iraq invaded Kuwait and incorporated it as its nineteenth province.²⁸ Galvanized by Saddam’s blatant aggression, the US and its supporting coalition launched air attacks against Iraq in January 1991 and a ground assault in March. As coalition troops poured into Kuwait, routing Iraqi forces, it quickly became clear to Saddam that not only would his conquest of Kuwait not stand, he might be overthrown should coalition troops continue on to Baghdad. In this perilous situation, Saddam lashed out in an act of environmental vandalism that served no purpose other than to inflict as much harm on as many people possible with the weapons at hand. Saddam ordered his troops to set Kuwait’s oil wells ablaze, and Iraqi forces dutifully set fire to more than 700 wells as they evacuated the country. The fires raged for eight months, creating a cloud of smoke and soot over several million square miles of the Persian Gulf, including Iraq itself. For good measure, Saddam poured between four and six million barrels of oil into the Persian Gulf, soiling more than 800 miles of Saudi, Kuwaiti, and Iraqi coastline.²⁹

Saddam's torching of the oil fields matters for several reasons. First, it made no sense; it did not enhance Iraq's security or economic well-being. It was destruction for destruction's sake, an act of pure unalloyed spite. Second, while American statements before the war could have reasonably have been interpreted as a sign that the United States did not want to get involved in the defense of Kuwait, there was no ambiguity about what the US thought about the destruction of the oil fields. In a letter from President George H.W. Bush to Saddam, delivered to the Iraqi government in January 1991, the President made it clear that if Saddam used chemical or biological weapons, or if he destroyed the Kuwaiti oil fields, his regime would suffer dire consequences.³⁰ The letter may have deterred Saddam from using chemical or biological weapons – though it is still not clear whether the Iraqi military was capable of launching them under the pressure of combat – but it clearly failed to deter him from setting the oil fields on fire.

Third, although the environmental effects of the oil destruction proved less cataclysmic than some feared at the time, Saddam did not know this when he gave the order. Some scientists predicted that the torching of the Kuwaiti fields would produce a “nuclear winter” spreading environmental havoc throughout the planet.³¹ The possibility of creating such a catastrophe did not give Saddam pause; indeed, malignant narcissist that he was, it may even have encouraged him.

Finally, Saddam's recklessness during the first Gulf War made American policy-makers and military commanders virtually certain that if Saddam had weapons of mass destruction, he would feel no compunctions about using them, as suicidal as that might be. That was the main reason the George W. Bush administration went to war: to prevent Iraq from acquiring such weapons. As it turned out, Saddam had no such weapons. But the near certainty that Saddam would use whatever weapons he had, regardless of American deterrent threats, reflected an accurate recognition that dictators, even with weapons of mass destruction, are virtually undeterrable when they believe they are about to be toppled.

Syria, 2011-

Syria under Bashar al-Assad vividly demonstrates the dangers of what can happen when a regime with weapons of mass destruction is endangered. Beginning with peaceful mass protests in March 2011, disturbances in Syria escalated within a year to a full-scale civil war that has already killed more than 100,000 people. Recognizing that Assad might be tempted to use his vast quantities of chemical weapons in order to preserve his power, President Barack Obama publicly tried to deter him from doing so. In August 2012, following reports that the Syrian regime was transferring substantial amounts of chemical weapons out of storage and mixing chemicals to make them ready for immediate use, Obama announced that moving or using large amounts of chemical weapons would cross a “red line” that would “change my calculus” regarding American involvement in the Syrian civil war.³² The red line was crossed in June 2013, when tissue samples from Syrian insurgents made it clear that sarin gas had killed as many as 150 rebels. Obama responded by announcing that he would begin sending weapons to the Syrian rebels for the first time, escalating American involvement in a conflict the White House had tried to avoid.³³ Obama’s decision did not deter the Syrian leadership, which launched an even larger chemical attack in August 2013, killing over 1,400 civilians, including 400 children. This attack precipitated a bewildering chain of events in which Obama first appeared to be on the brink of attacking Syria, but then backed off, only to accept a Russian proposal to disarm Syria’s chemical arsenal through diplomatic means.

Whether Assad will truly disarm remains to be seen. In any case, it is alarming that he chose to use chemical arms, despite being able to keep the insurgents at bay with his conventional forces, and in the face of a clear American deterrent threat not to do so. If the tide of the civil war turns against him and he is convinced he is about to die, there is no telling what he will do. Assad has already declared that he will not leave Syria, preferring to die in his own palace.³⁴ Many of his Alawite commanders may also conclude that the end of the regime will mean their demise as well. If Assad cheats, and does not get rid of all of his chemical arms as promised, it is plausible to see him and his henchmen using chemical arms against the Syrian population, or against their regional enemies such as Jordan, Turkey, and, of course, Israel. Other

nightmare scenarios include Assad handing off the chemical weapons to Hizballah, having the weapons fall into the hands of Islamist insurgents, or renegade commanders in Syria's dying regime deciding to use them on their own. Deterrence is a very slender reed against these kinds of passions in exceedingly desperate circumstances, all the more so given that deterrence has already failed against Assad in much less dire straits. If there is a silver lining to any of this, it is that Syria does not have nuclear or (probably operational) biological weapons, limiting the level of havoc its leadership can inflict.

Lessons for Iran

What do these examples say about Iran? In one sense they carry a reassuring message. With the exception of Syria, in none of the cases were weapons of mass destruction actually used, despite the threat of imminent loss of power to the besieged leaders. Moreover, the toppling of rulers in the so-called "Arab Spring" in Tunisia, Libya, Yemen, and Egypt has not resulted, so far, in any significant cross border warfare, let alone any use of biological or chemical arms. Does that mean that concerns about a teetering Iranian regime precipitating a regional or global Armageddon are overwrought?

Not necessarily. The Middle East, and indeed the world, escaped cataclysm in the examined cases not because deterrence worked. Rather, in each of the cases it was the absence of key ingredients that averted catastrophe.

The components of catastrophe are clear: a leadership that believes it has nothing to lose, a leadership that harbors an extreme hatred against some country or group, and most important, a leadership with the capability to let loose the harm it seeks. For Castro, Saddam, and Assad, the key missing component was the capability to inflict horrendous harm. Fidel Castro hated the US and would certainly have launched nuclear weapons if America sought to remove him, but he lacked control over the nuclear arms in Cuba. Saddam Hussein, who despised his regional foes as well as Israel and America, wreaked as much damage as he could by torching Kuwaiti oil fields in the first Gulf War, and almost certainly would have unleashed weapons of mass destruction in the second Gulf War, if he

had any. Bashar al-Assad's fear of Sunni insurgents and hatred of Israel give him ready targets for his country's chemical arsenal. If he reaches the point where his overthrow appears imminent, the likelihood he would use chemical arms that somehow avoided the prying eyes of international inspectors would skyrocket. As for the other deposed leaders of the "Arab Spring," they fortunately had no weapons of mass destruction to employ.

The Iranian leadership, on the other hand, is close to meeting all the requirements for unleashing disaster: waning power, unbridled hatred, and capability. The regime's hold on power is precarious. The major demonstrations of the summer of 2009 and beyond confirm that large numbers of Iranians detest the mullah's theocratic rule. The Iranian government was able to suppress that budding revolt, but it still faces a young, restive population linked by social networks, many of whom oppose Islamic rule and are frustrated with their lack of opportunities in a deteriorating economy. Making matters even dicier, since the 2009 protests the not-so-gentle winds of the "Arab Spring" continue to blow across Iran, and its leaders must recognize that the popular demonstrations that have swept through the Middle East may soon return to Tehran. Second, the mullahs have made no secret of their extreme hatred of Israel and their fervent wish to destroy the Jewish state.

Should the Iranian regime teeter on the brink of oblivion, all that would stop it from carrying out its murderous threats against Israel and perhaps the United States is a lack of capability. With thousands of centrifuges spinning each day, however, Iran is on its way to developing nuclear weapons, giving it the ability to do precisely what it has threatened. Assurances that we have little to worry about – because Iran's rational cost-calculating mullahs will not commit suicide – are not persuasive. If the prospect of horrendous retaliation was not enough to deter Castro or Saddam, and may yet prove ineffective against Assad, why would we expect the hate-filled mullahs of Iran to be any different?

