Radical Apocalypticism (RADAP) is a belief system that provides a logical framework for violent action in order to help usher in a new world order, which in the case of Iranian RADAP is a universal reign of the Mahdi. Since leaders with RADAP thinking have a distinct reasoning framework that significantly changes traditional cost-benefit calculations, it is imperative that analysts consider this plausible influence when evaluating Iran’s nuclear weapons intentions. However, with a few exceptions, past analyses of the Iranian nuclear situation have typically ignored the role of religion in shaping the leaders’ political decisions.

Drawing on the tools of traditional intelligence approaches, scholarship on religious apocalypticism, and system dynamics, this paper explores how RADAP ideology among Iran’s leadership might impact the dynamics surrounding Iran’s nuclear weapons development efforts. After addressing the factors and governing logic by which analysts typically assess Iran’s cost-benefit approach, we outline a starkly different framework of reasoning based on apocalyptic thinking. Next, we identify six suppositions of reality that distinguish violent RADAP thinking from that of peaceful forms of apocalypticism, such as the majority of Iranians hold. We then introduce six Measures from OSINT (open source intelligence) that analysts can use to evaluate the evidence for RADAP in a
given individual or group, including for key leadership positions in Iran. To illustrate that RADAP thinking in the Iranian leadership is plausible, we apply these Measures to the public speech and actions of President Mahmoud Ahmadinejad and the Supreme Leader Ali Khamenei. This preliminary analysis, which awaits a fuller application, indicates that it is highly plausible, though not certain, that RADAP ideology could play a role in the decision making calculus of these two leaders. Finally, we explore through a qualitative systems model the ways in which RADAP worldviews among key Iranian leaders could significantly “change the game” in our dealings with Iran. The goal of this analysis is to identify the mechanisms by which potentially catastrophic consequences could arise from a failure to account for the possible impact of RADAP dynamics in Iran’s decision making apparatus.

While it is not possible to make firm predictions, since more work is needed to more fully assess the extent of RADAP influence across the Iranian leadership, the analysis that follows vividly highlights how a failure on the part of the international intelligence and policy community to account for the dynamics introduced by RADAP could lead to policies that give the opposite results than intended – an Iranian leadership that is more deeply committed to developing and even using nuclear weapons. In addition, the analysis suggests ways in which the United States and its Allies can monitor the Iranian leadership and continue to apply appropriate pressure to Iran, while mitigating the dynamics that could enhance RADAP influence in Iran’s decision making calculus.
THE STATE OF INTELLIGENCE ON THE IRANIAN NUCLEAR PROGRAM

The control of nuclear weapons is one of the most difficult and urgent, international policy problems.\(^1\) Efforts to limit the spread of nuclear weapons are fraught with controversy and conflict with Iraq, North Korea, Pakistan, Syria, and other nations.

Currently, the main focus of attention on the proliferation issue is Iran. In the 1960s, under the Shah’s regime, Iran began a peaceful nuclear program, with assistance from the United States and other countries, and signed the Nuclear Non-Proliferation Treaty. After the 1979 Islamic Revolution brought a theocratic regime to power, the nuclear program, including any possible military uses, was suspended because of concerns on the part of Ayatollah Khomeini that nuclear weapons were against the tenets of Islam. In the midst of the Iran-Iraq War (1980-1988), Iraq’s use of chemical weapons prompted the Iranian government to quietly start a nuclear weapons program.

In the years that followed, Iran has, at least on a moderate scale, figured out how to perform all of the steps of the so-called nuclear fuel cycle, which can eventually result in a nuclear weapon: mining uranium ore, milling the ore into what is known as yellowcake, conversion of the yellowcake to uranium hexafluoride, and enrichment of the uranium hexafluoride (so far Iran has confirmed enrichment to 20%). Iran also has missiles that could deliver a nuclear weapon.\(^{ii}\) With the technical issues largely solved, all that remains are political decisions to enrich uranium to weapons grade (more than 90%) and then assemble a weapon.

Currently, the conventional wisdom is that, after supporting terrorism and subversion abroad in the 1980s and early 1990s, the Iranian theocratic regime has now
evolved into a more cautious and pragmatic government. Such a government would follow traditional international policy goals such as trade, influence, and security. A more moderate government might contemplate building a nuclear weapon with prestige and deterrence in mind (again traditional policies), but would be unlikely to pursue a weapons program to the point that the existence of the regime was endangered. According to the conventional wisdom, any actual use of a nuclear weapon would be even less likely, given the high likelihood of devastating retaliation.

Iran has signed the Nuclear Non-Proliferation Treaty, under which it forgoes the development of nuclear weapons in return for international assistance with peaceful nuclear power, along with verification of peaceful use from inspectors from the UN’s IAEA, the International Atomic Energy Agency. However, Iran’s relationship with the IAEA has been a troubled one. In August 2002 an Iranian opposition group, the National Council for Resistance in Iran (the political wing of the Mujahideen-e Khalq terrorist group), revealed that there was a covert underground uranium enrichment facility at Natanz, previously unknown to the IAEA. A February 2003 IAEA visit to Natanz confirmed that enrichment was underway, raising concerns about Iran’s intentions.

