

AMERICAN MILITARY UNIVERSITY

THE IRANIAN NUCLEAR PROGRAM AND THE CHANCE OF AN ISREALI ATTACK.

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“Anybody who recognizes Israel will burn in the fire of the Islamic nation's fury,”

- *Dr. Mahoud Ahmadinejad, President of the Islamic Republic of Iran.*

“Since the dawn of the nuclear age, we have not had a fanatic regime that might put its zealotry above its self-interest. People say that they’ll behave like any other nuclear power. Can you take the risk? Can you assume that?”

- *Benjamin Netanyahu, Prime Minister of Israel.*

Chapter I

Introduction

Since the advent of the nuclear age in the 1940’s the fear of nuclear warfare has been an ever present fear. The fear has become a one of the many threads that forms the national fabric of the United States. This thread of fear has like many things, transformed over time, from a subject that most every American was concerned about to one that most every American has an opinion about, but the fear has dulled.

The dulling of the fear comes from many things including reports of saber rattling from North Korea, a nuclear power, are a constant. Another constant, albeit one that occurs more infrequently than North Korea’s saber rattling is the constant tension between Pakistan and India, two nuclear powers that have frequently engaged in military actions against one another. Aside from the aforementioned nations whom always seem to be on the brink of war there is still the nuclear arms that are reside in many of the Former States of the Soviet Union, Russia’s nuclear arsenal and China’s nuclear arsenal to name just a few nuclear states. With all these nuclear powers the fear has dulled to the point where many are not concerned about Iran, a country which currently does not have a nuclear weapon.

Fear breeds vigilance and to a large extent the lack of fear over Iran getting nuclear weapons has breed complacency. While the complacency maybe the status quo in American, it is not the status quo in Israel. Israel’s fear is not dull like the fear of Americans when it comes to a nuclear armed Iran.

This could be, as previously alluded to, because when America ushered in the nuclear age, Israel was not even a state, when the Cuba missile crisis occurred Israel was still fighting a conventional war with its neighbors. Israel has not had the over exposure to the nuclear world like America has. America has also not had the threats from its neighbors that Israel has had and continues to have. Also, unlike America, Israel is not known for standing by as state that wishes Israel ill tries to attain nuclear arms. In fact in 1981 Israeli forces bombed an Iraqi nuclear facility in near Baghdad and in 2007 Israeli forces attacked a nuclear facility in Syria.

Israel attacked the nuclear facilities in Iraq and Syria because Israel believed that both nations were trying to produce nuclear weapons. The intent of the Israelis was not to destroy the nuclear programs of Syria and Iraq, but to damage them. The damage was intended to set those programs back and in-turn provides the Israelis with a feeling of safety from nuclear aggression from countries openly hostile toward the Jewish state. The attacks were also intended to send a message to any other states including Iran, who are openly hostile toward Israel, which if they should attempt to become a nuclear power Israel would be compelled to prevent their membership into the club of nuclear states.

While the attacks, in particular the strike on Syria's al-Kibar nuclear facility in 2007, were meant to send a message, it appears that Iran has wholly disregarded that message. In fact Iran has continuously increased their production of refined nuclear materials. Along with its continued pursuit of refined nuclear material Iran has also built numerous facilities to provide redundancy if one facility is damaged or destroyed. The facilities have also been hardened to make them more difficult to damage or destroy. Couple the increase in numbers of targets and the fact that those targets have apparently been hardened with the increased need for logistical support and where once an easy answer stood now stands a conundrum.

The impact of an attack by Israeli forces on Iranian nuclear facilities possesses many problems for Israel, but also the world in general and the United States specifically. This paper is a predicative

analysis of potential futures, specifically revolving around whether or not Israel will attempt a preemptive strike (meaning a strike prior to Iran achieving a nuclear weapon) on Iran. Furthermore it is necessary to note that while there are numerous actors that would be directly affected it is simply not practical from a time and length of document standpoint to discuss every potential actor. It is also of little value to discuss an enormous list of actors, many of whom have little influence over whether or not Israel attacks Iran or whether or not Iran continues their nuclear program unabated. To this end this analysis is limited to the following actors: Israel, Kingdom of Saudi Arabia, the Islamic Republic of Iran and The United States of America.

Due to the ramifications of an attack on Iranian nuclear facilities by Israeli forces it is not only necessary, but critical that policy makers and strategists within the United States understand the potential futures in which such a strike would or would not be likely and some of the factors that affect the probability of such a strike occurring. Coupled with the aforementioned subject is the critical factor of illustrating the various actors in the scenario add to the overall outcome of the scenario. By adding these important factors into the overall analysis of the various potential futures will give policy makers further insight into what actions can be taken to influence particular actors toward a particular stance thereby enhancing the potential for the desired future to actually occur. This analysis intends to present several potential futures based on predictive analysis methods.

Chapter II

Review of Supporting Literature

Many questions surround the potential threat of an Israeli airstrike on Iranian nuclear facilities; including: Will Iran stop its nuclear program? Or maybe just open their program up and pursue a path only to nuclear power and forgo any type of dual use technology. In the potential future will the United States back Israel? Will Saudi Arabia support an Israeli attack on Iranian nuclear facilities to ensure that they remain the dominant power within the region or let Iran become a nuclear power and become the dominant power with the region? The overarching question then is: Will Israel conduct a preemptive strike on Iranian nuclear facilities and what will influence this decision by the Israelis? In order to effectively present various potential futures based on various actions by the actors evaluated for this particular analysis a foundation must be established.

This foundation will be established by using various open source materials. The open source materials being used have been accessed from a number of different sources including, but not limited to the RAND Corporation and the Strategic Studies Institute. Every effort has been made to ensure that the materials present a broad based opinion in order to limit biases toward specific outcomes thereby potentially invalidating one or more particular scenarios.

The first of the pieces of literature is titled *Nuclear Iran: Not Inevitable* by David Albright. This particular piece of literature while containing dated information (technical information is from 2008 and earlier) also contains still valid observations. Observations such as the following:

Recent discussions of attacking Iran's nuclear facilities militarily sometimes liken the destruction of Iran's uranium enrichment program to Israel's surgical strikes on Syria's clandestine nuclear reactor in September 2007, or Iraq's Osirak reactor in June 1981. In each case a single attack with fewer than ten aircraft destroyed a key facility that could have produced plutonium for nuclear weapons, setting back that country's ability to produce a bomb by several years. In the case of Iran, the analogy goes, an attack on just two facilities, the Natanz enrichment plants and the Esfahan uranium conversion facility, would likewise significantly delay Iran's ability to produce weapon-grade uranium for nuclear weapons. This analogy is grossly misleading. It neglects the important differences between a gas centrifuge uranium enrichment program and a

reactor-based program, and fails to account for the dispersed, relatively advanced, and hardened nature of Iran's gas centrifuge facilities. It also ignores the years Iran has had to acquire centrifuge equipment abroad, often illicitly, allowing it to create reserve stocks of critical equipment.¹

Observations such as the preceding one build a solid base of understanding into one of the critical aspects that must be considered by Israel. That aspect is the logistical requirements to ensure success of the attack.

The next piece of literature is by Anthony H. Cordesman and is titled *Iran, Israel and Nuclear War*. Much like *Nuclear Iran: Not Inevitable* by David Albright, the information is dated, but the points made in the publication are still valid. Those points specifically revolve around various scenarios based on a nuclear exchange between Israel and Iran. Even though this paper is an analysis of potential futures specifically revolving around if Israel will attempt a military strike on Iranian nuclear facilities or not the scenarios provided in *Iran, Israel and Nuclear War* also include subjects such as diplomacy and dialog among other.

An example is illustrated in the following excerpt which is titled "Military Options for Dealing with Iranian Proliferation":

Diplomacy and Dialog: Efforts to persuade Iran not to proliferate by convincing Iran that it does not face a sufficient threat to proliferate and cannot make major gains in power or security by doing so.
Sanctions: Controls and measures designed to put economic pressure on Iran, limit its access to technology, and/or limit its access to arms.
Incentives: Options that give Iran security guarantees, economic and trade advantages.
Regime Change: Efforts to change the regime and create one that will not proliferate.
Defense: A mix of measures such as missile defense, air defense, counterterrorism, counter smuggling/covert operations capability, civil defense, and passive defense that would both deter Iran and protect against any use it made of its WMD capabilities.²

Again, like *Nuclear Iran: Not Inevitable* by David Albright, the material dated, but as illustrated it offers valid insights into the possible courses of action available for not only Israel, but also the United

¹ Albright, David, et al. 2009. *Nuclear Iran: Not Inevitable*. (Internet. Available from http://www.isisnucleariran.org/assets/pdf/Iran_paper_final_2.pdf; accessed June 2010), p. 23.

² Cordesman, Anthony H. 2007. *Iran, Israel, and Nuclear War*. (Internet. Available from http://csis.org/files/media/isis/pubs/071119_iran.is&nuclearwar.pdf; accessed June 2010) p. 17.

States and Iran. One of the fringe benefits from using this document comes from the ability to see how the various “courses of action” for the various actors track over time, giving the researcher and analyst somewhat of a background on the issue at hand.

The next work is also authored by Anthony H. Cordesman and is titled *The Israeli “Nuclear Reactor Strike” and Syrian Weapons of Mass Destruction: A Background Analysis*. This piece of literature helps to bring a historical view of how Israel has conducted operation against nuclear installations in the past. As the title states, the historic event is the 2007 airstrike against Syri’s nuclear reactor. In addition to providing a historical backdrop and information on how Israel has already conducted military strikes against a nuclear facility this piece provides information on the issue of targeting such facilities. This work provides further information for the analyst and policy maker to take into consideration when viewing the various potential future scenarios. It also provides further information on the type of logistics that would be required to succeed in an attack on Iranian nuclear facilities.

In 2010 Chuck Freilich authored the article “The Armageddon Scenario: Israel and the Threat of Nuclear Terrorism.” While this article appears, on the surface to only discuss the threat of nuclear terrorism against Israel it discusses how Israel can deal with nuclear devices via policy options. This is a point that is crucial to consider given that the nuclear threat to Israel could theoretically come from ballistic missiles or a device that is spirited into Israel by one of the terrorist groups supported by Iran, such as Hezbollah.

In the book *The Shia Revival: How Conflicts within Islam Will Shape the Future*, author Vali Nasr illustrates the various nuances and differences that exist within the region between the two major sects of Islam... the Shia and the Sunni. Being that Iran is a Shia state and not just any Shia state, but a fundamentalist Shia state it is very important to understand how the differences in religion play out when dealing with countries such as Saudi Arabia, which is predominantly Sunni. While this analysis

does not include other Muslim states as concerned actors, the differences between the religious sects is important to logistical decisions that Israel would have to make if they should decide to attack Iranian nuclear facilities.

In *Iran's Nuclear Program: Recent Developments* author Sharon Squassoni provides more history on Iran's purported attempt at ascension in the club of nuclear powers. An example of the information provided is as follows:

International Atomic Energy Agency (IAEA) inspections since 2003 have revealed two decades' worth of undeclared nuclear activities in Iran, including uranium enrichment and plutonium separation efforts. Iran agreed in 2003 to suspend sensitive activities in negotiations with Germany, France, and the UK (EU-3), which broke down in August 2005.³

As with previous materials this too gives the analyst and the policy maker insight into the history as it concerns Iran and their progression. This piece also helps to highlight that the issue has been a long ranging one as opposed to one that has recently developed. This helps eliminate a potential bias in the analyst, which can easily be developed by watching news programs which often act like a particular subject is new.

Abdullah Toukan and Anthony H. Cordesman go into great detail in *Iran, Israel and the Effects of a Nuclear Conflict in the Middle East* what capabilities exist among the various actors involved or directly concerned with the Iranian nuclear program and the potential of a military strike on that program by Israel. Some of the information provided is illustrated by the following except, "Israel launched a Jericho II missile across the Mediterranean that landed about 250 miles north of Benghazi, Libya."⁴ This information is of great significance in that it helps to illustrate the various options Israel has when it comes to a military strike as opposed to just assuming that Israel will do as it has done in the past and conduct an airstrike.

³ Squassoni, Sharon. 2006. *Iran's Nuclear Program: Recent Developments*. (Internet. Available from <http://www.fas.org/sgp/crs/nuke/RS21592.pdf>; accessed June 2010), p. 1.

⁴ Toukan, Abdullah & Anthony Cordesman. 2009. *Iran, Israel and the Effects of a Nuclear Conflict in the Middle East*. (Internet. Available from http://csis.org/files/publication/090601_Iran_Israel_EffectsofNuclearWar_06_01_09.pdf; accessed June 2010), p. 56.

In the various scenarios involving Israel's reaction to a nuclear armed Iran or an Iran who is close to becoming armed with nuclear weapons it critical to understand Israel's potential options. Equally important is the knowledge of the options that the United States possesses. James Phillips article "An Israeli Preventative Attack on Iran's Nuclear Sites: Implications for the U.S." helps to provide a more solid foundation for the various predictive futures in this analysis. The information in "An Israeli Preventative Attack on Iran's Nuclear Sites: Implications for the U.S." is also more current than much of the previously discussed information.