Indeed, an Iran armed with nuclear weapons would be an even greater worry than the cases discussed here suggest for two reasons. First, while Castro, Saddam, and Assad were driven to extreme behavior that bordered on irrationality by the prospect of being toppled, an Iranian use of nuclear weapons by a besieged regime can be seen as perfectly

rational. International studies scholars tell us that the way to understand foreign policy is to put ourselves in the position of a leader who confronts a certain problem and then ask what is the rational choice for the leader to make.³⁵ If the Iranian leadership believes it is about to be toppled and killed, and further believes that the source of its and much of the world's troubles lie with the Jews and Israel, is it crazy for them to unleash a nuclear attack against Israel as one last shot for posterity? Precisely because it is easy to understand the Iranian leaders acting in this way, it is not difficult to see why nuclear deterrence would not work against an Iranian leadership with nothing to lose and a hated enemy to destroy.

Second, while the prospect of losing power is the most likely situation in which Iranian leaders would launch their nuclear weapons against Israel, it is far from the only one. As with the US and the Soviet Union during the Cold War, a nuclear-armed Iran runs the risk of using its weapons due to unauthorized launchings, accidents, or miscalculation. This is especially worrisome since deterrence would play no role in halting nuclear war for any of these eventualities. Making matters even worse, an Iran with a rudimentary nuclear force is far more likely to experience these misfortunes than ever was the case for the superpowers, especially in a context of a Middle East with many nuclear weapons states.

UNAUTHORIZED LAUNCHINGS, ACCIDENTS, AND MISCALCULATIONS

The leaders of a nuclear-armed Iran may be perfectly rational, but that means little if some unhinged subordinate launches a nuclear strike without government authorization. Those who are not bothered by a nuclear-armed Iran assure us that Iran, like any state, will keep close tabs on its nuclear weapons precisely to avoid an unauthorized launch. But even if the Iranian leadership seeks to keep tight control over its nuclear weapons, it is not clear that it will be successful. What little is known about Iran's nuclear command structure is that it is marked by overlapping and competing centers of power.³⁶ Nevertheless, it is believed that ultimate control rests with the Supreme Leader Ali Khamenei, who is the head of state and commander and chief of the armed forces.³⁷ As leader of Iran, Khamenei may be rational and recognize that it makes no sense for Iran

to launch a nuclear strike. The problem, however, is that others in the nuclear chain of command may think differently. Khamenei's control of nuclear forces might be exercised through the Islamic Revolutionary Guard Corps (IRGC), a group known for its extreme views regarding Israel. It is not comforting that the IRGC is led by General Mohammad-Ali Jafari, who has openly called for Israel's destruction.³⁸

Given Khamenei's central role in nuclear affairs, how likely is it that an extremist member of the IRGC or some disgruntled military subordinate could launch a nuclear weapon at Israel without government approval? It is impossible to know for certain, but the overall picture is not reassuring. A nuclear-armed Iran will confront the always/never dilemma.³⁹ All leaders, particularly leaders with new (and possibly vulnerable) nuclear forces, must be certain that their nuclear weapons will "always" be used if so ordered, but "never" be used against their wishes. The problem is that efforts to ensure one goal undermine reaching the other. If Khamenei wanted to be certain that Iranian nuclear weapons would "never" be used without his express authorization, he might limit the authority to order a launch to himself. By so doing, a hate-filled colonel or psychotic Revolutionary Guard soldier would not be able to initiate a nuclear war on his own. However, if Khamenei wanted to be sure that Iranian weapons would "always" be ready to strike if he gives the order, then it makes sense for him to extend the launching authority to many subordinates, so that an attacker could not prevent an Iranian retaliation by "decapitating" its leadership.

Iran is especially likely to lean towards the "always" side of command and control, because it has good reason to fear an Israeli disarming strike. Unlike the US and the Soviet Union during the Cold War, Iran would be developing a small nuclear force that is likely to be vulnerable to a strike from an adversary that knows Iran seeks its destruction. A rational, pragmatic Iranian leadership could not help but take steps so that its ability to launch a nuclear strike could not be compromised by an Israeli effort to disrupt its command and control structure. Especially during a crisis, it is to be expected that Iran would move to ensure that many individuals would have the authority to launch. While this makes sense to ensure the ability of its nuclear forces to retaliate, it dramatically increases the likelihood of an unauthorized strike. Leaders may well have to be

rational to acquire and hold power. The same is not true for some random individual, deep in the bowels of command. The prospects of irrationality, fanaticism, or miscalculation undermining deterrence are therefore much greater. Making matters worse, we do not know what steps Iran has taken to ensure that level-headed, sane individuals are part of their nuclear structure. The US has gone to great lengths to test applicants involved with nuclear weapons for personality defects. It is not likely that Iran has the sophistication to duplicate these screening methods, if they make the effort at all.⁴⁰ Another problem with rudimentary nuclear forces held by new nuclear weapons states is a lack of appropriate electronic locks. The US has Permissive Action Links (PALs) on its nuclear weapons that ensure that the arms cannot be used if the code is not known. It is unclear what kind of locks Iran would place on its nuclear arms, but they are almost certainly going to be less effective than those used by the US, making their unauthorized use all the more likely.⁴¹ The combination of large numbers of individuals with the authority to launch nuclear arms without adequate vetting or safeguards makes an Iranian unauthorized launch against Israel all too possible, and confidence on deterrence to stop it all too foolhardy.

Nuclear deterrence will also play no role in the event of an accidental detonation or launch. During the Cold War, both the US and the Soviet Union experienced many accidents involving nuclear weapons. They included the crashing of aircraft with nuclear bombs, dropping of nuclear bombs on foreign soil, nuclear weapons being engulfed in flames, and false alerts of nuclear attacks.⁴² Even after the Cold War, frightening incidents continue to occur such as the transporting cruise missiles across the US without anyone realizing they were nuclear-armed. For new nuclear states such as Iran, the likelihood of an accident is far greater than that experienced by the US and the Soviet Union. Modern American nuclear weapons have what is called the “one point safety rule,” in which there is less than one chance in a million that a weapon will go off due to explosion or fire.⁴³ There is little to no possibility that an Iranian nuclear bomb will be made to this exacting standard. If an Iranian nuclear weapon goes off accidentally, it may be misinterpreted as an Israeli attack, prompting an Iranian strike that initiates a regional nuclear war. Accidental nuclear war is also made more likely by the proximity of

Israel and Iran. It would take just a few minutes for a missile launched by either country to hit the other, leading to hair-trigger and launch-on-warning postures. In such an environment, a false radar warning signaling an impending attack might push the Iranians to launch their missiles so they are not caught on the ground. Once launched, these missiles cannot be recalled, plunging both countries into a catastrophic war. If the Israelis and Iran engage in conventional war, hardly an impossibility, missiles armed with conventional warheads might be mistaken for nuclear-armed missiles, producing a nuclear response. Equally likely, a conventional conflict might destroy Israeli or Iranian nuclear forces, degrading them to the point that one side or the other may launch its remaining nuclear arms rather than lose its ability to employ them in ways it had planned. Such “inadvertent escalation” is seen as a means by which nuclear deterrence can be undermined.⁴⁴ Whatever the situation, a new Iranian nuclear force will not have the numbers, technology, safeguards, and restraints that (barely) got the superpowers through the Cold War. Perhaps humankind’s luck will continue and no nuclear weapon will be detonated or launched by accident. Given the primitive nature of what would be Iran’s new nuclear force, however, no one can be confident that this good fortune will continue.