Then, in September 2009 Western countries announced that their intelligence agencies had uncovered a second underground enrichment facility at Fordow, near Qom. In November 2011 the IAEA issued a report in which, for the first time, it expressed “concerns about possible military dimensions to Iran’s nuclear programme.” As recently as February and March of 2012 there was a dispute between Iran and the IAEA because Iran would not allow inspectors access to a military facility at Parchin, near
Tehran. Eventually, after a delay, the IAEA inspectors were allowed inside; but there were indications that the site had been cleaned up.\textsuperscript{viii}

The February 24, 2012 Atomic Energy Agency (IAEA) report provides evidence that Iran is accelerating its efforts at uranium enrichment.\textsuperscript{ix} Since the IAEA’s November, 2011 report, Iran’s production of 20% uranium has tripled and the number of enriching centrifuges at the Natanz Fuel Enrichment Plant has increased by 50%. Iran continues to restrict IAEA access to critical information about the intended use for these facilities. Moreover, Iran’s claim to enrich uranium only to 20% for medical research is highly suspect, given that IAEA inspectors found particles of 27% uranium at the Fordow facility and given that Iran has yet to offer a complete explanation for this discrepancy.

As Iran moves closer to a nuclear weapon, the international community (especially the United States and Israel) face a difficult policy challenge, with possible outcomes ranging from a negotiated settlement in which Iran agrees to stand down from building nuclear weapons, to acceptance of Iran as a nuclear power, to a strike to delay or destroy the program, and perhaps even a wider conflict. If the conventional wisdom regarding a trend toward pragmatism in Iran is accurate, the current policy of international sanctions, coupled with incentives for Iran to abandon its apparent nuclear ambitions, offer hope of a negotiated settlement.

Commentators on the Iranian nuclear program, however, have largely missed a much more dangerous possibility: that some in Iran might actually welcome confrontation with the United States, Israel, and with some in the Sunni world – confrontation that might even involve the use of nuclear weapons. The conventional
wisdom has been wrong about Iran in the past, especially when Western observers tried to fathom the role of religion in significant episodes in the country’s history, such as the fall of the shah in 1979.

“The main difficulty was that analysts, like everyone else at the time, underestimated the potential if not existing role of religion in many societies . . . it still seemed inconceivable that anything as retrograde as religion, especially fundamentalist religion could be crucial . . . it is difficult for most people living in a secular culture to empathize with and fully understand religious beliefs—especially when the religion is foreign to them.”

To understand why this is more than a remote possibility, it is necessary to delve into the role Iranian religious beliefs could play as part of the dynamics of the government’s decision whether to build, and perhaps even use, a nuclear weapon.

A NEW PARADIGM FOR RED TEAM ANALYSIS: APOCALYPTICISM AS A CULTURAL SYSTEM

A common starting point of intelligence analysis on Iran is the assumption that they are, as Chairman of the Joint Chiefs of Staff General Martin Dempsey says, “a rational actor,” and that they will act to preserve their national interests. However, if the analyst uses his/her own reasoning framework to determine what constitutes “rationality,” and if this includes relegating religion to the private sphere, this assumption can be quite misleading in the analysis of a religious culture. As sociologist Clifford Geertz established decades ago in his essay “Religion is a Cultural System,” a
religion is a set of symbols that creates an overarching construction of reality that seems uniquely realistic to its adherents and that instills in them powerful moods and motivations. Hence, a traditional “cost-benefit approach” that reasons that Iran would not use nuclear weapons even if it had them, because of the dire consequences to its own nation, may in itself not be a “rational” conclusion, if certain religious motivations influence key Iranian leaders.

“Apocalypticism” is a religious-cultural system that exists across many religions, including Shi’ite Islam in Iran. It informs an adherent’s view of the world, goals, motivations, self-identity, and relationships to others. For the moderate apocalypticist, this worldview may compete with other conceptual systems, including political and social frameworks. However, for radical apocalypticists, all other aspects of living - morality, politics, economics, views on the environment, social relations, the ethics of violence, and even weather events – are fitted into an overarching apocalyptic framework from which they derive their meaning.

Apocalypticism is a social/theological outlook introduced to the world by ancient Persia and adapted by Hellenistic Judaism, through which it profoundly influenced early Christianity and Islam. Each contemporary culture transforms the apocalyptic framework in particular ways, but there are general features of the system that have proliferated across cultures for millennia, and which still persist. The primary supposition of an apocalyptic worldview is that the mundane world is profoundly broken, controlled by evil forces or “Evil.” Through various means, whether a dream, vision, or a visit from an angel, a revelation discloses that the way things seem to be is
not the ultimate view of reality. Instead, the recipient of the revelation understands the universe from a larger, divine point of view, recognizing that beyond the earth there is a transcendent realm from which God / the divine rules. Apocalypticists want above all to bridge that gap between our world and the divine world, whether by ascending to the place where the divine rule exists, or by bringing that divine rule to earth.

Most apocalyptic scenarios, including the Shi’ite apocalypticism that predominates in Iran, focus on “eschatology,” speculations about a grand end to normal historical time when Evil is defeated and divine Goodness rules the universe in a new way. Adherents with a **passive eschatology** expect this eventual end to history, but they do not know when or where this will occur, so they patiently wait and hope for that era, acting out the values of their faith in the meantime. They are not “passive” in their religion or values, but only with respect the endtime, the arrival of which is not contingent on their actions. Adherents with an **active eschatology**, on the other hand, believe that some action of theirs actually triggers the intervention of divine agents (e.g. Christ, the Mahdi, angels), to end regular history and commence a new, unique era in which Evil is overcome. Not only do they hope to hasten its arrival, they also maintain that their actions are integral to bringing it about. The new era may not be the final end to Evil, but could be the new rule of a divinely ordered society (e.g. the millennial kingdom, the messianic rule) that vanquishes Evil in such as way as to herald its ultimate end.