This more current information is illustrated by the following excerpt: "Last year, Israeli officials leaked the details of a secret Israeli air attack against a convoy transporting Iran-supplied arms in Sudan that was headed for Egypt's Sinai Peninsula to be smuggled through tunnels to Hamas."⁵ The preceding excerpt provides the analyst with an example of how Israel is attempting to slow Iran's program, but "... the clock is ticking not only for Iran's nuclear program, but for Israel's preventive option."⁶

Thus far the majority of the sources have been largely devoted to information on the Israelis, to this end Joshua Teitelbaum's *What Iranian Leaders Really Say About Doing Away with Israel* provides insight into the Iranian perspective. Joshua Teitelbaum does this by providing analysis into statements made by Iranian President, Dr. Ahmadinejad. The following excerpt is an example of the analysis provided:

A contextual examination of these statements demonstrates beyond a doubt that when Iranian leaders use the euphemism "Zionist regime" or "the Jerusalem-occupying regime," they are most definitely referring to the State of Israel and not to the present regime. Iranian leaders are simply following the time-worn practice in the Arab world of referring to the "Zionist regime" in an attempt to avoid dignifying Israel by recognizing its name.⁷

⁵ Phillips, James. 2010. "An Israeli Preventative Attack on Iran's Nuclear Sites: Implications for the U.S." *Backgrounder*, No. 2361, 15 January 2010. (Internet. Available from <http://www.heritage.org/Research/Reports/2010/01/An-Israeli-Preventive-Attack-on-Iran-Nuclear-Sites-Implications-for-the-US>, accessed June 2010), p4.

⁶ Ibid.

⁷ Teitelbaum, Joshua. 2008. *What Iranian Leaders Really Say About Doing Away with Israel*. (Internet. Available from <http://www.jcpa.org/text/ahmadinejad2-words.pdf>, accessed July 2010), p. 17.

The preceding excerpt is part of the analysis on President Ahmadinejad's statement at the World without Zionism conference held in Tehran in 2005. To put the analysis into context one must see the statement itself which is, "Our dear Imam [Khomeini] ordered that this Jerusalem occupying regime [Israel] must be erased from the page of time. This was a very wise statement."⁸ By knowing the preceding information the analyst gains more appreciation for the various future scenarios and how they may evolve. It also helps, as previously mentioned, to balance out the information on Israel.

As previously mentioned a critical factor in an Israeli strike on Iranian nuclear facilities revolves around logistics. *Contingency Planning Memorandum No. 5: An Israeli Strike on Iran* by Steven Simon further enhances and reinforces the information presented in the other materials used for this analysis. Steven Simon provides critical information such as, "...F-16 and F-15 aircraft, equipped with conformal fuel tanks and refueled with 707-based and KC-130 tankers toward the beginning and end of their flight profiles, have the range to reach the target set, deliver their payloads in the face of Iranian air defenses, and return to their bases."⁹

In *An Overview of Nuclear Facilities in Iran, Israel and Turkey* Greenpeace International provide further information on the number and types of Iran's nuclear facilities. By using a piece of literature written by an environmental organization the information from the other pieces is further cemented by offering information from a source outside the normal defense industrial complex. Like many documents the information is dated, but still relevant.

Leonard Weiss in his article "Israel's Future and Iran's Nuclear Program," written of Middle East Policy Council provides some interesting insight into Iran and the intent of Iran should they gain nuclear weapons. Leonard Weiss's opinion balances other opinion pieces including *What Iranian Leaders Really Say About Doing Away with Israel*. This counterinterview is evidenced in the following:

⁸ Ibid.

⁹ Simon, Steven. 2009. *Contingency Planning Memorandum No. 5: An Israeli Strike on Iran*. (Internet. Available from http://www.cfr.org/publication/20637/israeli_strike_on_iran.html#, accessed June 2010), p. 3.

The ruling clerics did not seek power in order to see Iran destroyed; they see themselves as stewards of a revolution that they believe will bring Shia Islam to its rightful place of world leadership. They are not about to lose it in a nuclear holocaust. In the absence of military aggression against Iran threatening the power of the clerics, they have no theological or other motivation to start a war that could trigger Iran's nuclear destruction. Thus, even if Iran were to possess the bomb, the Iranians would be deterred from using it on another nuclear-weapons state.¹⁰

By using a variety of source material including "Israel's Future and Iran's Nuclear Program," this paper is attempting to ensure that every effort is made to limit biases and their effects on the overall analysis.

The last piece of literature in the review, although not the last piece of reference material, is *Osirak Redux? Assessing Israeli Capabilities to Destroy Iranian Nuclear Facilities?* The piece is authored by Whitney Raas and Austin Long and was published in 2006. Along with other publications, this one provides the analyst and policy maker with information on the Iranian view of nuclear weapons as observed in the following, "Iranian officials have claimed that by 2020, the growing population of the country and the expected global demand for oil will require the extensive use of nuclear power to meet the nation's growing energy needs while still enabling significant petroleum exports."¹¹ The piece also provides further information on the Israeli strike on the Osirak strike.

All the references presented in this chapter help in the development of the various potential future scenarios. Those scenarios in-turn provide the basis for the analysis and the different potential futures that will be laid out in depth in the coming pages. In the end these various references are the foundation all the analysis is built upon and therefore the accuracy of the analysis is largely built on the selection of reference materials. To this end care has been taken in the selection of the materials to ensure that biases are minimized and accuracy is increased.

¹⁰ Weiss, Leonard. 2009. "Israel's Future and Iran's Nuclear Program." *Middle East Policy Council*, Vol XVI, Fall 2009, No.3. (Internet. Available from http://www.mepc.org/journal_vol16/3Weiss.asp, accessed July 2010), p. 83.

¹¹ Raas, Whitney & Austin Long. 2006. *Osirak Redux? Assessing Israeli Capabilities to Destroy Iranian Nuclear Facilities?* (Internet. Available from http://belfercenter.ksg.harvard.edu/files/is3104_pp007-033_raas_long.pdf, accessed June 2010), p. 11.

Chapter III

Actors and Perceptions

At this point it is necessary to describe actors and their perceptions in order to develop potential future scenarios that answer the question: With the threat of a preemptive strike on Iranian nuclear facilities what path will the Iranian's choose and based on that choice will Israel actually conduct a strike on Iran and if so will the US support Israel? To this end it would be negligent to dismiss some of the historical relationships between the various actors and in particular Israel and Iran. So in detailing actors perceptions there has been significant attention given to how Iran views Israel and what Israel's perception is of the potential Iranian threat.

Iran

The first of the actors to be discussed will be Iran. In this story Iran is the antagonist, although this is an inadequate description of the complex relationship between the various actors and scenarios. Furthermore it is also to be noted that even by merely describing Iran as the antagonist of this story it shows a bias and potentially furthers biases already in place. To this end, this analysis intends to show how Iran fits into the antagonist description.

There is an Old Persian proverb; He who wants a rose must respect the thorn. That proverb aptly describes why Iran is willing to continue with its pursuit of nuclear technologies. To that end Iran views that it has a right as a nation to pursue nuclear technology. The issue with nuclear technology is that is a road that rarely halts with simple energy production or the pursuit of medical research. Iran's actions and their stated intentions seem, at least on the surface to be divergent. These confusing signals make other nations, in particular Israel apprehensive as to which direction that the Islamic Republic of Iran is truly headed.

Again, taken at face value it would seem that Iran does not want nuclear weapons. An example of this is Ayatollah Ali Khamenei, the leader of the Islamic Republic of Iran issued a fatwa exclaiming

that the production, stockpiling, and use of nuclear weapons are forbidden under Islam and that the Islamic Republic of Iran shall never acquire these weapons; a position that was reiterated by President Mahmud Ahmadinejad, in his inaugural address.¹² While such statements have been consistent, the actions of Iran appear to be contrary.

Iran has often stated that it is only using nuclear power in order to augment its own current power production since the demand has increased and continues to increase. But most modern nuclear power plants use LEU (low enriched uranium) not HEU (highly enriched uranium) and this is wherein lies the contradiction. Iran is quickly making progress toward having a significant ability to produce its own HEU. But, Iran has an answer for why it is trying to produce its own HEU and the reason is for research and in particular medical research.¹³

Iran has claimed that it needs to enrich its own uranium for medical research. It must be mentioned at this point that is isn't the uranium that is used for research but rather Molybdenum 99 (99Mo) which is available from a number of resources.¹⁴ Some of these resources are: Canada (which produces 40% of the world's needs), the Netherlands, Brussels, France, Germany, and South Africa.¹⁵ The issue with 99Mo is that it is used for storing and transporting Technetium-99m.¹⁶ Technetium-99m (99mTc) has a 6 hour half-life. This means that much of the 99mTc would have degraded by the time it reaches Iran for use in research. This validates Iran's stance that it would be more practical for the Iranian's to have a facility for the production of HEU to make 99Mo and as a result have 99mTc. To further illustrate Iran's stance one only needs to look at Ayatollah Ali Khamenei who has repeatedly

¹² Mehr News Agency. 2005. "Iran's Statement at IAEA's Emergency Meeting." *Mehr News Agency*, 10 August 2005. (Internet. Available from <http://www.fas.org/nuke/guide/iran/nuke/mehr080905.html>, accessed July 2010), NP.

¹³ LEU consist of uranium which has a concentration of <20% U-235 isotopes and HEU consists of Uranium with >20% concentration of U-235 isotopes HEU is used for nuclear weapons, research reactors, naval reactors and medical research.

¹⁴ Fordon, Geoffrey, Dr. 2009. "A Primer on Iran's Medical Reactor Plans." *Arms Control Wonk*. (Internet. Available from <http://forden.armscontrolwonk.com/archive/2492/a-primer-on-irans-medical-reactor>, accessed July 2010), NP.

¹⁵ Ibid.

¹⁶ Ibid.

stated that "...the domestic economic benefits of retaining the full enrichment cycle, seeing in it a solution for Iran's 'scientific retardation' and a sine qua non for Iran's political sovereignty."¹⁷

Again, it appears, on the surface that Iran is truthful when its leaders have stated that it has no desire for the acquisition of nuclear weapons. It is also worth mentioning that having nuclear weapons is not an indicator of hostility. Furthermore, as previously seen there is a practical reason for Iran to want HEU for medical research. Another point of interest and that also carries relevance is the point that most Iranians believe that Iran has the right to unrestrictedly seek modern technologies; those same Iranians are not so willing to pay the price for program.¹⁸ That price consists of a continuation in terms of sanctions, loss of confidence in investment, capital flight, and estrangement from the international community.¹⁹

But to determine more completely determine Iran's views on acquisitioning nuclear weapons requires one to delve into Iran's view toward Israel. Iran's view of Israel and the USA were illustrated in 2008 during a military parade in which President Ahmadinejad referred to the USA as the "Great Satan" and Israel as the "Little Satan."²⁰ Continuing on President Ahmadinejad stated that "... the region and the world are prepared for great changes and for being cleansed of Satanic enemies."²¹ While it is not unheard of for a nation to call another nation evil (e.g. President Bush calling Iran a member of the "Axis of Evil") it is unusual for a nation to openly describe and or call for the dissolution of another country, especially in the terms that President Ahmadinejad regularly uses.

President Ahmadinejad's statement in 2008 follows a long line of statements, one of which was made in 2006. In 2006 President Ahmadinejad made a statement in which he compared Israel to a germ whose elimination was both possible and imminent.²² He also made the statement that Israel was "...

¹⁷ Green, Jerrold D. et al. 2009. *Understanding Iran*. (Santa Monica: RAND Corporation), p 9.

¹⁸ Ibid, p XIV.

¹⁹ Ibid.

²⁰ Teitelbaum, Joshua. 2008. *What Iranian Leaders Really Say About Doing Away with Israel*. p. 10.

²¹ Ibid.

²² Ibid, p. 9.

heading toward annihilation.”²³ He further added to the previous statement by comparing Israel to “... a dried, rotten tree that will collapse with a single storm.”²⁴ The preceding statements, while made by only one man, a man who is not ultimately in charge of Iran (a position which is held by the Grand Ayatollah), are also not made without backing.

Prior to President Ahmadinejad, Iranian regimes have used such rhetoric, which while often explained away, often left little doubt the meaning behind the phraseology. Iranian regimes have described a process by which Israel collapses as a result of a military strike vice a collapse like the Soviet Union experienced.²⁵ Further evidence that the destruction of Israel is a long held tenet of Iran and Iranian regimes is found in banners located throughout Iran. Banners that proclaim, “Israel should be wiped off the face of the world.”²⁶

In a Friday sermon former Iranian President Rafsanjani stated that, “If one day, a very important day of course, the Islamic world will also be equipped with the weapons available to Israel now, the imperialist strategy will reach an impasse, because the employment of even one atomic bomb inside Israel will wipe it off the face of the earth, but would only do damage to the Islamic world.”²⁷ This statement is contrary to the fatwa issued by Ayatollah Ali Khamenei, but is consistent with the theme of destroying Israel by any means necessary.

While Iran’s true intentions on whether or not to procure nuclear weapons remain clouded, the fact remains that Iran is openly hostile to Israel. Furthermore the regime within Iran wishes to see Israel “... wiped off the face of the world.”²⁸ This rhetoric lends great credence to the perspective that Iran believes that it has the right to become a nuclear armed nation. It also appears that Iran believes that there is a possibility there is a potential that Israel will attack and is resolved that it will go to war with

²³ Ibid, p. 10.

²⁴ Ibid.

²⁵ Ibid, p. 13.

²⁶ Ibid, p. 18.

²⁷ Ibid, p. 13.

²⁸ Ibid.

Israel. The caveat for the preceding is even though the leadership in Iran is willing to go to war with Israel if the general populace is not supportive of such actions then the Iranian regime could face widespread civil disobedience at the very least. The Iranian government could also face the serious threat of a populist uprising to overthrow the Islamic regime. So even though the Iranian government may welcome warfare with Israel a populous against war could dissuade the government from actually engaging in open warfare and even prevent further development of nuclear technologies.

Israel

While the intentions of the Iranians are subject to much conjecture the perception and possible of the Israelis are fairly open and discernable. Israel views Iran as a significant threat without nuclear weapons. With nuclear weapons Iran becomes enough of a threat that the Israelis would seriously consider doing a preemptive strike on Iranian nuclear facilities.

Israel's attitude toward striking Iranian nuclear facilities is aptly described in the statement made by Lt. General Dan Halutz, the Chief of Staff of the Israeli Defense Forces in 2006. When asked how far Israel would go to stop the Iranian nuclear program Lt. General Dan Halutz replied, "Two thousand kilometers."²⁹ This falls in line with numerous signals sent by Israel that they would be willing to attack Iranian nuclear installations.