Deterrence will also not come into play if Israel is threatened by an Iranian nuclear strike stemming from miscalculation. During the Cold War, the US and the Soviet Union came close to nuclear war on several occasions, most notably during the Cuban missile crisis when President Kennedy estimated the chances of nuclear conflict at “somewhere between one out of three and even.”⁴⁵ Many of these confrontations were less about conflicts of interest than they were about excessive risk taking, misunderstandings about intentions, and problems in communication. One can easily envision a similar spiral of miscalculation between Iran and Israel, only this time the outcome is even more likely to lead to war. The relationship between Iran and Israel is far worse than ever was the case between the US and USSR. Even during the worst days of the Cold War, the United States and the Soviet Union recognized one another, had embassies in each other’s capital, refrained from calling for the destruction of the other, and – since the advent of the Hot Line in 1963 – had instantaneous communication links with each

other. Iran, however, refuses to recognize Israel. Its leaders regularly call for the destruction of the “Zionist” enemy, and there are no diplomatic exchanges or communication between the two countries. If a crisis erupts between Israel and Iran – two nuclear-armed states who hate each other, do not communicate, and fear that the other side will seek an advantage by striking first – it would be foolhardy to rely on deterrence to halt what would be a nearly unstoppable march towards nuclear war.⁴⁶

A nuclear-armed Iran also makes nuclear war more likely by spurring proliferation elsewhere. Once Iran gets nuclear weapons, other countries such as Saudi Arabia and Turkey are likely to follow suit. Deterrence is more difficult among many countries than it is with just two. States have to assess the intentions and capabilities of many actors, instead of focusing their efforts on just one, as was essentially the case during the Cold War. Since early warning systems that monitor all directions are more difficult to construct, determining the source of a nuclear strike becomes much more complicated, and the possibilities of one country disguising an attack as coming from someplace else increase. Adding to this are increased probabilities of accidents, miscalculations, unauthorized launches and inadvertent escalations that any new nuclear weapons state would face. Putting this all together in a region where distances are short, tempers hot, and disputes plentiful, the possibilities of nuclear war become unacceptably high, especially for countries such as Israel and Iran, where the threat of conflict already looms.

RESPONDING TO AN UNDETECTABLE IRAN

It is of course possible that a nuclear-armed Iran would be deterred, just as nuclear states have deterred one another since 1945. The Iranian leadership might take effective steps to prevent unauthorized launching. Iran may make nuclear weapons that are not subject to accidental detonation, and the horrors of nuclear war could be enough to prevent escalation from a conventional conflict. Both Israel and Iran may work out effective measures to ensure that miscalculations do not lead to a nuclear holocaust, and even the addition of new nuclear powers to the Middle East may not lead to nuclear war.

One can even imagine Iranian leaders faced with their own demise choosing to go quietly, instead of precipitating a nuclear Armageddon. This would be an Iran that is deterrable and containable, an Iran where nuclear weapons possession might not exactly be welcome, but would be acceptable.

The problem, however, is that no one can be sure that this reassuring picture is accurate. Unauthorized launchings may occur regardless of Iranian actions to halt them. An Iranian nuclear bomb may go off accidentally, precipitating a nuclear war. Conventional conflict with Israel may escalate to the nuclear level, even if no one sought that outcome. Miscalculations may occur despite the best efforts of Israel and Iran to prevent them. Most likely, the Iranian leaders, rational and prudent as they may be, may react to the prospect of losing power and their lives by seeking to eliminate the Zionist enemy as a parting gift to their descendants.

Even if one dismisses these risks and concludes that Iran can be deterred, how certain must one be of this to accept a nuclear-armed Iran with equanimity? Can policy-makers in Jerusalem conclude that if there is only a 20 percent chance or even a 10 percent chance that deterrence won't work against Iran, it is acceptable to rely on deterrence to provide for your security? There is no more important function of a government than to protect its citizens. As such, the mere possibility of an Iranian nuclear attack that cannot be stopped by deterrent threats requires serious consideration as what else can be done. A prudent Israeli leadership, therefore, would hope that deterrence against Iran will work, but act as if it will fail. Not relying on deterrence, however, will not be easy, as it has been the cornerstone of nuclear peace since the advent of nuclear weapons in 1945. Eliminating it removes the most powerful weapon against the outbreak of nuclear conflict.

There are two broad approaches of dealing with a nuclear-armed Iran without relying on deterrence. One approach is to develop policies that will prevent Iran from developing nuclear weapons in the first place. The other approach is to recognize that Iran may indeed be undeterrable, but that it may also be impossible or too costly to prevent it from becoming a nuclear power. As such, ways must be found to cope with a nuclear Iran that cannot be deterred. Although these approaches are different, they

are not mutually exclusive. It makes sense to both do what is possible to prevent Iran from getting nuclear arms, but also have a follow-up plan if prevention does not work. The key is determining which policies for each approach are likely to be effective and which are doomed to fail.

PREVENTING IRAN FROM BECOMING A NUCLEAR POWER

Those who emphasize preventing Iran from developing nuclear weapons argue that if there are serious questions about whether Iran could be deterred, than it is simply unacceptable to allow Iran to become a nuclear power. There are a broad range of policies that have been proposed to accomplish this.

Regional Nuclear Disarmament

One policy that is not likely to be successful is the creation of a Nuclear Weapons-Free Zone (NWFZ) in the Middle East. On its face, the argument for Israeli (and Iranian) disarmament is compelling. If a NWFZ is established in the Middle East, there will be no nuclear weapons that could be used against Israel or anyone else. The threat of an Iranian nuclear attack and the existential threat it presents against Israel would seemingly end. Egypt and Iran first proposed a Middle East NWFZ in the UN in 1974, and there have been many resolutions supporting the concept throughout the years. Typically, the proposals call on all states in the region to pledge not to develop nuclear weapons – or other weapons of mass destruction – and ratify the nuclear Non-Proliferation Treaty (NPT), which among other things, would require international inspection of all nuclear facilities. Prince Turki Al Faisal, former Saudi Ambassador to the United States, recently renewed efforts for a NWFZ, including mandatory military and economic sanctions by the five permanent members of the UN Security Council for those states that refuse to participate.⁴⁷

However promising this proposal may sound, it will go nowhere because Israel, for good reasons, is not going to give up its nuclear forces. Israeli conventional military forces are vastly outnumbered and outspent by its Middle Eastern neighbors, many of which refuse to recognize Israel's

right to exist. There is no evidence that an Israeli decision to divest itself of nuclear arms would convince Iran to halt its nuclear development, nor would Israel believe Iran if such a declaration was made. Iran has already violated its commitments to the Non-Proliferation Treaty by maintaining its secret enrichment facility at Fordow and interfering with international inspectors.⁴⁸ There is little reason to believe that Iran could be trusted to disarm simply because Israel signed the NPT and became nuclear free. In fact, the prospect of a nuclear strike against Israel from Iran would probably be greater if Iran believed it could secretly develop nuclear arms, attack Israel, and suffer no nuclear retaliation. While demanding a nuclear-free zone may score debating points, it is not going to happen, and would almost certainly not prevent Iran from developing nuclear weapons in the unlikely event it did.

Diplomacy

Another approach, with only a slightly better chance of preventing Iran from developing nuclear weapons, is diplomacy. For nearly ten years, the five permanent members of the United Nations Security Council plus Germany have unsuccessfully sought to convince Iran not to develop nuclear arms. In 2004, Britain, France, and Germany succeeded in getting Iran to stop enriching uranium and agree to more intrusive inspections of its nuclear programs by the IAEA, but that agreement came about due to Iranian fears that the US, feeling flush after its successful invasion of Iraq, would next turn its might against Iran. Once the US got bogged down in Iraq and the threat of American intervention in Iran evaporated, the mullahs quickly reneged on the agreement with the Europeans, restarted their enrichment activities, and again restricted IAEA inspections. American efforts fared no better. Some complained that the Bush administration's harsh words, such as the inclusion of Iran in the "Axis of Evil," poisoned relations between the two countries that could be reversed by a more conciliatory approach. Nevertheless, when Barack Obama came into office attempting to warm relations with Iran, he was summarily rebuffed.

Sporadic negotiations have continued in recent years, but have gotten nowhere. The Security Council members plus Germany's position has been summarized as "stop, shut, and ship," meaning that Iran should

stop enrichment of uranium (especially to 20 percent), shut down the Fordow plant, and ship out the existing stockpiles of 20 percent enriched uranium. In return, Iran would get fuel for its nuclear reactors and relief from economic sanctions. The Iranians have consistently rejected this proposal, arguing they should be allowed to have an unrestricted right to enrich as much uranium as they wanted.⁴⁹ Perhaps some compromise could be worked out whereby Iran would be allowed limited enrichment of uranium under strict inspections in return for a gradual lifting of sanctions, but so far no agreement is in sight. Given that the mullahs feed off their hostility to the US, and the fervent Iranian belief that they have the right to enrich as much uranium as they please, for them to compromise with the “Great Satan” threatens to undermine their legitimacy. Moreover, the Iranian leaders, like the leaders of North Korea, view the development of nuclear weapons as a means to guarantee their survival. They will not easily give up what they believe keeps them in power (and alive).⁵⁰ Of course, it makes sense to continue to pursue a diplomatic path towards halting Iranian enrichment, especially in light of President Rouhani’s encouraging words. It makes less sense to believe that diplomacy, especially if not backed by a credible use of force, will halt Iran’s march towards obtaining nuclear weapons.