For now, apocalypticists identify with the oppressed who live in a world temporarily dominated by evil. For this reason, an increased sense of oppression
validates and deepens the apocalyptic worldview. In the case of apocalypticists with an active eschatology, oppression adds a sense of urgency, further motivating them to act to precipitate the endtime even sooner. Apocalypticists may experience an increased sense of persecution through many means: physical aggression, such as occurs in war; economic assaults, such as sanctions; moral attacks, such as occurs in war; economic assaults, such as sanctions; moral attacks, humiliation or mockery; or cultural oppression, such as of the encroachment of a countervailing culture. In this way, an apocalyptic framework becomes a self-reinforcing lens by which adherents interpret the world around them, which in turn further validates their apocalyptic view.

Apocalypticists believe themselves to be privy to many cosmic secrets, which may be about eschatology, hidden spatial locations, secrets to human identity, the meaning of weather or cosmological events, and/or the “real” nature of worldly events and conflicts. Apocalyptic seers who continue to receive revelations and apocalyptic interpreters of original revelations, (e.g., Scripture, such as the Book of Revelation or the Qur’an), may therefore accrue significant authority in their societies.

RADICAL APOCALYPTICISM OR RADAP: A NEW FORMULATION

In itself, apocalypticism is neither violent nor non-violent. Michael Eisenstadt and Mehdi Khalaji’s analysis of Iranian nuclear proliferation distinguishes between “violent apocalypticism” and other forms of Shi’ism, and urges intelligence analysts to examine the influence of violent apocalypticism on Iranian politics. This study refines their insight, by proposing a formula identifying violent, radical apocalypticism by the
presence of six core suppositions about reality that are shared by its adherents.\textsuperscript{xviii} This formula itself is transcultural, but applicable to the Iranian Shi’ite context. From this point forward, this study uses “RADAP” to refer to this violent, radical apocalypticism.

The first three Reality Suppositions derive from a study on religious terrorism conducted by religion scholar Mark Juergensmeyer, who examined the characteristics of religious groups that become violent. Juergensmeyer found that religious groups that characterize conflicts as “cosmic war” are more likely to be violent than those who see conflicts in limited social or political terms.\textsuperscript{xix} He explains that for some religious groups, “Cosmic wars . . . are larger than life . . . [they] evoke great battles of the legendary past . . . relate to metaphysical conflicts between good and evil . . . are intimately personal but can also be translated to the social plane,” and ultimately “transcend human experience.”\textsuperscript{xx}

According to Juergensmeyer, a religious group is likely to characterize a conflict as a cosmic war when it holds to one or more of three Reality Suppositions:

1. \textit{The struggle involves a defense of basic identity and dignity}. \textit{It is “. . . of ultimate significance – a defense not only of lives but of entire cultures.”}\
2. \textit{Losing the struggle is unthinkable, since it is really “taking place on a transhistorical plane.”}\
3. \textit{The struggle cannot be won through human effort alone. While it seems “hopeless in human terms. . . the possibilities of victory are in God’s hands.”}\textsuperscript{xxi}
Juergensmeyer’s approach is very helpful in grasping the mindset of violent religious groups, but it is not entirely reliable for distinguishing peaceful from radical apocalypticists. It is possible that an apocalypticist could adhere to all three conditions on Juergensmeyer’s list and still not be violent. An example would be an apocalypticist who accepts that divine Good is engaged in a cosmic struggle with Evil that presently rules the earth, but who also maintains that his/her own role is to wage peaceful, positive social change in anticipation of God’s eschatological intervention.

Adherents of violent RADAP are apocalypticists who exhibit all of Juergensmeyer’s characteristics of religious groups that characterize confrontations as “cosmic war,” along with three additional Reality Suppositions:

4. The world comprises two starkly oppositional social groups: an in-group that belongs to the side of Good and an out-group representing Evil. The in-group members describe the out-group members in dehumanizing or demonizing terms.

For RADAP adherents, their in-group of the righteous belongs to and acts on the side of the cosmic force of Good. “Cosmic” here denotes a sphere of ultimate Goodness that is larger than human activity. They think that out-group members are on the side of the cosmic force of Evil to varying degrees, whether by intentional action or simply by not belonging to the RADAP group. In other words, the out-group can include those who are actively trying to advance Evil in the world. This includes moderates or “hypocrites” from the apocalypticists’ own religion whom they judge to be lax in their religious observance.\textsuperscript{xxii} Frequently, RADAP adherents are more upset with these moderate
“traitors” than with their enemies who are outright “evil,” which partly explains why Al-Qaeda has killed scores more Muslims than Western victims.\textsuperscript{xxiii}

RADAP adherents also tend to see members of the out-group as “other de-individuated” or stripped of personal identities, save for their out-group membership. For instance, a person is no longer “a wife,” or “Sally,” but it just a member of “group X.” According to sociologist Anthony Stahelski, language that monolithically dehumanizes – e.g., “group X people are dogs” – or demonizes the out-group members – e.g. “group X people are devils” – is further evidence of social psychological conditioning towards violence.\textsuperscript{xxiv} By contrast, radical apocalypticists often describe themselves and their in-group with language that connotes piety, moral certitude, and purity.