Although on the surface it may seem as if Israel would have no compunction in attacking Iran, especially given Israel's history of attacking nuclear facilities in the past. The real issue is not would they attack, but rather the Israeli perception of their ability to carry out a successful attack. Furthermore, the Israeli perception of the results of conducting an attack on Iranian facilities whether the attack succeeds or not.

²⁹ Phillips, James. 2010. "An Israeli Preventative Attack on Iran's Nuclear Sites: Implications for the U.S." *Backgrounder*, No. 2361, 15 January 2010. (Internet. Available from <http://www.heritage.org/Research/Reports/2010/01/An-Israeli-Preventive-Attack-on-Iran-Nuclear-Sites-Implications-for-the-US>, accessed June 2010), p. 2.

While Israel has repeatedly indicated that it would be willing attack Iran, they have not. This appears to be a result of Israel's loyalty to the United States and the policies of the United States which currently revolve around President Obama's strategy of engagement, which relies on diplomacy and sanctions. Falling lock-step on that line Israeli leaders have stated that they would prefer that Iran's nuclear weapons program (Israeli's are operating under the assumption that the Iranian's are trying to procure nuclear weapons) be halted by diplomacy.³⁰

Given Israel's history which included the 1981 attack on the Osiraq reactor in Iraq, severely setting back the Iraqi nuclear program.³¹ That history also includes a September 2007 airstrike against a Syrian nuclear facility being built with the assistance of the North Koreans.³² The attack on the Syrian facility is notable in that the Israeli planes penetrated Syrian air defenses which are thought to be more formidable than Iran's current air defense system.³³

While Israel has successfully completed such missions in the past there are some significant differences between Osirak, Syria and any mission to Iran. One of the greatest differences is in the distance; both Osirak and Syria are a lot closer to Israel than any of the Iranian nuclear facilities. Even though the Osirak and the Syrian facility were close to Israel by comparison the Israeli warplanes returned with very little fuel. A mission to Iran would require in-flight refueling, which would add difficulty to the mission.

Israel would also have to fly over sovereign airspace of another country. Of course Israel has done this in the past it has never been in the position to violate airspace controlled by the United States. Flying over Iraq would put Israel directly at odds with one of its biggest supporters, the United States. It is unlikely that the USA would give approval, even tacit approval to the Israelis to launch an airstrike

³⁰ Ibid.

³¹ Ibid, p. 3.

³² Ibid.

³³ Ibid.

by transiting through Iraqi airspace. The other option would be for Israel to fly through Saudi Arabia's airspace.

According to sources the head of Mossad reportedly met with Saudi officials.³⁴ During that meeting Saudi Arabian officials assured Israeli Prime Minister Benjamin Netanyahu that they would turn a blind eye to Israeli planes passing through their airspace.³⁵ This has been refuted by source in Saudi Arabia who made the statement, "Saudi Arabia rejects violating its sovereignty or the use of its airspace or territories by anyone to attack any country."³⁶ If Israel should attempt to fly through Saudi airspace without approval they would face a modern arsenal of weapons similar to what they possess including F-15 and F-16 aircraft, which would throw such an operation into serious doubt.

Another issue that separates the attacks on Osirak and Syria from one on Iran is that to delay the other nuclear programs only one target needed to be taken out. In contrast such an attack on Iran would require that dozens of targets be taken out. This could require more than a thousand sorties to ensure that the known nuclear infrastructure of Iran would be destroyed. Israel does not have enough aircraft, or the refueling capability to engage in such a campaign especially with countries that are located between Israel and Iran (Jordan, Syria, Turkey, Iraq, and Saudi Arabia) object to Israeli use of their airspace.³⁷

Given the logistical problems that Israel would have in conducting attacks on Iranian facilities, Israel most likely views such attacks as a last ditch effort to prevent Iran from attaining nuclear weapons. This of course falls in step with Israel's stance that they would prefer that a nuclear Iran be dealt with diplomatically as opposed to militarily. In the end Israel views Iran as a serious threat that

³⁴ Ibid.

³⁵ Ibid.

³⁶ Siasat Daily. 2010. "Saudis Say They Won't Help Iran's Enemies." *The Siasat Daily*, 13 June 2010. (Internet. Available from <http://www.siasat.com/english/news/saudis-say-they-wont-help-irans-enemy>, accessed July 2010), NP.

³⁷ Phillips, James. 2010. "An Israeli Preventative Attack on Iran's Nuclear Sites: Implications for the U.S." *Backgrounder*, No. 2361, 15 January 2010. p. 3.

cannot be easily dealt with, but must be dealt with and if military action appears to be the only means of achieving any kind of success then military action would be a “must.”

United States of America

Current policy for the United States with regards to Iran becoming a nuclear power revolves around a strategy of diplomacy and if that doesn't work then the application of sanctions. The Obama administration assesses an attack by the Israeli's to be undesirable.³⁸ The United States is concerned with Iran becoming a nuclear power for several reasons including the potential of Iran severely disrupting crude oil shipments to the United States from the region. The United States, which has acted as the de facto world police would also be under considerable pressure by several nations within the region to provide protection from the Iranian regime; a regime which is often viewed as being highly aggressive in pursuit of their goal to being the prime power in the region.³⁹

If Iran decided to continue their program as-is, including the pursuit of nuclear weapons the US would make threats including the threat of massive retaliation on Iran. This of course would the position of the United States if all other tactics had failed including sanctions and the rallying of allies outside of the United Nations structure to pressure Iran into discontinuing its program. In this instance an attack on Iranian facilities by Israeli forces would be a welcome reprieve for the United States since the United States would not have to directly engage Iran.⁴⁰

Overall, given the current political situation within the United States it is most likely that the U.S. would not conduct any direct military action against Iran itself. If there were to be a political shift, coupled with a general acceptance among the American people then the United States may commit to

³⁸ Simon, Steven. 2009. *Contingency Planning Memorandum No. 5: An Israeli Strike on Iran*. (Internet. Available from http://www.cfr.org/publication/20637/israeli_strike_on_iran.html#, accessed June 2010), p. 2.

³⁹ Wehrey, Frederic, et al. 2009. *Saudi-Iranian Relations Since the Fall of Saddam*. (Internet. Available from http://www.rand.org/pubs/monographs/2009/RAND_MG840.pdf, accessed August 2010), p. ix.

⁴⁰ Phillips, James. 2006. *U.S. Policy and Iran's Nuclear Challenge*. (Internet. Available from <http://www.heritage.org/Research/Lecture/US-Policy-and-Irans-Nuclear-Challenge>, accessed August 2010), NP.

military action. However, at this juncture in history with the United States concluding combat operations in Iraq and still heavily engaged in Afghanistan it is unlikely that the United States would view a military option as practical, even if Iran started producing nuclear weapons.

Another issue revolving around nuclear weapons, which concerns all actors, is that once a country has nuclear weapons it is unlikely that it will give them up. This would be especially true in the case of Iran. Policy makers within the United States most likely realize this and that any military operations have a shelf-life. That shelf-life expires when the nation has nuclear weapons and a viable way to deploy them. Once they have nuclear weapons if they should be attacked there is a very real possibility that if attacked they, in this case Iran, would use their nuclear weapons.

The United States policy makers also see that if Iran should get nuclear weapons it would most likely start an arms race in the region. If an arms race were to begin then the U.S. would be thrown into a very difficult position especially considering that although allied with several nations in the region, those connections often are suspect in the fact that many of the terrorists that threaten the U.S. come from that area.⁴¹ Overall the U.S. views that a nuclear armed Iran is unacceptable, but many in the U.S. view that a military option is also unacceptable therefore throwing the United States into a conundrum.

The Kingdom of Saudi Arabia

Prior to the Islamic Revolution, Iran and Saudi Arabia enjoyed good diplomatic relations.⁴² Those ties changed with the change of regime. With the change in regime came a new policies including one which saw Iran's support of Islamic groups including groups that was successful in destabilizing Sudan a neighbor of Saudi Arabia. Iran's support of these groups further drove a wedge between Iran and Saudi Arabia.

⁴¹ Ibid.

⁴² Khaitous, Tariq. 2007. *Egypt and Saudi Arabia's Policies Toward Iran's Nuclear Program*. (Internet. Available from http://www.nti.org/e_research/e3_96.html, accessed August 2010), NP.

Saudi Arabia recently has made the choice to try and contain Iran and Iranian influence rather than restore relations.⁴³ Some of this has to do with the belief in Saudi Arabia that Iran is attempting to become the leader within the region through its nuclear activities and other activities such as the support of groups such as Hezbollah. Given all these factors Saudi Arabia is still only pursuing diplomatic means in which to restrain Iranian ambitions and example of this is when "... Indian Prime Minister Manmohan Singh and King Abdullah, called on the international community to resolve the controversy over Iran's nuclear program peacefully through dialogue."⁴⁴

Insofar as Israel is concerned Saudi Arabia has stated that it will be the last Muslim state to normalize relations with Israel.⁴⁵ To that extent Saudi Arabia prefers to let other countries deal with Israel. This stance is evidenced in a statement made by King Abdallah which essentially said that Saudis are a partner in the Middle East peace process, but Saudi Arabia is confident that "... our brothers in Syria, Palestine and Lebanon are capable of dealing with Israel in a manner that serves Arab and Muslim interests."⁴⁶ Saudi Arabia's attitude toward Israel, while being aloof and standoffish is also greatly affected by the various Islamic entities within the government and the clergy. Those elements within the government and the clergy have a very hostile stance when it comes to Israel and Jews.

As for relations with the United States, Saudi Arabia, due to its relatively weak military sees the need for a strong U.S. presence to protect its interests.⁴⁷ Even though it sees the need for a U.S. presence the Saudis do not feel that it needs to appease the U.S. by accepting U.S. requests to normalize relations with Israel.⁴⁸ The Saudis also see the United States as not altogether reliable and feel that it is in their best interest to make concessions to Iran. So, Saudi Arabia much like the United

⁴³ Ibid.

⁴⁴ Farrar-Wellman, Ariel & Robert Frasco. 2010. "Saudi Arabia-Iran Relations." (*IranTracker*. Internet. Available from <http://www.irantracker.org/foreign-relations/saudi-arabia-iran-relations>, accessed July 2010), NP.

⁴⁵ Rubin, Barry. 2009. "Motives and Interests in Israeli-Gulf Relations." (*MERIA Journal of International Affairs*, Vol. 13, No. 3, September 2009. Internet. Available from <http://www.gloria-center.org/meria/2009/09/rubin.html>, accessed August 2010), NP.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

States is in a situation that presents a conundrum in which they do not want to look like they are willing to work with Israel, who could very well help to quell Iran's efforts to become the main regional power and thus ensure Saudi Arabia's continued dominance.

Chapter IV

Research Design

This paper is based on the Lockwood Analytical Method for Prediction (LAMP) method of predictive futures analysis. The LAMP method is easily the best method for answering the question: With the threat of a preemptive strike on Iranian nuclear facilities what path will the Iranian's choose and based on that choice will Israel actually conduct a strike on Iran? If so will the US support Israel? The reasoning behind the determinations that the LAMP method is the best for this analysis has to do with the answer being sought, which is a general answer, covering a limited scope and utilizing largely qualitative information as opposed to quantitative information. Therefore in order to move forward the LAMP method needs to be outlined so that the consumer of this analysis understands the "method behind the madness."

The LAMP method consists of 12 steps. The first step is to define the issue for which the most likely future can be determined. It is important to keep the issue narrow.⁴⁹ If the subject is too broad the number of alternate futures can become totally unmanageable. On the other hand if the subject is too narrow then the analysis is too general for an accurate and actionable analysis to be conducted.⁵⁰ It is critical to ensure that as mentioned the subject is outlined within proper parameters.

The next and second step is to specify the actors involved. In the context of the LAMP methodology an actor refers to nations or groups that are large enough to be able to influence nations.⁵¹ The number of actors involved in the issue needs to be limited, because much like having to broad a scope for the issue having too many actors will increase the number of potential future exponentially.⁵² Another reason for limiting the number of actors is simply that not every actor potentially affected actually will have sufficient influence to change potential futures. An example of this within the

⁴⁹ Lockwood, Jonathan S, Dr. & Kathleen O'Brien Lockwood. 1994. *IN520 The Lockwood Analytical Method for Prediction (LAMP)*. (MBS), p. 27.

⁵⁰ *Ibid*, p. 28.

⁵¹ *Ibid*, p. 29-30.

⁵² *Ibid*.

context of an Israeli attack on Iran would be the influence on the potential future of Lebanon. While Lebanon may, in fact be affected severely by an attack on Iran by Israel, the Lebanese have very little chance of influencing either Iran or Israel to change their course of action.

The third step involves performing an in-depth study of how each actor perceives the issue as defined earlier.⁵³ This step, as can be guessed includes historical research, cultural research and other factors that can influence perception of the various actors involved. This research plays into the next step, step four, which is to specify all possible courses of action for each actor.⁵⁴ During this step the analyst should avoid eliminating a course of action based on how unlikely it would be for an actor to choose it; choices that are clearly impossible or beyond the strength of the actor should be excluded.⁵⁵

For the fifth step the major scenarios need to be determined for comparison in the alternate futures. The scenarios provide the major assumption that influences the actions of all of the actors concerned.⁵⁶ An example of such an assumption would be Iran giving up its pursuit of nuclear weapons or anything dealing with nuclear materials. This would then have a major effect on whether Israel would feel the need to attack Iran and also how the United States would react.