Sanctions

At first glance, economic sanctions look to be a powerful tool to persuade Iran not to develop nuclear arms. Iran is very much a part of the globalized world, depending on trade and investment to keep its economy afloat.⁵¹ Oil exports alone make up 80 percent of Iran’s state budget, and without them Iran’s economy would collapse. Until 2012, sanctions imposed on Iran were relatively modest. Too many countries, including Russia and China, had too much to gain from selling Iran arms or buying oil and gas to allow its nuclear program to stand in the way. In 2012, however, the European Union joined with the United States in agreeing not to purchase any Iranian oil. The result has been a 40 percent drop in oil exports. Other sanctions on financial dealings and trade were also imposed.

These sanctions have had a major impact. Iran acknowledges that its economy has shrunk during the past two years and admits to an inflation

rate of 42 percent (others say it is much higher). Furthermore, the Iranian currency has lost more than half its value against the dollar since 2010 and unemployment among university graduates has skyrocketed. It is no wonder that a key aide of Iranian President Rouhani, Akbar Torjan, told local press that the economic situation of the country was “much worse than expected.”⁵² However, while sanctions hurt, the Iranian economy is resilient enough to absorb their impact. Iran has enough foreign reserves to pay for its imports for nearly a year, putting it in a position that is far better than most emerging economies. Even more important, despite international boycotts of Iranian goods, Iran still exports more than it imports. Countries such as China, India, Russia, and the UAE are more than happy to buy everything from cement to pistachios from Iran, propping up its economy.⁵³ Sanctions are well worth continuing, and it is certainly possible that with time they could produce a backlash among the Iranian population that has thus far supported the nuclear program. Nevertheless, sanctions alone will not push the Iranian leadership to halt a nuclear program they have continually proclaimed as their sovereign right.

Covert Operations Against Nuclear Scientists

Israel has pursued a range of coercive actions short of war, some in coordination with the US, to halt Iranian development of nuclear arms. These policies have produced mixed results. Israel has sought to intimidate or eliminate Iranian nuclear scientists as a way of ending Iran’s nuclear program, in line with previous Israeli actions. In the 1960s, Israel sent letter bombs to German scientists developing ballistic missiles for Nasser’s Egypt. The frightened German scientists left Egypt, ending the missile program.⁵⁴ It is strongly believed that Israel is behind a campaign that has already killed five Iranian scientists and wounded others.⁵⁵ However, Iran, unlike Egypt, has a robust number of indigenous nuclear scientists, many of whom have been placed under tight protection. If Israel expected its initial killings to produce a mass exodus of Iranian scientists, similar to what occurred with the Germans in Egypt, it must be disappointed. Perhaps recognizing the futility of the operation, the killings have seemingly stopped, while the nuclear program continues unabated.

Cyber-warfare

Israel has had better luck stopping Iranian nuclear development with a reputed campaign, conducted with the United States, to use cyber-warfare against Iranian nuclear facilities. The US, working with Israel Unit 8200 (a cyber-warfare group that is part of the Israeli military), first used cyber-attacks against Iran during the Bush administration, but accelerated them once Obama became president. The attacks, code named “Olympic Games,” utilized computer worms, bugs that secretly enmeshed themselves in Iran’s computers, causing the centrifuges to inexplicably slow down and then speed up to supersonic speeds, destroying their fragile components. The malicious software, known as Stuxnet, was especially insidious because the gauges monitoring the centrifuges reported all was normal. It was as if someone drained the oil from one’s car, with the gauge indicating nothing amiss. The operation reportedly disabled 1,000 of the 5,000 centrifuges that were operating at the Natanz enrichment plant at the time. Just how successful Olympic Games has been in halting overall Iranian efforts to enrich uranium is subject to some dispute. Officials in the Obama administration assert that the operation has been a great success, delaying Iranian efforts for up to two years.⁵⁶ Iran, however, has been able to absorb the setbacks, and still moves forward with its enrichment capabilities. As a result, Iran has far more working centrifuges today than it did when Olympic Games was working its mischief.⁵⁷ Cyber-warfare and other forms of sabotage – such as supplying Iran with defective parts for its centrifuges – have unquestionably complicated Iranian efforts to enrich uranium. But they have not stopped the Iranians, nor do they show any signs of being able to do so. Iran’s program is simply too massive for efforts such as these to have more than a temporary effect.

Military Strike

The most controversial path Israel could take to stop Iran’s nuclear program is to launch a military strike. Israel would undoubtedly prefer such an attack to come from the US, but as Washington prepares to leave Afghanistan and is still licking its wounds over Iraq, an American decision to go to war with another Muslim country is highly unlikely. If a military strike is to be launched against Iranian facilities, it would

almost certainly be Israel acting alone. Israel has taken this kind of action before. In 1981, Israeli fighter bombers destroyed Iraq's nuclear reactor in Osirak, setting back Saddam Hussein's nuclear program. In 2007, Israeli aircraft destroyed a clandestine nuclear reactor in Syria, apparently built with the cooperation of North Korea, ending Assad's efforts to develop nuclear arms. An Israeli strike against Iran's nuclear facilities would be far more complicated than its attacks against Iraq and Syria. Nevertheless, several studies believe a military strike can succeed. While details vary, there is a general belief that an Israeli military strike would employ around 100 fighter bombers, perhaps in combination with cruise and ballistic missiles. Targets to be attacked include the uranium enrichment facilities at Natanz and Fordow, the heavy water nuclear reactor complex at Arak, as well as various ballistic missile and air defense sites. An Israeli mission would require midair refueling for the jets to reach their targets and return home. The objective of the strike would be to delay Iran's nuclear development for several years, during which time international pressure might convince Iran not to continue with its nuclear development or perhaps allow for regime change in which a more reasonable Iranian leadership would emerge.⁵⁸

Although a military strike provides the hope of stopping Iran's nuclear program, success is far from assured, while its consequences are likely to be staggeringly harmful to Israel. Instead of destroying a single, above-ground nuclear reactor, as was the case with Iraq and Syria, Israel would need to attack a wide range of targets scattered throughout a large country. A particular challenge would be the destruction of thousands of centrifuges, many of which are dispersed, concealed, hardened against attack, and located in or near areas inhabited by large numbers of civilians. To highlight just one problem: even if Israel locates a tunnel in which centrifuges are located, it still faces the question of whether the tunnel veers left, right, or downward in order to target its missiles.⁵⁹

Most important, Iran may be very close or already have reached the point of no return –where it has enough centrifuges in locations invulnerable to Israeli attack to produce the necessary highly enriched uranium for a nuclear bomb, before inspectors can sound the alarm.⁶⁰

Reports of Iranian nuclear progress differ as to the amount of time it will take Iran to develop a nuclear weapon, but all agree that increasing numbers of Iranian centrifuges, especially the more effective IR-2m centrifuges, combined with growing stocks of 20 percent enriched uranium, bring Iran ever closer to a nuclear weapons capability. The notion that Iran has reached, or is about to reach, the point where a military strike would no longer deprive it of the capability to produce nuclear weapons has recently gained credibility due to two reports.⁶¹ The more alarming report, by the Non-proliferation Policy Education Center, argues that Iran's growing stockpile of 20 percent enriched uranium could be quickly enriched further to make a couple of nuclear bombs, before inspectors were able to discover anything amiss. Iran will have enough of the 20 percent uranium to do this, he argues, before the end of 2013.⁶² Another, only slightly more conservative report, posits that Iran will be able by mid-2014 to make several nuclear bombs in between the bi-weekly inspector visits. It argues that the actual manufacture of the nuclear weapons can be done in secret facilities that may already have nuclear explosive components, facilitating the actual assembly of the nuclear bomb.⁶³ All of this seemingly makes a mockery of warnings issued by Israel against Iran. In September 2012, Israeli Prime Minister Binyamin Netanyahu declared that Iran cannot be allowed to have enough uranium enriched to 20 percent (about 240 kilograms) to generate the 20 kilograms of highly enriched uranium (90 percent) needed for a nuclear bomb. But that "red line" however, may have already been crossed, or will be crossed by the end of this year, despite Iran's diverting of some of its 20 percent uranium to its research reactor. As such, it may already be too late for an Israeli attack, or Israel will have to launch a risky military strike before the end of this year, which is not a likely prospect.⁶⁴