These four suppositions are contingent on the perception that Evil is in control of the world for now, especially in the case of groups that oppose the adherents of RADAP. They feel oppressed, even persecuted, but sense that God will ultimately vindicate them. Hence, any perceived increase in oppression reinforces these suppositions.

Another supposition about reality that RADAP adherents hold is:

5. \textit{Violence is viewed as being somehow salvific and redemptive, leading to the victory of God / Goodness.}

For the RADAP adherent, violence may not only be necessary for waging the cosmic war on the side of God, it may be the very hallmark of piety.\textsuperscript{xxv} Physical violence may be directed at the in-group, including suicide missions, and/or at the out-group. Violence may also take psychological forms of threat, intimidation, or humiliation toward the out-group.
Finally, the adherent to RADAP also typically maintains belief in:

6. *Active eschatology*, maintaining that he/she plays a role in triggering the advent of eschatological events, especially the intervention of divine agents to end the present era of history in favor of a unique, transhistorical era in which God rules.

None of these six Reality Suppositions is sufficient alone to indicate that an apocalyptic group is or will become violent. However, when apocalypticists view reality through this full constellation of suppositions, it is likely that they have a RADAP ideology. Hence, a key intelligence task is to assess the extent to which a group or individual embraces these Reality Suppositions. In a later section we propose measures by which this assessment can be done and apply them to a brief analysis of the public speech and actions of President Ahmadinejad and Supreme Leader Khamenei.

**VARIETIES OF APOCALYPTICISM IN ISLAM**

All of Islam is to some degree apocalyptic, but the vast majority of Muslims do not share a RADAP belief system. In general, the Qur’an expects a judgment day (*yawm ad-din*) on which Allah (God) will judge the righteous, who will be rewarded in a garden in heaven, and the wicked, who will be punished in the fires of Jahim. Most Islamic religious authorities maintain a passive eschatology that does not strive to predict the timing of this Day of Reckoning, nor do they expect that its arrival depends on the actions of humans. Until this Day, Muslims are enjoined to be faithful, to keep the five pillars, and act as a witness to the one true God as a messenger to the rest of the world.
No reliable estimates exist of how many Muslims embrace an active eschatology, believing that they play a key role in the advent of endtime events. It is likely a small percentage of Islamists, those who desire the state to be ruled by Islamic law rather than secular law; this group is variously estimated at 6-15% of the world’s 1.7 billion Muslims. It is also important to note that the vast majority of Muslims, including Islamists, eschew terrorism since the Qur’an clearly prohibits offensive jihad (struggle) and maintains instead an obligation towards defensive jihad, but only in cases in which there is an aggressor and Islam is persecuted (Qur’an 2:185-190; 5:32).

However, in the last several decades, a new theology has emerged in both radical Sunni and Shi’a Islam that equates offensive and defensive jihad and it has done so in apocalyptic terms, claiming that we are at a turning point in history. Theologians such as Sayyid Qutb and Abdullah `Azzam preached that it is time for faithful Muslims to wage external jihad since the difference between “offensive” and “defensive” jihad has collapsed. In their view, this is because Islam is under constant attack through economic, cultural and political aggression from Israel, Western Europe, and America and its Allies. xxvi Such interpreters urge the ummah or Muslim community to wage war against “the West” as an obligation incumbent on all Muslims at this unique, divinely ordered moment in history. xxvii

VARIETIES OF IRANIAN APOCALYPTICISM

About 90% of Iran’s religious adherents belong to Twelver Shi’ism, which holds that the Twelfth Imam Muhammad al-Mahdi went into hiding in the early 10th century
C.E. but will someday return alongside Jesus Christ. Most Shi’ites expect that Jesus will defeat the *daijal* or Antichrist, while the Mahdi will purge the Muslim world of hypocrisy and injustice and unite it in a just, Islamic empire.

In Iran, various Shi’ite groups maintain starkly divergent understandings of how this apocalyptic scenario will unfold. The senior, traditional clerics look to older apocalyptic sources that shy away from interpreting political events as signs of the end. xxviii These clerics strongly uphold a *passive eschatology*, refusing to predict the timing of the arrival of the Mahdi and traditionally discouraging speculation that tries to fit contemporary events into prophecy.

By contrast, a diverse group consisting of some hardliners, war generation members, university students, newly ordained clerics, members of President Ahmadinejad’s cabinet, and the rural poor, is influenced by a recent, populist brand of apocalyptic interpretation. Its advocates – many of whom lack the requisite clerical qualifications – interpret passages from the Qur’an, *hadith*, and Book of Revelation as prophecy to decode signs of the end time and to predict the location and timing of the Mahdi’s arrival, when he will punish Sunni Muslims, destroy some mosques, rout the corrupt members of the *ulema*, and destroy the enemies of Islam (commonly Israel and “the Byzantines” or “the Crusaders,” identified as the West, especially America). xxx

Frequently, these populist apocalyptic interpreters vigorously demonize Israel as the *daijal* or Antichrist, or “the Little Satan,” and America as “the Great Satan,” and characterize global conflicts as a “cosmic war” pitting the Shi’a against the rest of the evil world. xxx They espouse an active eschatology that identifies particular individuals,
especially Supreme Leader Khamenei, President Ahmadinejad, and Hezbollah leader Nasrallah, as playing key roles in ushering in the end time events and the arrival of the Mahdi’s kingdom.