As previously alluded to, there are a number of alternative futures which will ultimately be compared. The sixth step is to determine the total number of possible permutations for each scenario.⁵⁷ During this step the effectiveness of steps one and two is determined. The following describes how the number of permutations is found:

Here is where the necessity of limiting the number of actors and choices becomes most apparent. The general formula for computing the number of alternate futures is:

$$X^Y=Z$$

Where X equals the number of courses of action open to each actor, and y equals the number of national actors involved (assuming each actor has the same number of courses of action open to it), Z equals the total number of alternate futures to be compared. For example, if the analyst is looking at five actors with two courses of

⁵³ Ibid, p. 30-31.

⁵⁴ Ibid, p. 32-33.

⁵⁵ Ibid.

⁵⁶ Ibid, p. 34.

⁵⁷ Ibid, p. 38.

action open to each, then he or she is looking at only 32 alternate futures. If however, the analyst includes another national actor with three courses of action, then the number of alternate futures becomes 96. However, if there were three courses of action open to all five national actors, then the number of possible alternate futures explodes to 243!⁵⁸

From the preceding it is easy to see how permutations expand exponentially with very minimal additions. For this analysis there are three actors, while Israel is an actor, this analysis is to determine the various permutations of actions of the other actors in concerns with Israel attacking or Israel not attacking. The actors being used are as follows: Iran, Saudi Arabia and the United States; therefore Y equals 3. X equals 3 therefore $X^Y = 3^3$, so $3^3 = 27$ permutations.

Once the various permutations are determined then they must be compared. In the seventh step the alternate futures are compared in a “pairwise comparison” to ascertain each one’s relative probability. Just as it sounds, pair permutations are compared and voted on. The most likely to occur based on evidence is given “vote;” while the less likely future is not given a “vote.” This process continues until all permutations have been compared.

The number of potential futures can be determined using $X = n(n-1)/2$.⁵⁹ In this equation n equals the total number of alternative futures to be analyzed and X equals the total number of “pairwise comparisons.”⁶⁰ For the analysis in this paper n equals 27; therefore $X = 27(27-1)/2$; $X = 351$ votes.⁶¹ So while it may seem, initially that 3 actors each with 3 options is a small number of variable to be considered it is easy to see how such a small number can grow and should be limited to ensure that the potential do not become unmanageable.

The eighth step is to place the scenarios in order from the scenario with the most votes to the scenario without any votes.⁶² The scenario with the most votes becomes the scenario that is the most likely future. This leads directly into the next step which is to analyze each alternative future in terms

⁵⁸ Ibid, p. 38-39.

⁵⁹ Ibid, p. 40.

⁶⁰ Ibid, p. 41.

⁶¹ Ibid.

⁶² Ibid, p. 43.

of consequences to the issue in question.⁶³ To complete the ninth step the analyst needs to use their imagination into what the potential consequences will evolve for a given set of actions (e.g. Israel attacks Iran and the UN enacts sanctions on Israel).⁶⁴ While this step uses the imagination of the analyst it also needs to remain soundly based, as much as possible, on evidence, such as history.

The tenth step is to state the potential of a given alternate future to “transpose” into another alternate future.⁶⁵ Transposition is where one action resembles the precursors for one potential future, but leads to another, alternative future. Once the consequences of the alternative future being described then the potential for transposition to another alternative future must be noted.⁶⁶

In the eleventh step is where “focal events” are identified which need to occur in a specified order to ensure that the given alternative future occurs. In the context of analysis using the LAMP method a “focal event” is defined as an occurrence of sufficient magnitude that it changes the relative probability of the alternate future.⁶⁷ The following excerpt from *IN520 The Lockwood Analytical Method for Prediction (LAMP)* further defines the concept of “focal events”:

If we were to "draw a line" in time from our present into the future, a focal event would resemble an intersection with two or more branches into other futures. Once the path is taken, we would soon be confronted with a different array of possible futures and branching off points. The most likely future has the fewest focal events leading into it; it is the alternate future offering the line of least resistance. In fact, our present might so closely resemble the alternate future that no focal events occur.⁶⁸

The eleventh step is much like the ninth step which requires the analysts to use their imagination.

The twelfth and final step is to develop a list of indicators associated with “focal events.”

“Focal event” is an event of such magnitude that it elicits changes in the alternative future.⁶⁹ A “focal event” is much like a fork in the road with one fork being blocked by a “do not enter” sign the actor

⁶³ Ibid.

⁶⁴ Ibid, p. 54.

⁶⁵ Ibid.

⁶⁶ Ibid, p. 55.

⁶⁷ Ibid.

⁶⁸ Ibid, p. 55-56.

⁶⁹ Ibid, p. 55.

will be forced into a particular course of action. The indicators are then entered into the database along with focal events and alternate futures. This facilitates situations where a “re-voting” is conducted based on the new information. The order of the list is then revised based on the number of votes received. This final product then gives the policymakers the most accurate prediction of the future possible.

While the LAMP method provides the frame work for this analysis, it is also important to describe what fills that frame work. All source material for this analysis was obtained through open sources. Open source material affects analysis in two significant ways. The first is that it provides a wide ranging number of sources which helps alleviate the potential for biases created when only material from a select element is used (e.g. only using material published by the US Government). The second is that the material is subject to a high number of potential inaccuracies, especially given the highly restrictive nature of the Iranian government and the flow of information out of Iran being controlled by the government.

This analysis is a predictive analysis of alternate futures and as such every attempt has been made to try and eliminate the biases as outlined in the previous paragraph. To this end the LAMP method also proves extremely valuable in that it forces the analysis to be done along a narrow range therefore eliminating many potential errors. Even as such one must not forget that, again, this is predictive analysis of alternate futures and as such there are no absolutes.

Chapter V

Case Studies/Analysis/Findings

In this chapter steps four through twelve are completed to illustrate how the analysis was completed. This allows the reader to see the process and allows the reader a chance to determine whether the analysis is valid, based on the various steps. The first of these steps is step four.

Step four as outlined in the previous chapter consists specifying all possible courses of action for each actor.⁷⁰ During this step courses of action will be eliminated on how unlikely it would be for an actor to choose it. This would include choices that are clearly impossible or beyond the strength of the actor.⁷¹

For this analysis, the fifth step will also be included in the next passage, since the fifth step determines the major scenarios that are to be compared in the alternate futures. This step also provides the major assumptions that influence the actions of all of the actors concerned.⁷² By outlining the assumptions that influence the actions of all the actors it is laid out for the reader as to how the analysts came to their findings. Therefore this is a critical step in ensuring that the analysis is as accurate as possible.

Israel

In this analysis Israel reacts to a given set of circumstances and therefore does not have actions like the other actors. Even as such it is still necessary to describe the scenarios for Israel and the major assumptions for each scenario. This will establish the basis for what situations would either facilitate or inhibit an attack on Iranian nuclear facilities by Israeli forces.

Scenario I

Due to various factors Israel decides to conduct strikes on Iranian nuclear facilities.

⁷⁰ Lockwood, Jonathan S, Dr. & Kathleen O'Brien Lockwood. 1994. *IN520 The Lockwood Analytical Method for Prediction (LAMP)*. (MBS), p. 32-33.

⁷¹ Ibid, p. 33.

⁷² Ibid, p. 34.

Scenario I Major Assumptions

1. Logistically speaking Israel has a high probability of success in setting back Iran's nuclear program.
2. Israel has little fear of having sanctions levied by the United Nations.
3. Israel has little fear of repercussions or the possibility of all out warfare from neighboring countries and groups, including Hamas and Hezbollah.
4. Israel has a very real belief that Iran will use a nuclear weapon to try and decimate the Jewish state.

Scenario II

Israel decides due to numerous factors that it is not feasible to attack Iranian nuclear facilities.

Scenario II Major Assumptions

1. Israel recognizes severe shortcomings in logistical support making it critical to receive support in order to ensure successful strikes against Iran's nuclear program.
2. Israel has a real fear of having sanctions levied by the United Nations, due to the hostile nature of many of the member nations including Russia and China coupled with the possibility of alienating allies such as the United States and the United Kingdom.
3. Israel believes that a strike against Iran could lead to an increase in terrorist acts by Hamas and Hezbollah coupled by the threat of military action by several of its neighbors.
4. Israel determines that if Iran should attempt to use a nuclear weapon against the Jewish state that Iran would risk turning the Arabian Peninsula against itself and possibly risking military action by the United States and Russia.

Iran

Iran has three, broad based actions available to it. While three may seem too few, it must be recognized that this analysis is being conducted on whether or not the Israeli's will attempt to attack Iranian Nuclear facilities, not on the events occurring after such an attack. Another reason for limiting

the actions available to Iran, as well as the other actors, revolves around the fact that as outlined in Chapter V the comparisons that would have to be made between the various scenarios quickly becomes prohibitive. To that end, again, Iran has three broad ranged responses.

Scenario I

Iran continues their nuclear program unabated and undeterred. By continuing their program, Iran may also choose to expand their program to include more centrifuges, thus upping their abilities to purify uranium indigenously. This would also likely mean that Iran is also still receiving technical support from those nations (i.e. Russia, China, Pakistan, etc.) which only lessens the sting of sanctions.

Scenario I Major Assumptions

1. Sanctions remaining largely ineffective due to other countries such as Russia and China skirting the sanctions in an effort to secure large stakes in Iranian natural resources and gain an economic advantage over other economic powerhouses including the United States.
2. The general populace supports the government in their pursuit of nuclear technology even with the negative impact of the sanctions on the populace at large.
3. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.

Scenario II

The second action is for Iran to discontinue its nuclear program in its entirety. While at first glance this might seem like impossible proposition, but given political change within Iran coupled with other pressure this could occur. Again although this sounds like a remote possibility, the probability remains given several factors currently at play within the Islamic Republic of Iran.

Scenario II Major Assumptions

1. Sanctions, while not generally damaging to the rulers of Iran affect the general populace causing general dissatisfaction with the government; thereby increasing support for separatists in Iran.

2. The general populace fails to support the government in their pursuit of nuclear technology due to the negative impact of the sanctions on the populace.
3. Countries largely refuse to provide Iran with any significant technological support.

Scenario III

The third and final action available to Iran is for Iran to modify their program, wherein they give up any pursuit of dual use technology and nuclear materials and only pursue nuclear energy. As stated this is where Iran makes a decision to forgo further purification of nuclear material, in particular HEU and instead concentrates on the production of LEU for nuclear power plants. This would also mean that Iran would forgo medical research requiring HEU.

Scenario III Major Assumptions

1. Sanctions, while not generally damaging to the rulers of Iran affect the general populace causing general dissatisfaction with the government; thereby increasing support for separatists in Iran.
2. The general populace fails to support the government in their pursuit of nuclear technology due to the negative impact of the sanctions on the populace.
3. Countries largely refuse to provide Iran with any significant technological support in terms of a nuclear program that goes beyond power generation.

Saudi Arabia

Saudi Arabia has three different actions available. These actions take into consideration that Saudi Arabia, while an Islamic nation is predominantly Sunni, whereas Iran is predominantly Shia. Due to the significant rift that exists between the two sects of Islam there is a great deal of distrust between the two countries. There is also a significant amount of resentment harbored by Iranian leaders stemming from Saudi Arabia's support of Iraq during the Iraqi – Iranian war. Given the preceding factors points toward the tenuous position that Saudi Arabia enjoys which consists of balancing its stated disdain for Israel while trying to maintain its power within the region.

Scenario I

The first action is one in which Saudi Arabia could approve Israeli forces to transit through Saudi Arabian airspace on their way to attack Iranian nuclear facilities. This deal would most likely be made “under the table” due to the general hatred of Israel by many Saudis. Even an “under the table” deal would still be a deal that goes beyond just ignoring an over flight by Israeli aircraft.

Scenario I Major Assumptions

1. The Saudi Royal family has a significant fear of eventually having to deal with a nuclear armed Iran, who could then threaten their dominance in the region.
2. The Saudis are generally able to cover their coercion with Israel throughout Saudi Arabia and the Islamic world.
3. The Saudis are sure that their general populace in Saudi Arabia can be made to believe that the Israelis somehow were able to skirt Saudi military defense network.

Scenario II

The second action available to Saudi Arabia is for the Saudi Arabia to publicly deny support of an Israeli attack on Iran. This would most likely take the form of publicly indicating to Israel that if Israeli warplanes were to violate Saudi airspace they would be attacked.

Scenario II Major Assumptions

1. The Saudi Royal family does not fear of having to deal with a nuclear armed Iran.
2. The Saudis are unable or unwilling to cover their coercion with Israel throughout Saudi Arabia and the Islamic world.
3. The Saudis are sure that their general populace in Saudi Arabia could become irate enough to attempt to overthrow the Saudi Royal Family.

Scenario III

The third action available to Saudi Arabia is for Saudi Arabia to remain neutral. This allows Saudi Arabia the ease of denouncing the actions of the Israelis, while essentially giving the Israelis a free ticket to transition through Saudi airspace. This also means that the Saudi Royal family could seek sanctions against Israel via the United Nations to try and gain favor with the Islamic world, given that any Israeli use of Saudi airspace would be seen as a major affront to the Islamic world in general, especially given Saudi Arabia official stance on Israel.

Scenario III Major Assumptions

1. The Saudi Royal family has a significant fear of eventually having to deal with a nuclear armed Iran, who could then threaten their dominance in the region.
2. The Saudis are unable or unwilling to cover their coercion with Israel throughout Saudi Arabia and the Islamic world.
3. The Saudis are sure that their general populace in Saudi Arabia can be made to believe that the Israelis somehow were able to skirt Saudi military defense network.

United States

While the United States has only three actions, the actual position of the United States is actually one that is deeply ensconced in diplomatic negotiations; these negotiations are extremely complex and as such are beyond the scope of this analysis. The three actions available to the United States are generally based on diplomatic positions and as such forgo any action by the United States such as a direct attack by the US on Iranian nuclear facilities. Also like Saudi Arabia the actions of the US are based on Iranian actions.