Making an Israeli strike even more problematic is what might happen after the attack is over. Following the operation, Israel would not be certain just how much damage it inflicted. There may be hidden sites left untouched by Israeli bombs, or targets that were hit but not destroyed. Even a strike that succeeded in eliminating all the critical sites would not end Iran's nuclear efforts forever. The Iranians know how to make nuclear bombs, and that knowledge would not be erased by

military action. At best, there may be a delay of a couple of years, after which Israel would find itself in the same position, debating whether to strike again. Nor would Iran suffer such an attack without responding. Iran could coax Hamas and Hizballah to unleash tens of thousands of missiles on Israel. Iran may choose to launch its own Shahab missiles at Israel, perhaps targeting Israel's nuclear reactor in Dimona, though it is unclear whether the Iranian missiles have the necessary accuracy. Iran may lash out against American bases in the Gulf, in response to real or perceived American cooperation with Israel. The proximity of Iran to the Saudi oil fields and the Straits of Hormuz provide ample opportunities for mischief, such as attacking oil tankers, disrupting traffic in the Straits, or even an attack on the Saudi oil fields themselves. Terrorism, including in the US, may erupt as Iranian sleeper cells are activated. Even if Iran does nothing, the price of oil would likely skyrocket, angering Israel's friends. While many world leaders would secretly welcome an Israeli strike, in public they would condemn the action, producing, at least in the short term, diplomatic costs for Israel. The news media will be filled with pictures of dead Iranian women and children, raising anti-Israeli feelings to a fever pitch and making Israel even more isolated than it is today. Israel's relations with the US could well deteriorate, as Washington would seek to distance itself from the Israeli action. Jews throughout the world could be subject to Iranian and Islamic vengeance. The military option for Israel will remain so long as Iran continues to develop nuclear weapons, but even its most enthusiastic supporters need to acknowledge that the prospects for success, however defined, are far from certain.

COPING WITH AN NUCLEAR-ARMED IRAN

Over the course of the next year, if Israel does nothing, Iran will acquire at least a de facto nuclear capability, if it has not done so already. Once Iran develops nuclear weapons, the prospect of an Israeli attack becomes even more remote. As such, while stopping Iran from developing nuclear weapons remains a critical priority, Israel has little choice but to consider what to do if prevention fails; that is, how to cope with an Iran armed with nuclear weapons without depending on deterrence.

Regime Change

There are several strategies Israel can follow to cope with a nuclear-armed Iran. One approach that is not likely to bear fruit is for Israel to attempt to bring about regime change in Iran. In this view, the problem is not Iran with nuclear weapons; it is the mullahs with nuclear weapons. Israel, after all, did not object to American nuclear cooperation with Iran when the Shah was in power; it could accommodate a nuclear-armed Iran, provided it had a different leadership. The trouble with this approach is that bringing about regime change is very difficult, and almost certainly beyond Israel's capabilities. The US succeeded in toppling Saddam Hussein, but that required an American invasion with several hundred thousand troops on the ground, something that Israel is not able to do in Iran. The era of coups backed by outsiders, which among other things succeeded in restoring the Shah to power in 1953, is long gone.⁶⁵ Israel's one brush with regime change, a 1982 attempt to place Bashir Gemayal in power in Lebanon, ended badly. Even if Israel could bring about regime change, there is no guarantee that the new leaders would continue to be sympathetic to Israel's interests or remain in power for long. Regime change would be a welcome development for Israel, but if it comes about it will have to be by the Iranians themselves.

Defensive Measures

A more promising strategy to deal with a nuclear-armed Iran is to focus on defense, particularly anti-missile defense. Defense, the act of physically guarding against harm, potentially provides far better protection than deterrence. When it comes to deterrence, the decision to attack rests on the aggressor, which is at the root of so many of Israel's anxieties regarding Iran. Regarding defense, however, it does not matter if the Iranian leadership decides to launch a nuclear strike, since Israel would be able to protect itself on its own. The defense option for Israel becomes even more attractive in that Israel is one of only a handful of countries that deploys an anti-ballistic missile system to destroy incoming warheads. There are two Arrow systems, the Arrow 2, which began deployment in 2000, and the newer Arrow 3, which will be deployed as early as 2014. The Arrow 2 intercepts enemy warheads at a height of 30

miles, which is high enough so that any nuclear detonation or spillage of chemical agents would not harm Israel. The system should be able to intercept Iranian warheads, destroying them with a proximity-fused warhead that need only come within 40 or 50 yards of its target. The Arrow 2 demonstrated its effectiveness in December 2005, successfully intercepting a mock Iranian Shahab-3 missile.⁶⁶ The Arrow 3 promises to be even better. Unlike the Arrow 2, which intercepts warheads within the earth's atmosphere, the Arrow 3 destroys its targets in outer space. This allows more time to intercept the warhead, enabling additional missiles to be launched if the initial effort was not successful. The Arrow 3 is more sophisticated than its predecessor, with a capability to maneuver to its target, destroying the warhead not with an explosive but with a direct hit that smashes it to smithereens. In response to Iranian nuclear developments, the Israelis – with American assistance – are speeding up the deployment of the Arrow 3.⁶⁷

While it makes sense for Israel to beef up its defensive capabilities against the possibility of a nuclear-armed Iran, relying on such capabilities for protection against a nuclear attack would be foolhardy. The effectiveness of any anti-ballistic missile system is in serious doubt. The destructive power of nuclear weapons is so devastating, and Israel is so vulnerable to a nuclear attack, that any warheads that penetrated the anti-ballistic shield would cause catastrophic damage. That some warheads would get through is a near certainty. The challenge of an anti-ballistic missile system is similar to “hitting a bullet with a bullet.” If that is not daunting enough, Iran could take counter-measures, such as employing decoy warheads or launching staggered attacks. If convinced that Israel would neutralize its ballistic missiles, Iran could use other delivery systems such as cruise missiles launched from offshore boats, long-range aircraft (perhaps disguised as civilian airliners), or even smuggling. A perfect anti-ballistic missile system would be worthless against any of those kinds of attacks. Making matters worse for Israel, its defensive systems are far from perfect. The Arrow systems have been plagued by shortcomings, with many tests resulting in failure. When the margin for failure is so small and when counter-measures open to the aggressor are so many, defense against nuclear attack will always be a worthy, but insufficient effort.⁶⁸

Offensive Measures

If Iran cannot be deterred, and defense is inadequate, the possibility of preempting an Iranian nuclear attack must be given serious consideration. Preemption is striking first against an adversary when you have a reasonable belief that you are about to be attacked. A preemptive attack differs from a preventive war in terms of time frame. A preventive strike seeks to cripple an enemy that may present a threat sometime in the future – months, if not years, away. The Japanese attack on Pearl Harbor or, if it occurs, an Israeli assault against Iranian nuclear facilities, would be an example of a preventive strike. A preemptive strike, however, takes place only when violence from the other side is deemed imminent – hours or, at most, days away. The Israeli decision to strike first in June 1967, as its Arab neighbors prepared to attack, is most often cited as an example of successful preemption.⁶⁹

There is moral justification for Israel adopting a strategy of preemption against a nuclear-armed Iran. There is a strong case for preemption, particularly for countries like Israel whose margin of error is so slight. A preemptive strike is justified where there is “a manifest intent to injure, a degree of active preparation that makes that intent a positive danger, and a general situation in which waiting, or doing anything other than fighting, greatly magnifies the risk.”⁷⁰ Should Iran be readying its missiles to launch an attack on Israel, each of these conditions would be overwhelmingly met. Jewish law also argues for preemption. The “Rodef” injunction that appears in the Hebrew Bible makes it abundantly clear that if someone is coming to kill you, you are obligated to kill him first. This obligation applies not only for an individual’s protection but for the defense of the community as well. As such, stopping an Iranian strike before it could be launched is not only permitted by Jewish law, it is *required*.⁷¹

For an Israeli preemptive strike to be successful, it would need to destroy Iran’s nuclear force before the Iranians could launch their own attack. This first requires that Israel has timely intelligence that Iran is indeed readying its forces for a nuclear attack. Moving warheads from their storage bins, preparing missiles for launch, loading aircraft with nuclear bombs, and the mass of communication chatter that would accompany an Iranian decision to strike could all provide some warning. Israel

presumably would launch its own ballistic missiles, cruise missiles, and aircraft in the preemptive attack, using both nuclear and conventional weapons to destroy the Iranian nuclear weapons and launchers. A key element to a successful preemptive strike would be Israel's anti-ballistic missile and anti-aircraft capabilities. No first strike can be certain that it would destroy all of the threatening weapons. Israel, however, may have confidence that it could destroy enough of Iran's nuclear forces so that its defensive capabilities would be able to neutralize the few weapons that survived its initial onslaught.