If this new, populist apocalypticism views violence against evil enemies as a legitimate and divinely mandated means of bringing about the desired endtime, it may justifiably be characterized as radical apocalypticism (RADAP). To the extent that RADAP ideology influences key decision makers, it changes the political calculus, redefining what constitutes “rational” action. Given Iran’s development of nuclear power and the possible development of nuclear weaponry, it is vital that analysts monitor the nature and depth of apocalyptic beliefs amongst the Iranian leadership.

MEASURES FOR ASSESSING EVIDENCE OF RADAP THINKING

To aid analysts in gauging the extent to which members of the Iranian leadership embrace the six RADAP Reality Suppositions, we provide six Measures that may be assessed through open source analysis (OSINT). These Measures are:

1) *Rhetoric Employing Key Symbols from Apocalyptic Scenarios*, especially rhetoric suggestive of the first three Reality Suppositions about cosmic war,

2) *Rhetoric of Eschatological Agency*, which indicates the presence of an active eschatology by assigning eschatological roles to the in-group or its key leaders,

3) *Rhetoric of Eschatological Imminence*, which indicates the belief that the endtime is coming soon,
4) Rhetoric Demonizing or Dehumanizing Opponents, which indicates an advanced stage of social-psychological conditioning towards violence,

5) Rhetoric Embracing Salvific Violence, which demonstrates whether or not the religious culture positively valences violence as redemptive and pious, and

6) Money/Resources Expended Toward Apocalyptic Infrastructure, Equipment, or Programs, which demonstrates the degree to which the leader has taken concrete steps to make the apocalyptic scenario a concrete reality.

APPLYING THE RADAP MEASURES TO THE IRANIAN LEADERSHIP

An exhaustive assessment of the influence of RADAP on Iran’s leadership exceeds the scope of this study, given the opacity and complexity of Iran’s decision making apparatus. Alongside executive, legislative and military branches (such as the President, Cabinet, Parliament, and Armed Forces), there is a parallel clerical system (Guardian Council, Expediency Council, Islamic Revolutionary Guards Corps [IRGC], and Supreme Leader). In principle, however, a decision about whether to proceed with the building of a nuclear weapon would be made as part of an ongoing struggle for power between four factions which operate across the government and military: (1) the war generation, including the IRGC and the President, who defended the country during the war with Iraq in the 1980s and believe that the conservatives have become corrupt and it is time for new leadership; (2) conservatives, including the senior clerics and the Supreme Leader, who took control after the fall of the shah in 1979 and want to maintain their power and privileges; (3) pragmatists, who are willing to make
compromises to promote state-controlled economic growth; and (4) reformers, who want more democracy and the rule of law. All factions support a peaceful nuclear program; on a weapons program they vary from willingness to put off having a nuclear bomb indefinitely (pragmatists and reformers) to pushing ahead (war generation and perhaps conservatives). For all practical purposes, the IRGC (mostly comprising representatives of the war-generation) is in control of any nuclear weapons and missile programs, but as explained below, the Supreme Leader retains ultimate control over decisions affecting the expediency of the regime.

Even given the diffuse nature of power in Iran, which is divided amongst so many factions and governmental bodies, a RADAP framework of thinking shared by a few key individuals (especially the Supreme Leader, President Ahmadinejad, with his ties to the IRGC, leaders of the IRGC, members of the President’s Cabinet, the influential cleric Mesbah Yazdi, etc.) could have a profound impact on what constitutes a rational action with respect to Iran’s nuclear intentions. Discerning the presence and extent of RADAP thinking in the leadership is difficult, however, since analysts must largely rely on OSINT. The purpose of this section is to demonstrate a nascent methodology of six measures for assessing through OSINT (open source material such as speeches, blogs, lectures, films and publications) the nature and extent of violent RADAP thinking amongst key leaders in Iran.

Space here only allows for a brief, illustrative application of the six measures of RADAP to the public speech and actions of President Mahmoud Ahmadinejad, followed by an even briefer summary of initial findings on Supreme Leader Khamenei. We urge a
fuller application of this methodology to the available rhetoric and actions of both leaders, as well as to that of other figures who are vital to Iranian nuclear deliberations.

1) Rhetoric Employing Key Symbols from Apocalyptic Scenarios and Cosmic War

Although it was not necessarily heard that way, President Ahmadinejad’s recent 2011 speech to the United Nations was apocalyptic. He first lists at length the sins of America, before explaining the only way to overcome evil in the world: “All of us should acknowledge the fact that there is no other way than the shared and collective management of the world in order to put an end to the present disorders, tyranny, and discriminations worldwide . . . .” The statement fulfills two of Juergensmeyer’s conditions for characterizing a struggle as cosmic war, since it presents this new order as worldwide in scope, involving the basic dignity of the world.

Ahmadinejad then explains that the new “management of the world” will come about through the leadership of the Mahdi:

A future . . . will be built when humanity initiates to trend the path of the divine prophets and the righteous under the leadership of Imam al-Mahdi, the Ultimate Savior of mankind and the inheritor to all divine messengers and leaders and to the pure generation of our great Prophet. The creation of a supreme and ideal society with the arrival of a perfect human being who is a true and sincere lover of all human beings, is the guaranteed promise of Allah. He will come alongside with Jesus Christ to lead the freedom and justice lovers to eradicate tyranny and discrimination, and promote knowledge, peace, justice freedom and love
across the world. He will present to every single individual all the beauties of the world and all good things which bring happiness for humankind.