Scenario I

The first action is one in which the United States could approve an over flight of Iraq by Israeli forces who are attacking Iranian nuclear facilities. Or the first action can be the support of the United States of an Israeli position condemning Iran for pursuing nuclear weapons. As previously described

this action is one that can take on many meanings, but the one common thread is that it involves the support of the United States on whatever action that Israel takes.

Scenario I Major Assumptions

1. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
2. The United States will not suffer any long-term diplomatic problems with Islamic nations who provide the majority of oil to the United States.
3. The United States is either willing to endure worldwide criticism for supporting a hostile attack on Iranian facilities or believes that there will be very little significant political fallout over supporting an Israeli attack.
4. The political structure within the United States does not fear a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections.

Scenario II

The second action available to the United States is for the United States to publicly deny support of an Israeli attack on Iran. This would most likely take the form of not giving Israel permission to enter Iraqi airspace, which the United States has control over. Another possible factor would also be a threat to tighten or outright restrict sales of military hardware to Israel. This would have a severe impact on Israel since a significant amount of the military hardware fielded by Israel is produced in America.

Scenario II Major Assumptions

1. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.

2. The United States will suffer any long-term diplomatic problems with Islamic nations who provide the majority of oil to the United States and therefore affect the American economy which is trying to recover from a depression.
3. The United States is unwilling to endure worldwide criticism for supporting a hostile attack on Iranian facilities or believes that there will be significant political fallout over supporting an Israeli attack.
4. The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections.

Scenario III

The third action available to the United States is for the United States to remain neutral. This allows the United States to essentially “let the chips fall where they may” and at the same time giving tacit approval to the Israelis to take action against Iran. This also allows the United States to take a position of plausible deniability, in that they can claim and rightly so that Israel was never given permission to, say, fly through Iraqi airspace. From this position the United States can also denounce Israel’s actions, while still, actually supporting Israel.

Scenario III Major Assumptions

1. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
2. The United States will suffer any long-term diplomatic problems with Islamic nations who provide the majority of oil to the United States and therefore affect the American economy which is trying to recover from a depression; but also believes that if a neutral position is taken the US will have plausible deniability and thus prevent any significant interruptions in the oil supply.
3. The United States is unwilling to endure worldwide criticism for supporting a hostile attack on Iranian facilities or believes that there will be significant political fallout over supporting an Israeli

attack; but also believes that if a neutral position is taken the US will have plausible deniability and thus prevent any long-term damage.

4. The political structure within the United States does not fear a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections.

Permutations

For the sixth step the total number of possible permutations must be determined.⁷³ The number of possible permutations is found as follows:

2. Using the following formula $X^Y=Z$ where Y equals the number of actors, which is three (Iran, Israel and the United States) and X equals the number of actions open to each actor, or three in this case.
3. Therefore $X^Y=Z$ or $3^3= 27$ permutations.

So there are a total of 27 total permutations (actions) available for this scenario, which is determining whether Israel will attack Iranian nuclear facilities or not. While 27 may seem to be a small number, one mustn't forget that the number of permutations will expand exponentially in the next step.

To illustrate further illustrate the sixth step two tables shall be used. The first table, Table 1 outlines the general actions available to each actor and provides a reference for the columns in Table 2. Table 2 provides the different permutations which consist of one action per actor. These permutations will be compared in the next step.

Table 1: Actors & Actions		
Actor	Action	Action Definition
Iran	Continue Program (CP)	Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia)
	Discontinue Program (DP)	Iran discontinues any pursuit of nuclear technologies , including the building of nuclear power plants.
	Pursue Nuclear Power Only (NPO)	Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities.
Saudi Arabia	Support (Ssa)	Saudi Arabia publicly supports Israeli strikes on Iranian nuclear facilities.
	Deny (Dsa)	Saudi Arabia denies Israel access to Saudi airspace.
	Neutral (Nsa)	Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia.

⁷³ Ibid, p. 38.

United States	Support (Sus)	The United States publicly supports Israeli strikes on Iranian nuclear facilities.
	Deny (Dus)	The United States denies Israel access to Iraqi airspace.
	Neutral (Nus)	The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

Table 2: Permutations			
	Iran	Saudi Arabia	United States
1	Continue Program	Support	Support
2	Continue Program	Support	Deny
3	Continue Program	Support	Neutral
4	Continue Program	Deny	Support
5	Continue Program	Deny	Deny
6	Continue Program	Deny	Neutral
7	Continue Program	Neutral	Support
8	Continue Program	Neutral	Deny
9	Continue Program	Neutral	Neutral
10	Discontinue Program	Support	Support
11	Discontinue Program	Support	Deny
12	Discontinue Program	Support	Neutral
13	Discontinue Program	Deny	Support
14	Discontinue Program	Deny	Deny
15	Discontinue Program	Deny	Neutral
16	Discontinue Program	Neutral	Support
17	Discontinue Program	Neutral	Deny
18	Discontinue Program	Neutral	Neutral
19	Pursue nuclear power only	Support	Support
20	Pursue nuclear power only	Support	Deny
21	Pursue nuclear power only	Support	Neutral
22	Pursue nuclear power only	Deny	Support
23	Pursue nuclear power only	Deny	Deny
24	Pursue nuclear power only	Deny	Neutral
25	Pursue nuclear power only	Neutral	Support
26	Pursue nuclear power only	Neutral	Deny
27	Pursue nuclear power only	Neutral	Neutral

Pairwise Comparison

The seventh step is to determine the number of potential futures. To determine the potential futures the equation $X=n(n-1)/2$ will be used.⁷⁴ In this equation X equals the total number of “pairwise comparisons” that will be used.⁷⁵ As previously determined, n equals 27, the total number of alternative

⁷⁴ Ibid, p. 40.

⁷⁵ Ibid, p. 41.

futures to be analyzed; therefore $X=27(27-1)/2$; $X= 351$ votes.⁷⁶ Table 3 shows an example of how the pairwise comparison was conducted.

		Israeli Attack			2	3	4	5	6	7	8	9		
					US	Dus	Nus	Sus	Dus	Nus	Sus	Dus	Nus	
					SA	Ssa	Ssa	Dsa	Dsa	Dsa	Nsa	Nsa	Nsa	
					Iran	CP								
		Iran	SA	US										
Votes					0	0	1	1	1	1	0	1		
17	1	CP	Ssa	Sus	1	1	0	0	0	0	1	0		
						1	1	1	1	1	1	1		
8	2	CP	Ssa	Dus		0	0	0	0	0	0	0		
							1	1	1	1	0	1		
13	3	CP	Ssa	Nus			0	0	0	0	1	0		
								0	1	0	0	1		
20	4	CP	Dsa	Sus				1	0	1	1	0		
									1	1	1	1		

The next step, which is the eighth, consists of placing the scenarios in order from the scenario with the most votes to the scenario without any votes.⁷⁷ The scenario with the most votes becomes the scenario that is the most likely future. Table 4 shows the results of step eight.

		Israeli Attack			No Israeli Attack					
		Iran	SA	US						
Votes					Votes					
24	9	CP	Nsa	Nus	26	5	CP	Dsa	Dus	
23	27	NPO	Nsa	Nus	25	23	NPO	Dsa	Dus	
22	6	CP	Dsa	Nus	24	14	DP	Dsa	Dus	
21	7	CP	Nsa	Sus	22	6	CP	Dsa	Nus	
20	4	CP	Dsa	Sus	21	17	DP	Nsa	Dus	
20	5	CP	Dsa	Dus	20	15	DP	Dsa	Nus	
20	23	NPO	Dsa	Dus	19	20	NPO	Ssa	Dus	
19	24	NPO	Dsa	Nus	18	24	NPO	Dsa	Nus	
17	1	CP	Ssa	Sus	18	26	NPO	Nsa	Dus	
17	25	NPO	Nsa	Sus	17	18	DP	Nsa	Nus	
15	14	DP	Dsa	Dus	16	11	DP	Ssa	Dus	
15	15	DP	Dsa	Nus	15	13	DP	Dsa	Sus	

⁷⁶ Ibid.

⁷⁷ Ibid, p. 43.

15	22	NPO	Dsa	Sus	14	22	NPO	Dsa	Sus
13	3	CP	Ssa	Nus	13	16	DP	Nsa	Sus
13	8	CP	Nsa	Dus	12	8	CP	Nsa	Dus
12	18	DP	Nsa	Nus	12	12	DP	Ssa	Nus
11	17	DP	Nsa	Dus	9	2	CP	Ssa	Dus
11	19	NPO	Ssa	Sus	9	9	CP	Nsa	Nus
9	26	NPO	Nsa	Dus	7	4	CP	Dsa	Sus
8	2	CP	Ssa	Dus	7	10	DP	Ssa	Sus
8	21	NPO	Ssa	Nus	7	21	NPO	Ssa	Nus
7	16	DP	Nsa	Sus	6	25	NPO	Nsa	Sus
5	13	DP	Dsa	Sus	6	27	NPO	Nsa	Nus
2	11	DP	Ssa	Dus	3	7	CP	Nsa	Sus
2	20	NPO	Ssa	Dus	3	19	NPO	Ssa	Sus
1	10	DP	Ssa	Sus	2	3	CP	Ssa	Nus
1	12	DP	Ssa	Nus	0	1	CP	Ssa	Sus
351	Total				351	Total			

The next and ninth step is to analyze each alternative future in terms of consequences to the issue in question.⁷⁸ To complete this step it must be determined what potential consequences, within reason, for a given set of actions will exist (e.g. Israel attacks Iran and the UN enacts sanctions on Israel).⁷⁹

Scenario I: Israel Attacks Iranian Nuclear Facilities

For this scenario Israel attacks Iranian nuclear facilities. For this analysis only the four permutations receiving the most votes will be evaluated (it should be noted that permutation 4, 5 and 23 each received 20 votes). In reviewing Table 4 it can be seen that the top four pairwise comparisons are 9, 27, 6 and 7 which represent the following:

- **9:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States

⁷⁸ Ibid, p. 54.

⁷⁹ Ibid.

does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

- **27:** Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
- **6:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
- **7:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States publicly supports Israeli strikes on Iranian nuclear facilities.

The common thread that runs through all the preceding pairwise comparisons and that is that at no time does Saudi Arabia support Israeli strikes on Iranian nuclear facilities. Another common thread is that the United States does not deny Israeli forces the use of Iraqi airspace. Still another common thread is that none of the permutations indicate Iran totally forgoing their nuclear program. All these preceding points help facilitate an attack by Israel on Iranian nuclear facilities. Thus the aforementioned points would indicate that the Israelis would most likely attack.

Pairwise Comparison 9

Pairwise comparison 9 received the most votes in the scenario involving an attack by Israeli force with 24 votes. This makes this the most likely event to occur that would facilitate an Israeli

attack. It needs to be noted that 9 is not a “hands down” favorite as it only received 1 more vote than 27.

In pairwise comparison 9 Iran continues with their nuclear program unabated, including the enrichment of or seeking of HEU. In this situation the United States and Saudi Arabia both neither supporting nor actively opposing an attack by Israel facilitate an attack by Israeli forces. Given the lack of outright approval of an attack on Iranian facilities the Israelis could resolve to strike at only a limited number of high value targets with airstrikes and save the less valuable targets for a long-range missile strike. The missile strike could come from Jericho II and Popeye Turbo missiles, with the later being submarine launched.⁸⁰

The strikes by missiles would, as previously indicated, be of low value targets. This would be for several reasons such as the modest payload they carry with the Jericho II only having a payload of 750kg of explosives. The small payload would do little damage against hardened targets which Iran is known to have hardened many of their nuclear facilities against such strikes. The other issue with using missiles comes from their potential inaccuracy, thereby making them a less than desirable choice to use against high value targets.

Pairwise Comparison 27

Pairwise comparison 27 received the second most votes in the scenario involving an attack by Israeli force with 23 votes. In pairwise comparison 27 Iran decides to forgo any programs that involve the enrichment of uranium or the use of enriched uranium, but maintains all the key components of a nuclear power program. Also, like 9, the United States and Saudi Arabia both neither supporting nor actively opposing an attack by Israel facilitate an attack by Israeli forces. Given the lack of outright approval of an attack on Iranian facilities the Israelis could resolve to strike at only a limited number of high value targets with airstrikes and save the less valuable targets for a long-range missile strike. The

⁸⁰ Federation of American Scientists. ND. “Israel’s Missiles and Satellites.” *FAS.Org*. (Internet. Available from <http://www.fas.org/nuke/guide/israel/missile/index.html>, accessed August 2010), NP.

missile strike could come from Jericho II and Popeye Turbo missiles, with the later being submarine launched.⁸¹

Even though Iran has given up on their program for the enrichment of uranium Israel still conducts strikes on Iranian nuclear facilities. This could largely be attributed to the fact that the Iranians have a less than stellar record of transparency with the world when it comes to their nuclear program. It also can be attributed to the sense that Iran still possess a significant risk to Israel and therefore warrants such a strike.

Pairwise Comparison 6

Pairwise comparison 6 received the third most votes in the scenario involving an attack by Israeli force with 22 votes. In 6 Iran continues with their nuclear program unabated, including the enrichment of or seeking of HEU. In this situation the United States neither supports nor actively opposes an attack by Israel facilitate an attack by Israeli forces. In 6 Saudi Arabia actively opposes any military action by Israel and inform Israel that if Israeli warplanes enter Saudi airspace they will be dealt with militarily. Since Saudi airspace provides the most direct route to Iran, in this situation Israel would likely use Iraqi airspace for flights to Iran.

Given the lack of a Saudi approval of an attack on Iranian facilities the Israelis could resolve to use missiles which would most likely fly over Saudi Arabia, but due to their size would prove difficult for the Saudi's to spot and track, but not impossible. Such a strike using Saudi airspace would also limit the loss of Israeli forces via action by the Saudis and given that the missiles would be targeted at low value targets their loss would not pose much of a problem for the success of an Israeli strike. Furthermore the Popeye Turbo missiles being submarine launched could be launched from off the Iranian coast and not susceptible to targeting by Saudi forces.⁸²

Pairwise Comparison 7

⁸¹ Ibid.