Even under the best of conditions, however, launching a preemptive strike would be extraordinarily risky. Attacking too soon risks starting a war and drawing Iran into a conflict, when it perhaps had no hostile intentions in the first place. Attacking too late means that Israel will have failed to destroy the weapons launched to destroy it. If Israel decides to strike, it would have to be confident that it knew the locations of all of Iran's nuclear-armed weapons, including those that Tehran has attempted to conceal. Even with this knowledge, Israel would need to be sure that the Iranians would not launch their weapons upon warning of an Israeli attack. If the Iranians keep their missiles on a hair-trigger, or maintain a launch-on-warning posture, destroying their weapons on the ground would be made even more difficult. Indeed, a downside of developing preemptive capabilities is that it may move Iran to adopt such tactics, making accidental or unauthorized launches more likely. Post-attack intelligence would need to be near perfect, to know which of Iran's weapons survived the initial attack and which require additional targeting. Israel would have to have confidence that its own weapons would work flawlessly. Given the enormous uncertainties and few margins for error, it is no wonder that a preemptive attack against a nuclear-armed state has never been attempted.⁷²

Israeli leaders could also decide to attempt a disarming strike against Iran in a "bolt from the blue" attack. If the strike were carried out without any knowledge of an Iranian imminent attack, it would be a clear example of a preventive war, only with nuclear weapons. The decision to launch such an attack would likely be made in the belief that Iran would eventually use its nuclear weapons against Israel, so it would be far better to attack them early, before the number of nuclear weapons and basing modes

made a disarming first strike impossible. Once it became clear that Iran had produced a handful of nuclear weapons, Israel would act to destroy them, most likely demolishing much of Iran's nuclear infrastructure as well. While superficially appealing, this approach combines the worst shortcomings of attacking Iran before it acquired nuclear weapons and preemption of an Iranian nuclear strike. As with an attack that sought to deny Iran a nuclear weapons capability, an Israeli strike against a nuclear-armed Iran could not be certain of success, only now even a partial failure would all but guarantee a nuclear retaliatory strike against Israel. Like preemption, even a successful disarming strike would not ensure some future Iranian retaliation, only in this instance Iran could likely have the backing of the international community as it responds to what will be seen as unprovoked Israeli aggression. Initiating nuclear war against a nuclear-armed adversary will never be an easy decision. It is made all the more difficult when war is not otherwise certain, which helps explain why disarming attacks against nuclear-armed adversaries have never been undertaken.

CONCLUSION – IMPLICATIONS FOR ISRAELI POLICY

Israel is faced with an array of policy choices, none of which are attractive. Preventing Iran from acquiring nuclear weapons would be welcome, but does not seem likely. After all, regional disarmament is an utopian fantasy, diplomacy shows few signs of yielding results after ten years, economic sanctions have yet to bring Iran to its knees, and a military strike promises only to leave Iran with the ability to make more nuclear weapons later, while unleashing catastrophic consequences in its wake. Coping with a nuclear Iran is hardly better. Israel is unable to bring about a favorable regime change, and defense offers limited protection against a determined nuclear attack, while preemption or an effort to disarm the Iranians are not likely to be fully successful. Israel would be left open to a horrific Iranian retaliation. In such a dire situation, what is Israel to do?

One possible answer comes from the experience of the Cold War, when nuclear weapons transformed a situation likely to produce war to one in which peace prevailed, at least between the superpowers. In doing so,

we find that the United States and the Soviet Union did indeed consider many of the alternatives to deterrence that Israel is currently weighing as they attempted to ensure their security in the new age of nuclear-armed states. The superpowers, however, recognizing the inherent problems of these policies, either did not pursue them seriously or assigned them a peripheral role in nuclear planning.

On the prevention side, little was done by the United States to stop the Soviet Union from acquiring nuclear weapons. Once the USSR became a nuclear weapons state, the two superpowers learned to cope with another, eschewing policies that sought to replace nuclear deterrence. Substantial disarmament did not occur until after the Cold War ended.⁷³ Diplomacy eased some of the tensions of the Cold War, but it is difficult to see how it had any discernible impact on the nuclear relationship. Neither side saw regime change as a viable policy nor took any meaningful steps to bring it about.

Most important, the key policies that Israel is presumably weighing today – defense, preemption, and carrying out a disarming first strike – did not play a central role during the Cold War or its aftermath. Anti-ballistic missile defense, to be sure, was hotly debated during the Cold War, but neither side deployed more than a token force of launchers. Both the US and Soviet Union maintained plans to preempt the other, upon timely warning of an impending attack, as neither wanted to absorb a blow they knew was coming. Yet, despite the many crises that took place during the Cold War, a preemptive attack never occurred or came close to being carried out, suggesting that the plans were not as serious as portrayed.⁷⁴ Moreover, it is true that preventive war against the USSR was advocated by senior American military officials in the 1950s, to prevent further development of their nuclear weapons.⁷⁵ What is more significant, however, is that even during this time, when the Soviet nuclear arsenal was small and its ability to retaliate against American targets was weak, civilian leaders were able to ensure that no preventive attack took place.

There is a wealth of factors that can explain why the US and the Soviet Union were not more aggressive in their nuclear policies. Concerns about whether the attacks would succeed, the costs of dealing with a ravaged

loser, environmental fears such as “nuclear winter,” and the relatively muted nature of their political dispute certainly played a part. Most important by far, however, was the belief that deterrence would work. Both the United States and the Soviet Union did not wish to risk suicide by embarking on policies that would leave even a handful of nuclear weapons in an adversary laid waste by a horrendous attack.

If Iran was like most countries, Israel could follow the lessons of the US and the Soviet Union and rely on deterrence to ensure its security. Like the superpowers, it could develop plans and capabilities should deterrence fail, but they would not be the centerpiece of its nuclear efforts. Iran, however, is not like most other countries. The possibility of accidents and unauthorized launchings are reason enough to doubt the threat of Israeli retaliation would be enough to stay Iran’s hand. More disturbing still, should the Iranian regime teeter on the brink of oblivion, the same deterrence that kept the peace during the Cold War becomes frighteningly irrelevant. Assurances that we have little to worry about because Iran’s rational cost-calculating mullahs will not commit suicide, just as the leaders of the Kremlin did not do, are not persuasive. If the prospects of horrendous retaliation was not enough to deter Fidel Castro or Saddam Hussein, and would likely not work against Bashar al-Assad, why would we expect the hate-filled mullahs of Iran to be any different?

Because it cannot rely on deterrence to keep Iran from launching a nuclear strike against it, Israel needs to pursue a different path than that pursued by the Soviet Union and the United States during the Cold War. If efforts to persuade Iran not to develop nuclear weapons do not bear fruit, Israel must emphasize – and not simply give lip service to – policies that assume that Iran will not be deterred. Budgetary allocations, weapons developments, and plans for attack must reflect a country that faces an adversary for whom deterrence cannot be relied upon. This means that Israel must be prepared to launch a military strike to prevent Iran from becoming a nuclear power. If that approach is rejected, Israel must focus on ballistic missile defense, give serious thought to disarming a nascent Iranian nuclear capability, and be ready to preempt an Iranian attack, especially one that might come about in response to internal turmoil.

All the alternatives to deterrence contain serious shortcomings and risks. No doubt, that is why neither the Soviet Union nor the United States gave priority to them during the Cold War. None of these dangers, however, match the risks Israel would face if it relied on deterrence to protect itself from an Iranian nuclear attack. In the not too distant future, Israel may confront a nuclear-armed Iran whose leaders find themselves with nothing to lose and everything to destroy. Whether Israel can meet this challenge may well determine whether it continues to thrive as a state, or perishes in a hail of nuclear warheads.