Today nations have been awakened.xxxvii Ahmadinejad presents this worldwide eschatological rule as “guaranteed” because Allah has promised it. Losing this struggle against worldwide tyranny appears to be unthinkable for Ahmadinejad, since he maintains that it will be won by divine forces, the Mahdi and Jesus Christ. This statement fulfills all of the Indicators derived from Juergensmeyer’s conditions for characterizing a struggle as a “cosmic war.”xxxviii If taken at face value, Ahmadinejad believes that the scope of the Mahdi’s guaranteed rule will be universal, exceeding all earlier political states and religious authorities. Analysts should consider whether his loyalty to this vision exceeds his loyalty to the interests of the nation of Iran itself, and also prepare for the Red Team possibility that a human claimant could be identified as a the Mahdi, which has happened in recent decades in both Shi’ite and Sunni Islam.

2) Rhetoric of Eschatological Agency

In an earlier 2005 address to the United Nations that featured similar themes, Ahmadinejad claimed that a divine green light enveloped him while he spoke to the United Nations.xxxix This divine light has symbolic important in Shi’ism, since it is that which is passed on from the Prophet Muhammad to members of his family, the Imams – including the Mahdi. This light imbues them, unlike Sunni leaders, with infallibility and divine omniscience. Hence, it appears that Ahmadinejad sees himself on a divinely
guided mission to pave the way for the Mahdi’s arrival, which is suggestive of an active eschatology.

3) Rhetoric of Eschatological Imminence

Ahmadinejad’s 2011 statement to the United Nations, “Today nations have been awakened,” points to the imminence of his eschatology: the end is soon. In fact, it is so soon that it is well known that President Ahmadinejad saves an empty seat for the Mahdi at cabinet meetings. The U.N. speech thus functioned for Ahmadinejad as both an invitation to the nations and as a warning that a new, apocalyptic political order is coming soon.

Members of Ahmadinejad’s cabinet share his belief, and they produced a widely circulated documentary entitled The Coming is Soon, which interprets contemporary political events as the fulfillment of eschatological prophecy about the coming kingdom of the Mahdi. The documentary identifies specific signs, drawn from a long tradition in Shi’ism of “lesser signs” and “greater signs” that precede the arrival of the Mahdi; these include a revolution in Yemen and the death of King Abdullah of Saudia Arabia (The Coming). The film also strongly suggests that Ahmadinejad should be identified with a prophesied figure who will conquer Jerusalem, and Khamenei with another prophesied figure who will hand over the flag of Islam to the Mahdi, in coordination with Nasrallah of Hezbollah (The Coming).

4) Rhetoric Demonizing or Dehumanizing Opponents

Ahmadinejad and other Iranian leaders have, since 1979, regularly demonized America as “The Great Satan” and Israel as “The Little Satan.” The President has also
dehumanized Israel as “dirty vermin,” “a dead rat,” “a stinking corpse,” and “filthy bacteria.”xli These statements fulfill Stahelski’s criteria of “other de-individuation,” in “demonizing” and “dehumanizing” language that indicates social psychological conditioning towards violence.xlii

5) Rhetoric Embracing Salvific Violence

Shi’ism has always attached a high degree of esteem to martyrs who are willing to die in order to protect Islam, in imitation of their martyred heroes `Ali, the first true Imam and son-in-law of Muhammad, and Hussein, son of `Ali and Muhammad’s daughter Fatima (680 C.E.). In the time of the Iran-Iraq war (1980-1988), Ayatollah Khomeini exploited this Shi’ite love of martyrdom, giving out hundreds of thousands of plastic “keys to paradise” for participants to wear around their necks as a reminder that martyrs go to heaven.xlii Estimates of those willing to act as martyrs – counting the volunteer Basij force made up of women, young men, and children as young as 12 - ranges as high as a few million over the eight year period. Hundreds of thousands went to the front lines in “human waves” that preceded the army in combat, walking to their death to awe and deter Iraqi forces.xliii Among these were children, who cleared the minefields by walking or rolling over the earth after they had wrapped themselves in blankets to try to keep their body parts minimally together for burial.xliv

President Ahmadinejad has imitated Khomeini in his rhetorical embrace for the martyrdom of the people, passionately referring to Iran as “a nation of martyrs” (like Khomeini) and praising the nation’s “culture of martyrdom.” As early as 2005, he appeared on Iranian TV saying, “Is there art that is more beautiful, more divine and
more eternal than the art of martyrdom? . . . A nation with martyrdom knows no captivity . . . The message of the (Islamic) Revolution is global and is not restricted to a specific place or time . . . it will move forward."xlv In 2007 he spoke to student Basij members and referenced the death of a martyr named Fahmideh in the Iran-Iraq war, by stating “today millions of Fahmidehs are standing fresher and more prepared.”xlvi He then claimed the Basij forces could disrupt shipping in the Strait of Hormuz. More recently, he has publicly honored martyrs and met with their families. The Center for Strategic and International Studies estimates the present size of the Basij at 90,000 active members and 1 million people that could be mobilized.xlvii

As for violence against out-group members, analysts must consider that Ahmadinejad has close ties with members of the IRGC through their shared time in the Iran-Iraq war. Although it is difficult to know which of their activities Ahmadinejad has personally sanctioned, it is well known that the IRGC has engaged for decades in global terrorism, including through cooperation with Hezbollah and other proxies, such as the recent attempted assassination of the Saudi Ambassador on American soil.