⁸² Ibid.

The fourth and final pairwise comparison is 7 which received 21 votes. Pairwise comparison 7 involves Iran continuing their nuclear program unabated, including the enrichment of or seeking of HEU. With Iran continuing their program the United States decides that it will support an Israeli attack. While the United States supports an attack by Israel, Saudi Arabia remains neutral, only proffering the standard rhetoric about Israel while not actively attempting to block an attack by Israeli forces.

Given the lack of a Saudi approval of an attack on Iranian facilities the Israelis could resolve to use missiles over Saudi Arabia and to fly their warplanes through Iraqi airspace and only use the planes to target high value targets. By using missiles over Saudi airspace the Israelis would help provide Saudi Arabia with plausible deniability in that the Saudis could claim that they did not detect any Israeli forces in their airspace. Furthermore the Popeye Turbo missiles being submarine launched could be launched from off the Iranian coast and would not harm the Saudi's standing in the Islamic world.⁸³

Scenario II: Israel Does Not Attack Iranian Nuclear Facilities

For this scenario Israel forgoes attacking Iranian nuclear facilities. This analysis, like the preceding analysis consists of four permutations that received the most votes. In reviewing Table 4 it can be seen that the top four pairwise comparisons are 5, 23, 14 and 6 which represent the following:

- **5:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.
- **23:** Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.

⁸³ Ibid.

- **14:** Iran discontinues any pursuit of nuclear technologies, including the building of nuclear power plants. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.
- **6:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

The common thread that runs through all the preceding pairwise comparisons is that in every instance Saudi Arabia denies Israel access to Saudi airspace. Another common thread is that the United States never supports Israel in an attack on Iranian facilities. All these preceding points help to influence Israel not to attack Iranian nuclear facilities.

Pairwise Comparison 5

Pairwise comparison 5 received the most votes with 26 votes in the scenario wherein Israel does not attack. This makes this the most likely event to occur that would influence Israel to forgo an attack. It needs to be noted that 5 is not a “hands down” favorite as it only received 1 more vote than 23.

In pairwise comparison 5 Iran continues with their nuclear program unabated, including the enrichment of or seeking of HEU. In this situation the United States and Saudi Arabia both deny Israel access to airspace that they control. This limits Israel severely making the attack a logistics nightmare meaning that one of their more realistic options would be to depend on missiles strikes. Once again the missiles have several short comings, not the least of which is a small payload that has little chance of severely damaging hardened Iranian facilities.

Pairwise Comparison 23

Pairwise comparison 23 received the second most votes at 25. In pairwise comparison 23 Iran decides to forgo any programs that involve the enrichment of uranium or the use of enriched uranium,

but maintains all the key components of a nuclear power program. Also, like 5, the United States and Saudi Arabia both deny Israel access to airspace that they control. Again, like 5, this makes this situation one of a logistical nightmare for the Israelis. Also given that in this situation Iran has given up on the pursuit of dual use materials and technologies. By giving up on technologies and materials that could be used to build a nuclear weapon Israel realizes that conducting such an attack would potentially force it into heavy sanctions. This also includes the potential that the United States would stop selling weapons and weapons systems to Israel. This would mean, that given the assumptions already outlined that Israel would have more to lose than gain by attacking Iran.

Pairwise Comparison 14

Pairwise comparison 14 received the third most votes with 24 votes. In 14 Iran discontinues all of their nuclear programs due to pressure from a combination of the international community and the internal pressure for the Iranian populace at large. In this situation the United States and Saudi Arabia both deny Israel access to airspace that they control. Given all the preceding factors and not unlike 23, Israel decides against attacking Iran.

Pairwise Comparison 6

The fourth and final pairwise comparison is 6 with a total of 22 votes. In pairwise comparison 6 Iran continues with their nuclear program unabated, including the enrichment of or seeking of HEU. In this situation the United States neither supports nor actively opposes an attack by Israel facilitate an attack by Israeli forces. In 6 Saudi Arabia actively opposes any military action by Israel and inform Israel that if Israeli warplanes enter Saudi airspace they will be dealt with militarily.

While this situation provides Israel a better logistical outlook Israel still would be limited in terms of logistics. Israel also could realize that Iranian leaders would risk losing control of Iran should they develop a nuclear device and attempt to use it. This would effectively paint Iran into a corner,

given that they would have the means to destroy Israel, but should they do so they could incur the wrath of not only the United States, but also of Russian.

They would also risk a retaliatory strike by Israel, if still capable and the Iranian strike would most likely kill Palestinians and others from the countries that surround Israel. If they should kill Sunnis, especially if a significant amount of Sunnis were killed in a nuclear strike on Israel that could cause retaliatory strike by other Islamic states. This again would cast severe doubt on the ability of the Iranian regime to maintain control over Iran.

The tenth step is to state the potential of a given alternate future to “transpose” into another alternate future.⁸⁴ Transposition is where one action resembles the precursors for one potential future, but leads to another, alternative future. Once the consequences of the alternative future being described then the potential for transposition to another alternative future must be noted.⁸⁵ This final product then gives the policymakers the most accurate prediction of the future possible.

In Scenario I where Israel attacks Iranian nuclear facilities the first two permutations (9 and 27) only differ in Iran’s position with regards to its nuclear program.

- **9:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
- **27:** Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United

⁸⁴ Lockwood, Jonathan S, Dr. & Kathleen O’Brien Lockwood. 1994. *IN520 The Lockwood Analytical Method for Prediction (LAMP)*. (MBS), p. 54.

⁸⁵ Ibid.

States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

This would mean that given incorrect intelligence in concerns with 27, Israel could still deem that Iran is continuing their program unabated and choose to attack. Such an attack could lead to sanctions such as those suggested in Scenario II permutation 23, although due to the positions of Saudi Arabia and the United States a transposing of Scenario II permutation 23 on either Scenario I permutation 9 or 27 is highly unlikely.

Scenario I permutation 6 and Scenario II permutation 6 have a very realistic likelihood of transposition. This likelihood is based on the fact that both contain the exact same actions by Iran, the United States and Saudi Arabia. In this instance the perception of the Israelis is paramount. If the Israelis believe that they have a significant chance of success in setting back Iran's nuclear program and that Iran will use a nuclear weapon against Israel then they will most likely attack. However, if Israelis believe that their chance of success is unlikely and that Iran will not use a nuclear weapon then they will not conduct an attack.

The eleventh step is where "focal events" are identified which need to occur in a specified order to ensure that the given alternative future occurs. In the context of analysis using the LAMP method a "focal event" is defined as an occurrence of sufficient magnitude that it changes the relative probability of the alternate future.⁸⁶ The eleventh step is much like the ninth step which requires the analysts to use their imagination.

Scenario I: Israel Attacks Iranian Nuclear Facilities

- **9:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not

⁸⁶ Ibid, p. 55.

openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

1. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.
 2. Iran continues their nuclear program unabated.
 3. Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.
 4. Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran's nuclear program.
 5. Saudi Arabia, does not take any measures to prevent an attack of Iran, e.g. placing their air force on an alert status for a possible over flight of Israeli aircraft.
 6. Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.
 7. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
 8. The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.
 9. The American public is more concerned about the U.S. economy than with U.S. denying Israel access to Iraqi airspace.
- **27:** Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
1. Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.

2. Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran's nuclear program.
 3. Saudi Arabia, does not take any measures to prevent an attack of Iran, e.g. placing their air force on an alert status for a possible over flight of Israeli aircraft.
 4. Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.
 5. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
 6. The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.
 7. The American public is more concerned about the U.S. economy than with U.S. denying Israel access to Iraqi airspace.
- **6:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
1. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.
 2. Iran continues their nuclear program unabated.
 3. Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.
 4. Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran's nuclear program.
 5. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.

6. The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.
 7. The American public is more concerned about the U.S. economy than with U.S. denying Israel access to Iraqi airspace.
- **7:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States publicly supports Israeli strikes on Iranian nuclear facilities.
1. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.
 2. Iran continues their nuclear program unabated.
 3. Saudi Arabia, does not take any measures to prevent and attack of Iran, e.g. placing their air force on an alert status for a possible over flight of Israeli aircraft.
 4. Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.
 5. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.

Scenario II: Israel Does Not Attack Iranian Nuclear Facilities

- **5:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.
1. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.

2. The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.
 3. Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.
 4. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.
 5. Iran continues their nuclear program unabated.
- **23:** Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.
1. Iran abandons its nuclear enrichment program while allowing inspections by the International Atomic Energy Agency (IAEA) and thereby defuses the tensions within the region.
 2. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
 3. The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.
 4. Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.
- **14:** Iran discontinues any pursuit of nuclear technologies, including the building of nuclear power plants. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.

1. Iran abandons its nuclear program while allowing inspections by the International Atomic Energy Agency (IAEA) and thereby defuses the tensions within the region.
 2. The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.
 3. The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.
 4. Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.
- **6:** Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.
1. Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.
 2. Iran continues their nuclear program unabated.
 3. Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.

The twelfth step and final step is to develop a list of indicators associated with “focal events.”

The indicators are then entered into the database along with focal events and alternate futures. The following is a list of indicators which are associated with focal events:

Scenario I: Israel Attacks Iranian Nuclear Facilities

9: Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent

them including over flights of Iraq.		
1	Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.	<ol style="list-style-type: none"> 1. Presence of foreign technicians in Iranian Nuclear facilities. 2. Shipments of foreign nuclear materials.
2	Iran continues their nuclear program unabated.	<ol style="list-style-type: none"> 1. Continued reports from various sources, including IAEA, of continued work on the nuclear program.
3	Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.	<ol style="list-style-type: none"> 1. Israel makes statements concerning a nuclear armed Iran more often than previously. 2. Israeli forces start doing training that is out of the norm, e.g. bomber training with “bunker buster” bombs.
4	Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran’s nuclear program.	<ol style="list-style-type: none"> 1. Israeli starts gather logistic forces together, e.g. refueling planes. 2. Israeli submarines capable of carrying missiles get underway for the Persian Gulf or vicinity of the Persian Gulf.
5	Saudi Arabia, does not take any measures to prevent and attack of Iran.	<ol style="list-style-type: none"> 1. Saudi Arabia remains largely quiet about a potential attack by Israel on Iranian facilities.
6	Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.	<ol style="list-style-type: none"> 1. Saudi Arabia starts to make decisions and pressures other nations into decisions that would negatively affect Iran, e.g. refuse to act as a way point for goods being shipped to Iran.
7	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	<ol style="list-style-type: none"> 1. United States maintains fighter aircraft within Iraq, even when ending combat operations.
8	The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.	<ol style="list-style-type: none"> 1. United States while maintain control over Iraqi airspace does not set up resources to track aircraft, beyond commercial flights.
9	The American public is more concerned about the U.S. economy than with U.S. denying Israel access to Iraqi airspace.	<ol style="list-style-type: none"> 1. Media outlets with the U.S. run more stories about issues within the United States largely ignoring a potential attack by Israel on Iranian facilities.

27: Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.		
1	Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.	<ol style="list-style-type: none"> 1. Israel makes statements concerning a nuclear armed Iran more often than previously. 2. Israeli forces start doing training that is out of the norm, e.g. bomber training with “bunker buster” bombs.
2	Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran’s nuclear program.	<ol style="list-style-type: none"> 1. Israeli starts gather logistic forces together, e.g. refueling planes. 2. Israeli submarines capable of carrying missiles get underway for the Persian Gulf or vicinity of the Persian Gulf.
3	Saudi Arabia, does not take any measures to prevent and attack of Iran.	<ol style="list-style-type: none"> 1. Saudi Arabia remains largely quiet about a potential attack by Israel on Iranian facilities.
4	Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.	<ol style="list-style-type: none"> 1. Saudi Arabia starts to make decisions and pressures other nations into decisions that would negatively affect Iran, e.g. refuse to act as a way point for goods being shipped to Iran.
5	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	<ol style="list-style-type: none"> 1. United States maintains fighter aircraft within Iraq, even when ending combat operations.
6	The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.	<ol style="list-style-type: none"> 1. United States while maintain control over Iraqi airspace does not set up resources to track aircraft, beyond commercial flights.
7	The American public is more concerned about	<ol style="list-style-type: none"> 1. Media outlets with the U.S. run more stories about issues

	the U.S. economy than with U.S. denying Israel access to Iraqi airspace.	within the United States largely ignoring a potential attack by Israel on Iranian facilities.
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6: Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.		
1	Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.	<ol style="list-style-type: none"> 1. Presence of foreign technicians in Iranian Nuclear facilities. 2. Shipments of foreign nuclear materials.
2	Iran continues their nuclear program unabated.	<ol style="list-style-type: none"> 1. Continued reports from various sources, including IAEA, of continued work on the nuclear program.
3	Israel fears a nuclear attack by Iran, if Iran is allowed to continue with their nuclear program.	<ol style="list-style-type: none"> 1. Israel makes statements concerning a nuclear armed Iran more often than previously. 2. Israeli forces start doing training that is out of the norm, e.g. bomber training with “bunker buster” bombs.
4	Israel devises a way in which to logistically support a large enough attack to be successful in setting back Iran’s nuclear program.	<ol style="list-style-type: none"> 1. Israeli starts gather logistic forces together, e.g. refueling planes. 2. Israeli submarines capable of carrying missiles get underway for the Persian Gulf or vicinity of the Persian Gulf.
5	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	<ol style="list-style-type: none"> 1. United States maintains fighter aircraft within Iraq, even when ending combat operations.
6	The United States does not take any measures to prevent an over flight of Iraqi airspace by Israeli aircraft.	<ol style="list-style-type: none"> 1. United States while maintain control over Iraqi airspace does not set up resources to track aircraft, beyond commercial flights.
7	The American public is more concerned about the U.S. economy than with U.S. denying Israel access to Iraqi airspace.	<ol style="list-style-type: none"> 1. Media outlets with the U.S. run more stories about issues within the United States largely ignoring a potential attack by Israel on Iranian facilities.