NOTES

¹ See Kenneth Waltz, “Why Iran Should Get the Bomb.” *Foreign Affairs*, 91/4, July/August, 2012, pp. 2-5; Zbigniew Brzezinski, “Iran Should be Key Topic at Hearings.” *The Washington Post*, January 3, 2013 (http://articles.washingtonpost.com/2013-01-03/opinions/36210797_1_military-action-iranian-nationalism-nuclear-non-proliferation-treaty). Waltz sees an Iranian bomb as a possibly positive development, balancing Israel’s nuclear capability. Brzezinski is more nuanced; he argues that an Iranian bomb can be stopped short of a disastrous military strike, but that even if Iran gained nuclear weapons, containment could still work.

² For a brief but insightful account of how fanaticism may drive Iran’s leaders, see Mattias Kuntzel, “Ahmadinejad’s Demons.” *The New Republic*, April 24, 2006, pp. 15-23. For a spirited defense of the United States attacking Iran, see Matthew Kroenig, “Time to Attack Iran: Why a Strike Is the Least Bad Option.” *Foreign Affairs*, January/February 2012, 91/1, pp. 76-86.

³ Ethan Bronner, “Just How Far Did They Go, Those Words Against Israel.” *The New York Times*, June 11, 2006. The article makes the case that Ahmadinejad’s words were not mistranslated.

⁴ Bret Stephens, “Iran Cannot Be Contained.” *Commentary*, July/August 2010, p. 4.

⁵ “Iran state TV: Rouhani’s comments on Israel were distorted.” *Haaretz*, August 2, 2013 (<http://www.haaretz.com/news/middle-east/1.539410>). Rouhani was initially reported to have called Israel an “old wound” that should be removed. His corrected comments are not as incendiary, but are hardly reassuring.

⁶ Clifford D. May, “What Iran’s Rulers Want.” *Foundation for the Defense of Democracies*, May 24, 2012 (<http://www.defenddemocracy.org/media-hitwhat-irans-rulers-want/>).

⁷ Dudi Cohen, “Khamenei: Zionist Regime is a Cancer.” *Ynet*, March 2, 2012.

⁸ Jason Burke, “Iran was behind bomb plot against Israeli diplomats, investigators find.” *The Guardian*, June 17, 2012 (www.guardian.co.uk/world/2012/june/17/iran-bomb-plot-israel-nuclear-talks).

⁹ Voice of America News, “US Calls Iran’s Nuclear Reactor Plans ‘Deeply

Troubling.” June 5, 2013.

¹⁰ One of the best observers of Iran’s nuclear capability is David Albright. See David Albright and Christina Walrond, “Iran’s Critical Capability in 2014: Verifiably Stopping Iran from Increasing the Number and Quality of its Centrifuges.” ISIS Report, July 17, 2013.

¹¹ Ibid, pp. 1, 3, 6.

¹² *The Economist*, “Briefing: Iran’s nuclear programme.” June 22-28, 2013, p. 26.

¹³ For an account of IAEA frustrations with Iran’s lack of cooperation, see International Atomic Energy Agency, “Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran.” May 22, 2013 (<http://www.iaea.org/Publications/Documents/Board/2013/gov2013-27.pdf>).

¹⁴ David Albright and Jacqueline Shire, “Iran’s Growing Weapons Capability and Its Impact on Negotiations.” pp. 8-9 (http://www.armscontrol.org/act/2009_AlbrightShire).

¹⁵ Steven A. Hildreth, “Iran’s Ballistic Missile Programs: An Overview.” *Congressional Research Service*, February 4, 2009, p. 3 (<http://www.fas.org/sgp/crs/nuke/RS22758.pdf>).

¹⁶ IAEA, “Implementation of the NPT Safeguards Agreement.” May 22, 2013, pp. 10-11. The report details suspicious Iranian activity associated with the manufacture of nuclear warheads.

¹⁷ Ralph Sanders, “Israel and the Realities of Mutual Deterrence.” *Israel Affairs*, 15/1, January 2009, p. 82.

¹⁸ Leonard Weiss, “Israel’s Future and Iran’s Nuclear Program.” *Middle East Policy*, XVI/3, Fall 2009, p. 82.

¹⁹ “Nuclear Weapons: Who has What at a Glance.” Arms Control Association, April 2013 (<http://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat>); Ralph Sanders, “Israel and the Realities of Mutual Deterrence,” p. 87.

²⁰ For Waltz’s views on the desirability of nuclear proliferation, upon which the following discussion is based, see Kenneth N. Waltz, “The Spread of Nuclear Weapons: More May be Better.” *Adelphi Papers*, Number 171 (London: International

Institute for Strategic Studies, 1981); Scott D. Sagan and Kenneth N. Waltz (eds.), *The Spread of Nuclear Weapons: A Debate Renewed* (New York: W.W. Norton and Company, 1995); “Why Iran Should Get the Bomb.” *Foreign Affairs*, July/August 2012, pp. 2-5.

²¹ See McGeorge Bundy, “The Unimpressive Record of Atomic Diplomacy,” in Gwyn Prins (ed.), *The Choice: Nuclear Weapons vs. Security* (New York: Chatto and Windus, 1984).

²² This is Waltz’s major conclusion: “Why Iran Should Get the Bomb.” *Foreign Affairs*, July/August 2012, pp. 2-5.

²³ Mattias Kuntzel, “Ahmadinejad’s Demons.” *The New Republic*, pp. 15-23.

²⁴ Waltz, “Why Iran Should Get the Bomb,” p. 4.

²⁵ Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 2008), pp. 71-91.

²⁶ One of the best accounts of “bandwagoning” can be found in Stephen M. Walt, *The Origins of Alliances* (Ithaca: Cornell University Press, 1987), especially on pp. 147-180.

²⁷ The entire correspondence between Castro and Khrushchev was published by the Cubans in 1990. For a copy of the letters, see James G. Blight, Bruce J. Allyn, and David A. Welch, *Cuba: On the Brink: Castro, the Missile Crisis and the Soviet Collapse* (New York: Pantheon, 1993), Appendix 2 (pp. 474-491). The letter referenced above can be found on p. 481.

²⁸ For a gripping account of why Saddam invaded Kuwait, see Efraim Karsh and Inari Rautsi, *Saddam Hussein: A Political Biography* (New York: Grove Press, 1991), especially Chapter 6 (pp. 135-150).

²⁹ Paul R. Bauman, “Environmental Warfare: 1991 Persian Gulf War.” State University of New York at Oneonta (http://employees.oneonta.edu/baumanpr/geosat2/Environmental_Warfare/ENVIRONMENTAL_WARFARE.htm); A. De Souza, “The Environmental Consequences of the Persian Gulf War: 1990-1991 Remote Sensing Datasets of Kuwait and Environs.” *National Geographic Society: Committee for Research and Exploration 7* (Special Issue), 1991, p. 48.

³⁰ Sharad S. Chauhan, *War on Iraq* (New Delhi: A.P.H. Publishing Company, 2003)

pp, 119-120.

³¹ One of the principal exponents of the “nuclear winter” threat is Carl Sagan. See Carl Sagan, “Nuclear War and Climactic Catastrophe: Some Policy Implications.” *Foreign Affairs*, 62/2, Winter 1983/84, pp. 257-292. Sagan went on the television show *Nightline* to argue that Saddam’s environmental vandalism could produce a “nuclear winter” like effect.

³² Peter Baker, Mark Landler, David E. Sanger and Anne Barnard, “Off-the Cuff Obama Line Put U.S. in Bind on Syria.” *The New York Times*, May 4, 2013.

³³ Mark Mazzetti, Michael R. Gordon and Mark Landler, “U.S. Is Said to Plan Weapons to Syrian Rebels.” *The New York Times*, June 13, 2013.

³⁴ Hamida Ghafour, “Syrian President Bashar Assad: Will he fight or flee?” *TheStar*, December 8, 2012(http://www.thestar.com/news/world/2012/12/08/syrian_president_bashar_assad_will_he_fight_or_flee.html).

³⁵ Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: McGraw-Hill, 2006).

³⁶ Mehran Kamrava, “Iranian National Security Debates: Functionalism and Lost Opportunities,” *Middle East Policy*, XIV/2, Summer 2007, p. 84.