6) Apocalyptic Infrastructure, Equipment or Programs

Under Ahmadinejad, the Iranian government has purportedly spent 120 million of dollarsxlviii refurbishing and supporting the Jamkaran shrine outside of Qom, Iran, site of the Mahdi’s appearance in popular expectation (Eshraghi 2010; Cook 2011). Qom has, in effect, become a factory for popular apocalypticism, with some Iranian estimates claiming that up to 31 million pilgrims a year visit the Jamkaran shrine.xlix While this is probably a high figure,
the shrine is definitely crowded each week with pious visitors fervently hoping for the Mahdi’s return, with some claiming to receive answers to prayers and miraculous physical healings. Publishing houses in Qom have also recently poured out large numbers of recent publications predicting the coming of the Mahdi and providing apocalyptic interpretations of our current times.1 In addition to these efforts to promote popular mahdism in Qom, the government is building the “Mahdi Highway” from the border of Iraq-Iran to Qom.ii Clearly, apocalypticism and mahdism are not only spiritual ideas in Iran, they have been translated into concrete infrastructure and programs through governmental spending. Analysts should consider the theological impact of this rampant populist apocalypticism on the 50,000 clerics from 70 countries presently training in Qom, and that the selection of the site for the (previously secret) uranium enrichment facility of Fordow could have religious valences as the future home of the Mahdi.

In sum, it appears that there is evidence that a fuller investigation of these Measures of RADAP in President Ahmadinejad’s public speech would be very high, and certainly plausible. Spurred by Ahmadinejad, the proliferation in the last five years of popular apocalyptic Shi’ite mahdism is unprecedented in degree throughout Iran, Lebanon, and Iraq. As religion scholar David Cook describes the situation, the popular Shi’ite messianic literature has never been as “copious, publicly available, detailed, or socially explosive,” and he concludes: “[Shiite m]essianism is slipping free of the control of the religious establishment,
and it is increasingly used by lay preachers to interpret current events and to compel their followers to take action—often according to a radical agenda.”

It is of course possible that President Ahmadinejad himself promotes this theology simply out of a calculated political move, since it does undermine the power of the senior clerics. However, this conclusion must factor in that he has consistently exhibited this theology since the Iran-Iraq war, including in his time as Mayor of Tehran (when he created the Mahdi bus route to take pilgrims to Qom after his arrival, and also published the Mahdi’s likely route through Iraq and Iran). Whatever Ahmadinejad’s actual religious convictions may be, analysts should take note that in any case he is still appealing to the deeply held radical apocalypticism of others in the government and the population, who, though definitely constituting a minority in the nation, could still make a major impact in a plausible “black swan” event.

IRANIAN RELIGION, POLITICS, AND THE ROLE OF THE SUPREME LEADER

The extent to which popular Shi’a apocalypticism and mahdism can actually influence Iranian politics not only depends on which leaders share the RADAP view, but also on their position regarding the proper relationship of religion – especially sharia or Islamic law - and politics. The clerical elements of the Iranian government are not in agreement on the ideal relationship between religion and politics. In 1979, when the Ayatollah Khomenei established the new principle of velayat-e faqih or “the guardianship of the jurist” that established the Supreme Leader as both the leading (religious) jurist and the ruler of the republic, he first had to overcome oppositional
senior clerics who felt that *sharia* law should not be implemented by the political regime before the arrival of the Mahdi.\textsuperscript{lv}

With Khomeini’s victory, his successor, the Supreme Leader Ayatollah Ali Khamenei, has power through *velayat-e faqih* as the leading jurist over the political constitution of Iran and standing *sharia* law. That is, he has the religious and legal power to alter or reverse any fatwas or decisions by other jurists on the basis of “expediency” for the Islamic Republic.\textsuperscript{lvii} Furthermore, he has enormous religious authority based on the fact that until the Mahdi’s return, he is the representative of the infallible Hidden Imam and of the Prophet Muhammad. Hence, no single person has more power to determine the course of Iran’s nuclear weapons program or its possible future use.

Unfortunately, it is not easy to determine Khamenei’s views on the development of nuclear weapons, since he has espoused widely contrasting views. According to a 2009 internal IAEA report, Khamenei endorsed Ayatollah Khomeini’s decision in 1984 to start a secret nuclear weapons program, saying “this was the only way to secure the very essence of the Islamic Revolution from the schemes of its enemies . . . and to prepare it for the emergence of Imam Mahdi.”\textsuperscript{lvii} Such rhetoric would seem to suggest that Khamenei supports a nuclear weapons program as part of an active eschatology, which could indeed be dangerous to countries that Iran opposes. By contrast, much more recently in 2011 Khamenei strongly iterated in a speech that Iran would not use nuclear weapons, saying, “We believe that using nuclear weapons is *haraam* [sinful] and prohibited and that it is everybody’s duty to make efforts to protect humanity against
As the statement makes clear, however, since 2009 Khamenei’s statements have only focused on the use of nuclear weapons, dropping earlier language rejecting the production and stockpiling of nuclear weapons, which is worrying to some. Furthermore, the traditional Shi’ite obligation of “taqiyya” or lying in order to protect Islam, as well as the Supreme Leader’s right to overturn all previous opinion at any point based on the expediency of the Islamic regime, greatly compounds the difficulty of interpreting his actual position.