7: Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia. The United States publicly supports Israeli strikes on Iranian nuclear facilities.		
1	Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.	<ol style="list-style-type: none"> 1. Presence of foreign technicians in Iranian Nuclear facilities. 2. Shipments of foreign nuclear materials.
2	Iran continues their nuclear program unabated.	<ol style="list-style-type: none"> 1. Continued reports from various sources, including IAEA, of continued work on the nuclear program.
3	Saudi Arabia, does not take any measures to prevent and attack of Iran, e.g. placing their air force on an alert status for a possible over flight of Israeli aircraft.	<ol style="list-style-type: none"> 1. Saudi Arabia remains largely quiet about a potential attack by Israel on Iranian facilities.
4	Saudi Arabian leaders fear a nuclear armed Iran causing diplomatic relations between Iran and Saudi Arabia to further cool.	<ol style="list-style-type: none"> 1. Saudi Arabia starts to make decisions and pressures other nations into decisions that would negatively affect Iran, e.g. refuse to act as a way point for goods being shipped to Iran.
5	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	<ol style="list-style-type: none"> 1. United States maintains fighter aircraft within Iraq, even when ending combat operations.

Scenario II: Israel Does Not Attack Iranian Nuclear Facilities

5: Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.		
1	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	1. United States maintains fighter aircraft within Iraq, even when ending combat operations.
2	The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.	1. Polls within the United States indicate that the controlling party is largely disfavored as compared to the minority party in an election year. 2. Polls within the United States generally indicate that Israel and Israeli intentions in the Middle East are largely viewed as suspect.
3	Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.	1. Israel realizes that an attack would require logistical support and forces that are in excess of what they have indigenously available. 2. Israel does not mobilize its logistical forces.
4	Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.	1. Presence of foreign technicians in Iranian Nuclear facilities. 2. Shipments of foreign nuclear materials.
5	Iran continues their nuclear program unabated.	1. Continued reports from various sources, including IAEA, of continued work on the nuclear program.

23: Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.		
1	Iran abandons its nuclear enrichment program while allowing inspections by the International Atomic Energy Agency (IAEA) and thereby defuses the tensions within the region.	1. Iran asserts that it is discontinuing its nuclear program. 2. IAEA inspectors indicate that it appears that Iranians have suspended their nuclear program.
2	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	1. United States maintains fighter aircraft within Iraq, even when ending combat operations.
3	The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.	1. Polls within the United States indicate that the controlling party is largely disfavored as compared to the minority party in an election year. 2. Polls within the United States generally indicate that Israel and Israeli intentions in the Middle East are largely viewed as suspect.
4	Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.	1. Israel realizes that an attack would require logistical support and forces that are in excess of what they have indigenously available. 2. Israel does not mobilize its logistical forces.

14: Iran discontinues any pursuit of nuclear technologies, including the building of nuclear power plants. Saudi Arabia denies Israel access to Saudi airspace. The United States denies Israel access to Iraqi airspace.		
1	Iran abandons its nuclear program while allowing inspections by the International Atomic Energy Agency (IAEA) and thereby defuses the tensions within the region.	1. Iran asserts that it is discontinuing its nuclear program. 2. IAEA inspectors indicate that it appears that Iranians have suspended their nuclear program.

2	The United States maintains control of Iraqi airspace, even with the impending withdrawal of American combat forces from Iraq.	2. United States maintains fighter aircraft within Iraq, even when ending combat operations.
3	The political structure within the United States fears a large public outcry denouncing attacks by Israel on Iran that could affect mid-term elections, so denies Israeli permission to fly through Iraqi air space.	1. Polls within the United States indicate that the controlling party is largely disfavored as compared to the minority party in an election year. 2. Polls within the United States generally indicate that Israel and Israeli intentions in the Middle East are largely viewed as suspect.
4	Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.	1. Israel realizes that an attack would require logistical support and forces that are in excess of what they have indigenously available. 2. Israel does not mobilize its logistical forces.

6: Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia). Saudi Arabia denies Israel access to Saudi airspace. The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.		
1	Several countries support Iran via technological assistance those countries could include North Korea, Pakistan, India and Russia.	1. Presence of foreign technicians in Iranian Nuclear facilities. 2. Shipments of foreign nuclear materials.
2	Iran continues their nuclear program unabated.	1. Continued reports from various sources, including IAEA, of continued work on the nuclear program.
3	Israel recognizes severe shortcomings in logistical support making it improbable that an attack would be successful.	1. Israel realizes that an attack would require logistical support and forces that are in excess of what they have indigenously available. 2. Israel does not mobilize its logistical forces.

Once the indicators are listed a “re-voting” is conducted based on this new information. The “re-voting” would then initiate a reordering of scenarios based on the new votes. From there the list of scenarios, in order is then finalized and presented to policy makers. This would represent the most accurate possible futures developed.

Chapter VII

Conclusions

Trying to determine whether the Israelis will or will not strike Iranian nuclear facilities is something akin to hitting a moving target. This is also complicated by several factors the least of which is not the general thoughtless information available to the analyst and policy maker in the popular media. This makes the work of the analyst all that more difficult for the analyst must do very in-depth research. The analyst also does not have the luxury of time to do the research and that research must also include the massive amount of information that appears on an almost daily basis. The sheer amount of information is daunting, but once that information is distilled down into its critical components the analysts then must make the case for the scenarios developed.

Making the case for the scenarios, while sounding easy, is uncomfortably complex due to the overall lack of quality, reliable information that is available to the policy maker provided everyday by the general media. While much of the media information has elements of the truth and nuggets of golden information it is often surrounded by general opinion based on very little research. This information is like the information used by a scam artist... it bears elements of the truth but misdirects the consumer from the truth.

In conclusion, the scenarios presented in this paper have been crafted in such a way as to take into account as many pertinent factors as possible. Some of these factors are as desperate as logistics and the Sunni-Shia rift, but they all play into the complex nature of whether or not Israel would attack Iranian nuclear facilities. To this end this analysis, due to all the complex elements within it, has a "shelf-life" and therefore must be acted upon, preferably within the next three months, but no later than the next six months. At the six month marker this analysis should be completely revised in order to provide the most up to date analysis based on the most up to date information available.

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Appendix A: Tables, Diagrams, Etc.

Actor	Action	Action Definition
Iran	Continue Program (CP)	Iran continues to seek the enrichment of uranium, either in their own facilities or via another party (e.g. Russia)
	Discontinue Program (DP)	Iran discontinues any pursuit of nuclear technologies , including the building of nuclear power plants.
	Pursue Nuclear Power Only (NPO)	Iran abandons uranium enrichment programs, but continues with the construction of nuclear power facilities.
Saudi Arabia	Support (Ssa)	Saudi Arabia publicly supports Israeli strikes on Iranian nuclear facilities.
	Deny (Dsa)	Saudi Arabia denies Israel access to Saudi airspace.
	Neutral (Nsa)	Saudi Arabia does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Saudi Arabia.
United States	Support (Sus)	The United States publicly supports Israeli strikes on Iranian nuclear facilities.
	Deny (Dus)	The United States denies Israel access to Iraqi airspace.
	Neutral (Nus)	The United States does not openly support strikes against Iranian facilities, but does not actively seek to prevent them including over flights of Iraq.

	Iran	Saudi Arabia	United States
1	Continue Program	Support	Support
2	Continue Program	Support	Deny
3	Continue Program	Support	Neutral
4	Continue Program	Deny	Support
5	Continue Program	Deny	Deny
6	Continue Program	Deny	Neutral
7	Continue Program	Neutral	Support
8	Continue Program	Neutral	Deny
9	Continue Program	Neutral	Neutral
10	Discontinue Program	Support	Support
11	Discontinue Program	Support	Deny
12	Discontinue Program	Support	Neutral
13	Discontinue Program	Deny	Support
14	Discontinue Program	Deny	Deny
15	Discontinue Program	Deny	Neutral
16	Discontinue Program	Neutral	Support
17	Discontinue Program	Neutral	Deny
18	Discontinue Program	Neutral	Neutral
19	Pursue nuclear power only	Support	Support
20	Pursue nuclear power only	Support	Deny
21	Pursue nuclear power only	Support	Neutral
22	Pursue nuclear power only	Deny	Support
23	Pursue nuclear power only	Deny	Deny
24	Pursue nuclear power only	Deny	Neutral
25	Pursue nuclear power only	Neutral	Support
26	Pursue nuclear power only	Neutral	Deny
27	Pursue nuclear power only	Neutral	Neutral

Table 3A: Pairwise Comparison Grid

Israeli Attack					2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27				
			US		Dus	Nus	Sus	Dus	Nus																									
			SA		Ssa	Ssa	D's	D's	D's	N's	N's	N's	Ssa	Ssa	Ssa	D's	D's	D's	N's	N's	N's	Ssa	Ssa	Ssa	D's	D's	D's	N's	N's	N's				
			Iran		CP	DP	NPO																											
		Iran	SA	US																														
Votes					0	0	1	1	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1				
17	1	CP	Ssa	Sus	1	1	0	0	0	0	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	0				
8	2	CP	Ssa	Dus		1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	1	1	1	1			
13	3	CP	Ssa	Nus			1	1	1	1	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	1	0	0	1	1			
20	4	CP	Dsa	Sus				0	1	0	0	1	0	0	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1			
20	5	CP	Dsa	Dus					1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0			
22	6	CP	Dsa	Nus						0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1			
21	7	CP	Nsa	Sus						0	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1			
13	8	CP	Nsa	Dus									1	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	0	0	1			
24	9	CP	Nsa	Nus										0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0			
1	10	DP	Ssa	Sus										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2	11	DP	Ssa	Dus											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1	12	DP	Ssa	Nus												0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5	13	DP	Dsa	Sus													1	1	1	1	1	1	0	1	1	1	1	1	0	1	1			
15	14	DP	Dsa	Dus														0	0	0	0	0	1	0	1	1	1	1	1	1	1			
15	15	DP	Dsa	Nus															0	1	0	1	0	0	1	1	1	1	0	1	1			
7	16	DP	Nsa	Sus																1	1	1	0	0	1	1	1	1	1	0	1			
11	17	DP	Nsa	Dus																	0	0	0	1	1	0	0	0	0	0	0			
12	18	DP	Nsa	Nus																		1	0	0	1	1	1	1	0	1	1			
11	19	NPO	Ssa	Sus																			0	0	1	1	1	1	1	1	1			
2	20	NPO	Ssa	Dus																				1	1	1	1	1	1	1	1			
8	21	NPO	Ssa	Nus																					0	0	0	0	0	0	1	1		
15	22	NPO	Dsa	Sus																						1	1	1	0	1	1			
20	23	NPO	Dsa	Dus																							0	0	0	0	1	1		
19	24	NPO	Dsa	Nus																								1	0	1	1	1		
17	25	NPO	Nsa	Sus																									0	1	1	1		
9	26	NPO	Nsa	Dus																										1	1	1	1	
23	27	NPO	Nsa	Nus																											0	1	1	1
351	Total																																	

Table 3B: Pairwise Comparison Grid

No Israeli Attack					2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27									
				US	Dus	Nus	Sus	Dus	Nus																														
				SA	Ssa	Ssa	Dsa	Dsa	Dsa	Nsa	Nsa	Nsa	Ssa	Ssa	Ssa	Dsa	Dsa	Dsa	Nsa	Nsa	Nsa	Ssa	Ssa	Ssa	Dsa	Dsa	Dsa	Nsa	Nsa	Nsa									
				Iran	CP	DP	NPO																																
		Iran	SA	US																																			
Votes					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1									
0	1	CP	Ssa	Sus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
						0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0									
9	2	CP	Ssa	Dus		1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1									
							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1									
2	3	CP	Ssa	Nus			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0									
								1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0									
7	4	CP	Dsa	Sus				0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1									
									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
26	5	CP	Dsa	Dus					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1									
										0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
22	6	CP	Dsa	Nus						1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1									
											1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1									
3	7	CP	Nsa	Sus							0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
												0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0	1									
12	8	CP	Nsa	Dus								1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0									
													0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0	0									
9	9	CP	Nsa	Nus									1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1									
														1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1									
7	10	DP	Ssa	Sus										0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0									
															0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1									
16	11	DP	Ssa	Dus											1	1	0	0	1	0	1	1	0	1	0	0	0	1	0	1									
																1	1	1	1	1	1	1	0	1	0	1	1	1	0	1	0								
12	12	DP	Ssa	Nus												0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1								
																	1	1	0	1	0	0	1	0	1	0	1	1	1	0	1								
15	13	DP	Dsa	Sus													0	0	1	0	1	1	0	1	0	1	0	0	1	0	1								
																		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0							
24	14	DP	Dsa	Dus														1	1	1	1	1	1	1	1	1	1	0	1	1	1	1							
																			0	1	0	0	1	0	0	1	0	0	0	0	0	0							
20	15	DP	Dsa	Nus														1	0	1	1	0	1	1	0	1	1	0	1	1	1	1							
																			1	1	0	1	0	1	0	1	1	1	0	1	0	1							
13	16	DP	Nsa	Sus															0	0	1	0	1	0	0	0	1	0	0	1	0	1							
																				1	0	0	0	0	0	0	1	0	0	0	0	0							
21	17	DP	Nsa	Dus																0	1	1	1	1	1	0	1	1	1	1	1	1							
																					0	1	0	0	1	0	0	1	0	0	1	0							
17	18	DP	Nsa	Nus																	1	0	1	1	0	1	1	0	1	0	1	1							
																						1	1	1	1	1	1	1	1	1	1	1							
3	19	NPO	Ssa	Sus																		0	0	0	0	0	0	0	0	0	0	0							
																							0	0	1	1	0	1	0	1	0	1							
19	20	NPO	Ssa	Dus																			1	1	0	0	1	0	1	0	1	1							
																								1	1	1	0	1	0	1	0	1	0						
7	21	NPO	Ssa	Nus																				0	0	0	1	0	1	0	1	1	1						
																									1	1	0	1	0	1	0	1	0	1					
14	22	NPO	Dsa	Sus																					0	0	1	0	1	0	1	0	1	0					
																										0	0	0	0	0	0	0	0	0	0				
25	23	NPO	Dsa	Dus																							1	1	1	1	1	1	1	1	1				
																												0	1	0	1	0	1	0	1	0			
18	24	NPO	Dsa	Nus																								1	0	1	0	1	0	1	0	1			
																													1	1	1	1	1	1	1	1	1		
6	25	NPO	Nsa	Sus																									0	0	0	0	0	0	0	0	0		
18	26	NPO	Nsa	Dus																																			
6	27	NPO	Nsa	Nus																																			
351	Total																																						