³⁷ Anthony H. Cordesman and Adam C. Sietz, “Iranian Weapons of Mass Destruction: Doctrine, Policy and Command.” CSIS Working Paper, January 12, 2009, p. 8 ([csis.org/files/media/csis/pubs/090112_iran_wmd_policy.pdf](http://www.csis.org/files/media/csis/pubs/090112_iran_wmd_policy.pdf)).

³⁸ *Ibid*, p. 4.

³⁹ Peter D. Feaver, “Command and Control in Emerging Nuclear Nations.” *International Security*, 17/3, Winter 1992/93, pp. 160-187. What Feaver describes is similar to what has been called the “usability paradox.” See Albert Carnesale, Paul Doty, Stanley Hoffmann, Samuel P. Huntington, Joseph S. Nye, Jr., and Scott D. Sagan, *Living with Nuclear Weapons* (Cambridge MA: Harvard University Press, 1983), pp. 34-35.

⁴⁰ For a taste of what the United States requires to vet those involved in nuclear weapons, see Department of Defense, “Nuclear Weapons Personnel Reliability Program (PRP) Regulation,” June 2006 (<http://www.dtic.mil/whs/directives/corres/pdf/521042r.pdf>).

- ⁴¹ Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton: Princeton University Press), especially pp. 137-139.
- ⁴² The role of accidents is explored by Scott Sagan and Kenneth Waltz, *The Spread of Nuclear Weapons: A Debate Renewed*, pp. 75-80, 96-99.
- ⁴³ Steven E. Miller, "Assistance to Newly Proliferating Nations," in Robert D. Blackwill and Albert Carnesale (eds.), *New Nuclear Nations: Consequences for U.S. Policy* (New York: Council on Foreign Relations, 1993), p. 116.
- ⁴⁴ Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca: Cornell University Press, 1991), p. 2.
- ⁴⁵ Theodore C. Sorenson, *Kennedy* (London: Hobben and Stoughton, 1965), p. 705.
- ⁴⁶ For a similar argument, see Barry Rubin's remarks in Barry Posen, Barry Rubin, James M. Lindsay and Ray Takeyh, "The Containment Conundrum." *Foreign Affairs*, 89/4, July/August 2010, p. 164.
- ⁴⁷ HRH Turki Al Faisal, "A Political Plan for a Weapons of Mass Destruction Free Zone (WMDFZ) in the Middle East." Belfer Center for Science and International Affairs, 2013.
- ⁴⁸ Implementation of the NPT Safeguards Agreement." IAEA Report, May 22, 2013.
- ⁴⁹ On difficulties in negotiating with Iran, see Ellen Barry and Rick Gladstone, "Setback on Iran's Nuclear Program in a 'Gulf of Mistrust.'" *The New York Times*, June 19, 2012 (www.nytimes.com/2012/06/20/world/middleeast/ense-iran-nuclear-talks-resume-in-moscow.html?).
- ⁵⁰ The view that the best determinant of leadership behavior in the developing world is their perception of what must be done to ensure their survival can be found in Steven R. David, "Explaining Third World Alignment." *World Politics*, 43/2, January 1991, especially pp. 235-238.
- ⁵¹ In this respect, Iran is very different from North Korea, another nuclear weapons proliferator.
- ⁵² Thomas Erdbrink and Rick Gladstone, "Iran's Next President Faults Ahmadinejad on Economy." *The New York Times*, July 15, 2013.
- ⁵³ Steve H. Hanke and Dr. Garbis Iradian, "Now is the Not the Time to Step Up

the Economic War against Iran.” *CATO Commentary*, July 22, 2013 (www.cato.org/publications/commentary/now-not-tme-step-economic-war-against-iran).

⁵⁴ Roger Howard, *Operation Damocles: Israel’s Secret War Against Hitler’s Scientists, 1951-1967* (New York, Pegasus Press, 2013).

⁵⁵ Alan Cowell and Rick Gladstone, “Iran Reports Killing Of Nuclear Scientist in ‘Terrorist Blast,’” *The New York Times*, January 11, 2012. See also Dan Raviv and Yossi Melman, *Spies Against Armageddon: Inside Israel’s Secret Wars*, (Sea Cliff, New York: Levant Books, 2012).

⁵⁶ David E. Sanger, “Obama Order Sped Up Wave of Cyberattacks Against Iran.” *The New York Times*, June 1, 2012. See also David E. Sanger, *Confront and Conceal: Obama’s Secret Wars and Surprising Use of American Power* (New York: Crown, 2013).

⁵⁷ David Albright and Christina Walrond, “Iran’s Critical Capability in 2014: Verifiably Stopping Iran from Increasing the Number and Quality of its Centrifuges,” pp. 2-3, 7.

⁵⁸ See Whitney Raas and Austin Long, “Osirak Redux? Assessing Israeli Capabilities to Destroy Iranian Nuclear Capabilities.” *International Security*, 31/4, pp. 7-33; Efraim Inbar, “The Need to Block a Nuclear Iran.” *The Middle East Review of International Affairs*, 10/2, 2006. See also Matthew Kroenig, “Time to Attack Iran: Why a Strike Is the Least Bad Option.” *Foreign Affairs*, pp. 76-86. Kroenig focuses on an American, not an Israeli, strike.

⁵⁹ Gabriel Schonfeld, “Darkness at the End of the Tunnel: Penetrating the Iranian Underground.” *The Weekly Standard*, June 30, 2008.

⁶⁰ Albright and Walrond, “Iran’s Critical Capability in 2014,” p. 1.

⁶¹ For a summary of the two reports, see, “Briefing: Iran’s nuclear programme.” *The Economist*, June 22, 2013, pp. 25-26.

⁶² Greg Jones, “Out of the Spotlight: Iran’s Rate of Enriched Uranium Production Continues to Increase.” Non-Proliferation Policy Education Center, June 2011 (www.npolicy.org/Article_file/iran_enrichment_update_greg_jones.pdf).

⁶³ Albright and Walrond, “Iran’s Critical Capability in 2014,” especially pp. 1, 3, 6.

⁶⁴ For a similar analysis, see “Briefing: Iran’s nuclear programme,” p. 26.

⁶⁵ For an account of outside backing of coups, especially in its heyday of the 1950s, see Steven R. David, *Third World Coups d’Etat and International Security* (Baltimore: Johns Hopkins University Press, 1987).

⁶⁶ Ian Siperco, “Shield of David: The Promise of Israeli National Missile Defense.” *Middle East Policy*, XVII/2, Summer 2010, pp. 131, 132.

⁶⁷ Uzi Rubin, “The Origins of Israel’s Arrow System,” *Jerusalem Issue Brief*, 2/9, Jerusalem Center for Public Affairs, March 5, 2003; Yaakov Lappin, “Israel Stepping Up Production of Arrow 3.” *The Jerusalem Post*, June 5, 2013 (www.jpost.com/defense/israel-stepping-up-production-of-arrow-3). Israel also has defensive systems such as the Iron Dome designed to counter shorter range missiles, but since those missiles are not able to carry nuclear weapons, they are not included in this discussion.

⁶⁸ William J. Broad, “Weapons Experts Raise Doubts About Israel’s Anti-Missile System.” *The New York Times*, March 20, 2013; Reuven Pedatzur, “Even if the Hetz [Arrow] Succeeds.” *Haaretz*, July 28, 2009 (www.haaretz.com/print.edition/opinion/even-if-the-hetz-succeeds-1.280853).

⁶⁹ For an illuminating discussion explaining why preemptive wars can be justified while preventive wars cannot, see Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations* (New York: Basic Books, 1977), pp. 74-85.

⁷⁰ *Ibid*, p. 81.

⁷¹ The “Rodef” injunction can be found in the Hebrew Bible, Shemot (Exodus) 22:1.

⁷² Even conventional preemption is very rare. See Dan Reiter, “Exploding the Powder Keg Myth: Preemptive Wars Almost Never Happen.” *International Security*, 20/2, Fall 1995, pp. 5-34.

⁷³ For a good overview of arms control throughout the Cold War and beyond, see Avis Bohlen, “The Rise and Fall of Arms Control.” *Survival*, 45/3, Autumn 2003, pp. 7-34.

⁷⁴ On US plans for preemption, see Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton, Princeton University Press, 1989), pp. 21-24.

⁷⁵ Scott D. Sagan, “More Will be Worse,” in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate*, pp. 57-61.

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