Table 4: Pairwise Comparison Vote Results Grid

Table 4: Pairwise Comparison Vote Results Grid									
	Israeli Attack					No Israeli Attack			
		Iran	SA	US			Iran	SA	US
Votes					Votes				
24	9	CP	Nsa	Nus	26	5	CP	Dsa	Dus
23	27	NPO	Nsa	Nus	25	23	NPO	Dsa	Dus
22	6	CP	Dsa	Nus	24	14	DP	Dsa	Dus
21	7	CP	Nsa	Sus	22	6	CP	Dsa	Nus
20	4	CP	Dsa	Sus	21	17	DP	Nsa	Dus
20	5	CP	Dsa	Dus	20	15	DP	Dsa	Nus
20	23	NPO	Dsa	Dus	19	20	NPO	Ssa	Dus
19	24	NPO	Dsa	Nus	18	24	NPO	Dsa	Nus
17	1	CP	Ssa	Sus	18	26	NPO	Nsa	Dus
17	25	NPO	Nsa	Sus	17	18	DP	Nsa	Nus
15	14	DP	Dsa	Dus	16	11	DP	Ssa	Dus
15	15	DP	Dsa	Nus	15	13	DP	Dsa	Sus
15	22	NPO	Dsa	Sus	14	22	NPO	Dsa	Sus
13	3	CP	Ssa	Nus	13	16	DP	Nsa	Sus
13	8	CP	Nsa	Dus	12	8	CP	Nsa	Dus
12	18	DP	Nsa	Nus	12	12	DP	Ssa	Nus
11	17	DP	Nsa	Dus	9	2	CP	Ssa	Dus
11	19	NPO	Ssa	Sus	9	9	CP	Nsa	Nus
9	26	NPO	Nsa	Dus	7	4	CP	Dsa	Sus
8	2	CP	Ssa	Dus	7	10	DP	Ssa	Sus
8	21	NPO	Ssa	Nus	7	21	NPO	Ssa	Nus
7	16	DP	Nsa	Sus	6	25	NPO	Nsa	Sus
5	13	DP	Dsa	Sus	6	27	NPO	Nsa	Nus
2	11	DP	Ssa	Dus	3	7	CP	Nsa	Sus
2	20	NPO	Ssa	Dus	3	19	NPO	Ssa	Sus
1	10	DP	Ssa	Sus	2	3	CP	Ssa	Nus
1	12	DP	Ssa	Nus	0	1	CP	Ssa	Sus
351	Total				351	Total			

HOW ISRAEL CAN STRIKE IRAN

Israeli strike against Iranian nuclear sites

- Possible air strike routes
- Strike with Jericho II Missiles



Natanz
Uranium enrichment plant

Arak
Heavy water plant; future reactors for plutonium production

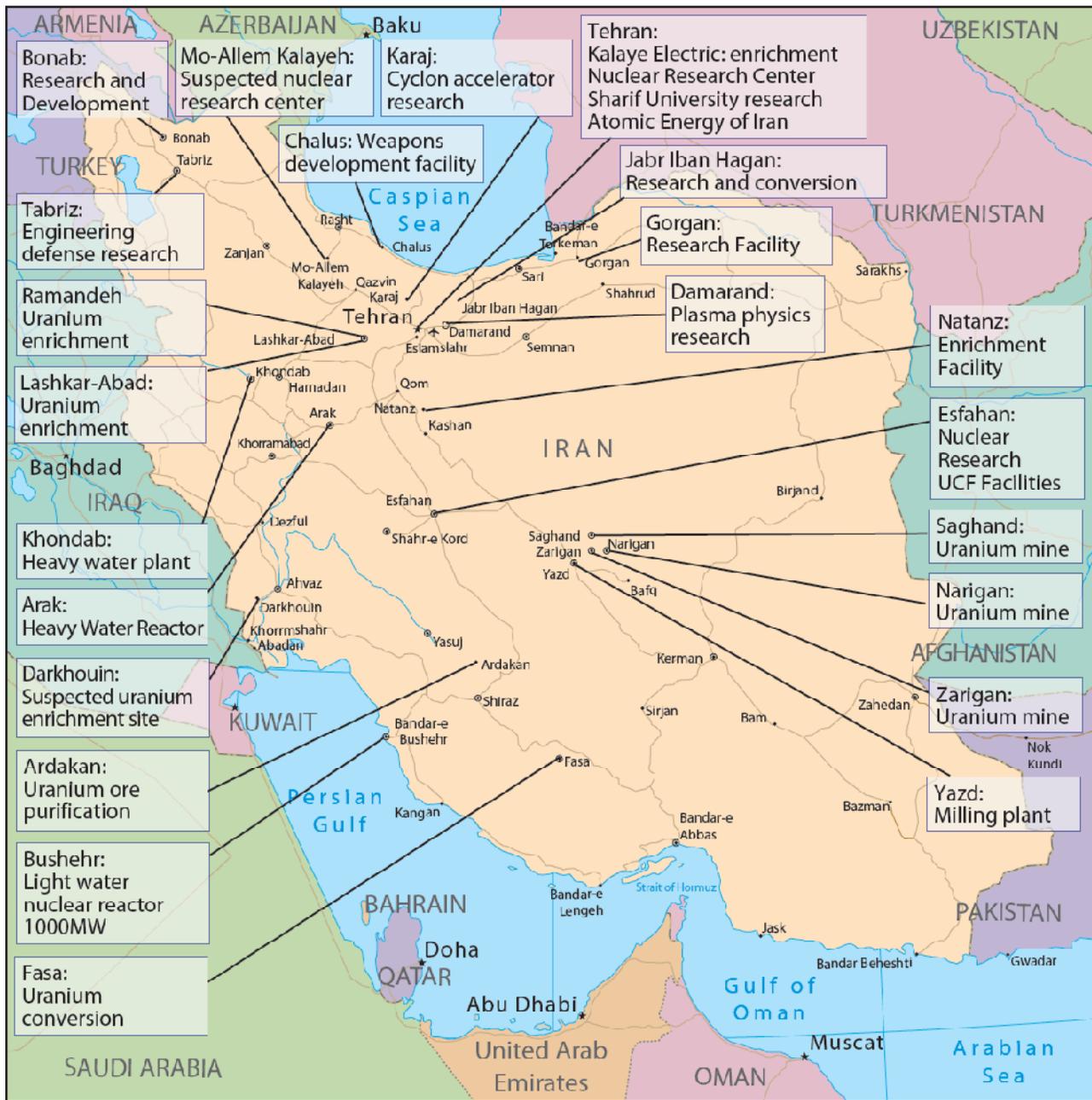
Esfahan
Nuclear research center; uranium conversion plant

- Uranium processing plant
- Uranium mine
- Heavy water plant
- Nuclear research plants
- Uranium enrichment plant
- Light water reactor (Under construction)



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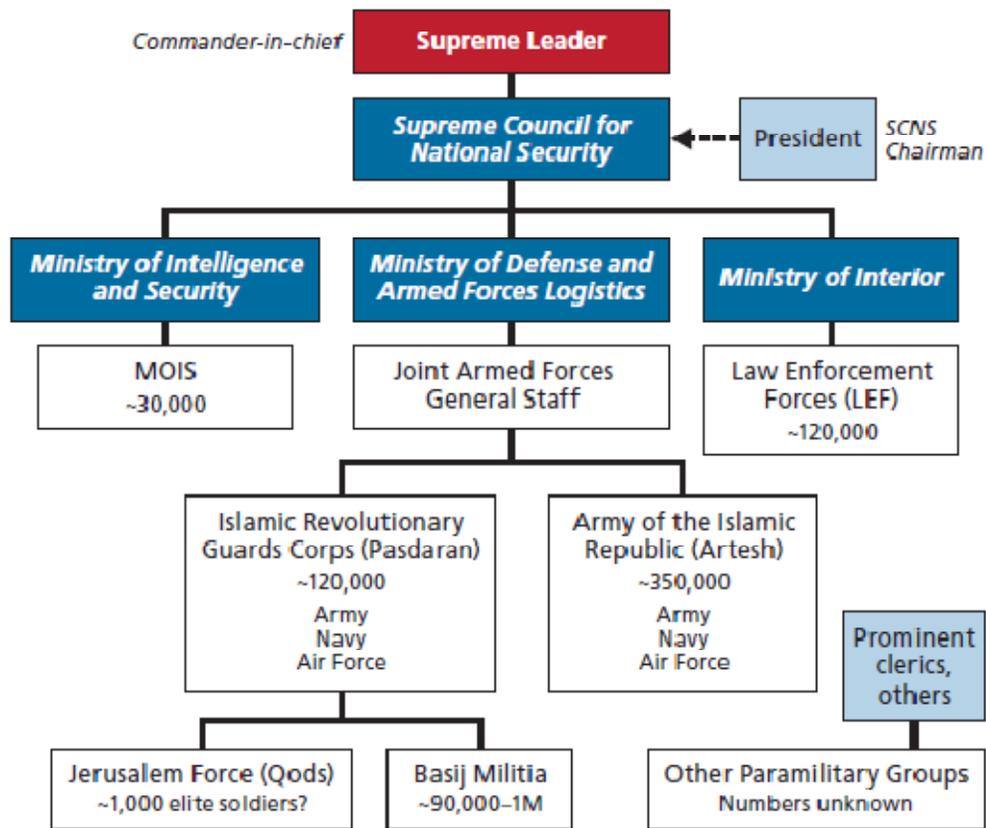
⁸⁷ Business Insider.Com. 2010. *Map of the Day: Here's The Israeli Attack Route Iran Just Cut Off.* (BusinessInsider.com. Internet. Available from <http://www.businessinsider.com/israel-syria-iran-radar-2010-7>, accessed August 2010), NP.



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⁸⁸ Nuclear Threat Initiative. 2006. *Iran Nuclear Sites*. NTI.Org. (Internet. Available from <http://www.nti.org>, accessed July 2010), NP.

Major Institutions of the Iranian Defense Establishment



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⁸⁹ Green, Jerrold D. et al. 2009. *Understanding Iran*. (Santa Monica: RAND Corporation), p 11.

Partial listing of Iranian Nuclear Facilities⁹⁰	
Tehran Nuclear Research Centre, Consists of:	Kelaye Electric Company – Tehran, Consists of:
<ul style="list-style-type: none"> - Tehran 5Mwe Nuclear Research Reactor18 - A Radioisotope Production Facility - Jabr Ibn Hayan Multipurpose Laboratories19 - A radioactive waste Handling Facility - Comprehensive Separation Laboratory for work with uranium - Laser Separation Laboratory for experiments into enrichment of uranium by lasers 	<ul style="list-style-type: none"> - Company belonging to the Atomic Energy Organization of Iran - P-1 centrifuges assembled and tested here 1997 – 2002, before work moved to Natanz
Isfahan Nuclear Technology Centre, Consists of:	Bushehr Nuclear Power Plant, Consists of:
<ul style="list-style-type: none"> - 30kW Miniature Neutron Source Reactor21 - Light Water Sub-Critical Reactor - 100W Heavy Water Zero Power Reactor22 - Graphite Sub-Critical Reactor (decommissioned) - Uranium Conversion Facility Nuclear - Fuel Manufacturing Plant - Fuel Fabrication Laboratory - Uranium Chemistry Laboratory (closed down as of Nov 2004) - Zirconium Production 	<ul style="list-style-type: none"> - 1000 Mwe VVER-1000 Reactor - Spent storage pool - New fuel store
Natanz, Consists of:	Karaj Nuclear Research Centre, Consists of:
<ul style="list-style-type: none"> - Operational pilot scale uranium enrichment facility (planned to have 1000 centrifuges)23 - Commercial scale plant under construction (planned to have 50,000 centrifuges) 	<ul style="list-style-type: none"> - Enrichment equipment storage - Nuclear waste store
Lashkarabad, Consists of:	Arak, Consists of:
<ul style="list-style-type: none"> - Pilot uranium laser enrichment plant (now dismantled) 	<ul style="list-style-type: none"> - Iran 40 Mw(th) Heavy Water Nuclear Research Reactor IR-40 - Heavy Water Production Plant - Hot cell facility for production of isotopes (abandoned)
Anarak, Consists of:	Gachin, Consists of:
<ul style="list-style-type: none"> - Nuclear waste storage site 	<ul style="list-style-type: none"> - Uranium mine - Raw uranium ore to yellowcake conversion facility
Saghand, Consists of:	Farayand Technique, Consists of:
<ul style="list-style-type: none"> - Uranium mine 	<ul style="list-style-type: none"> - Centrifuge assembly and quality control plant
Pars Trash, Consists of:	
<ul style="list-style-type: none"> - centrifuge assembly plan 	

⁹⁰ Greenpeace International. 2007. *An Overview of Nuclear Facilities in Iran, Israel and Turkey*. (Internet. Available from <http://www.greenpeace.org/raw/content/international/press/reports/nuclear-facilities-iran-israel-turkey.pdf>, accessed June 2010), p 6.