Identifying whether Khamenei shares the RADAP worldview would provide additional informing in analyzing his stance on nuclear weapons. However, the extent of Khamenei’s RADAP thinking is also difficult to discern. On the one hand, he typically aligns himself with the senior clerics, 86 of whom are elected as the Assembly of Experts, which can appoint as well as remove the Supreme Leader from office. The senior clerics are clearly opposed to Ahmadinejad’s promotion of popular mahdism and RADAP, and Khamenei seems sympathetic to their concerns, since he arrested at least twenty-five of the President’s Cabinet and charged them with “sorcery.” These “sorcerers” included the producer of The Coming is Soon video, as well as Ahmadinejad’s family member and Chief of Staff, Esfandiar Rahim Mashaei, said by many to be Ahmadinejad’s personal pick as the next President.

On the other hand, an investigation using the Measures sketched above suggests that the Supreme Leader may share some of the President Ahmadinejad’s RADAP views, even as he must continually appease the senior clerics who could remove him from office. For instance, the normally reserved Khamenei has recently given speeches
similar to Ahmadinejad’s U.N. speech, saying: “a sweeping Islamic movement with Iran at its epicenter will ultimately eliminate the domineering materialistic policies of the arrogant powers.”\textsuperscript{lxii} Thus, he characterizes the scope of the struggle as cosmic, and assumes that his side will definitely win: “Islam has reached a turning point in its immense movement forward, which will bring about highly significant changes in the world and terminate the existing hegemonic power structures.”\textsuperscript{lxiii} For Khamenei, this is “the century of Islam,” in which conventional rules change and past history does not apply, since: “the history of the world, the history of humanity has reached a major historical turn. This is the dawn of a new era across the entire world.”\textsuperscript{lxiv} His characterization of the impending break with history is complete enough to be termed eschatological, and it is already beginning, (which is sooner than “soon”). He also acts with agency that is suggestive of an active eschatology, since he goes by the title “the Deputy of the Mahdi.” Like Ahmadinejad, he demonizes his opponents, such as America “The Great Satan,” and also dehumanizes them, telling a youth conference from seventy nations: “we all oppose the cancerous tumor of Israel.”\textsuperscript{lxv} Finally, despite the outcry of the senior clerics, he took months to remove from circulation \textit{The Coming is Soon} video that predicts that he is the eschatological figure who will hand the flag of Islam over to the Mahdi. Obviously, a fuller study of the extent of Khamenei’s RADAP thinking is crucial for ascertaining his nuclear intentions.
THE NEED FOR AN INTERDISCIPLINARY SYSTEMS-ORIENTED ANALYSIS OF THE PROBLEM

Having established that it is at least plausible that RADAP ideology could play a role in Iran’s decision making calculus, our goal from this point forward is to explore how such an influence might impact the dynamics surrounding Iran’s nuclear development efforts and the efforts by the US and others to persuade Iran to stand down. The analysis reported here suggests ways in which the US and its Allies can monitor the Iranian leadership and continue to apply appropriate pressure to Iran, while mitigating the dynamics that could enhance RADAP influence in Iran’s decision making calculus.

This analysis uses the tools of system dynamics. This methodology helps develop insights about how the structure of the system (causal links, feedback dynamics, etc.) has shaped the past and how decision makers might employ those insights to influence the future. Such an approach is useful with problems involving complex interactions and feedback among multiple actors with conflicting agendas and goals.

The Iranian nuclear crisis is such a problem. Each nation involved in this crisis acts according to its respective goals, values, ideology, and perceptions of the other actors. These actions collectively create a system of complex feedback dynamics where each nation applies its own calculus to respond to its perceptions of the current state of affairs, which in turn affects how others respond, further impacting the situation and prompting more action. The outcome from such a system can be counterintuitive and potentially disastrous.
One of the distinctive features of system dynamics is that it provides an accessible language and iconic representation of systems that is accessible to non-modelers. The methodology has found its way into a variety of problem contexts, including environmental management, national energy policy, public health, education, business management, and national security.

In its fullest implementation, a system dynamics study involves the development of a running simulation model that can be used by decision makers to gain insight about the sometimes counterintuitive nature of the problem that they hope to address. However, many studies stop short of developing a fully functional simulation model and instead focus on developing a qualitative model of the systemic causal structure behind the problem and then gleaning insights from that model. The model is represented using a causal loop diagram (or “influence diagram”) and accompanying narrative. The causal loop diagram (CLD) and narrative together comprise a dynamic hypothesis, since together they provide an informed but provisional explanation of the dynamics behind the system’s behavior.

The qualitative model can be used to explore possible futures that might plausibly emerge from the hypothesized structure. Hence, even though one cannot reliably predict the future directly from a qualitative model, the skilled analyst can it to identify important dynamics that could have a significant influence on how the future might unfold. For example, Coyle uses influence diagrams to explore the dynamics associated with counterinsurgency warfare. Vennix describe several case studies in which qualitative system dynamics models were used to develop insights and consensus.
among stakeholders in complex business problems. Coyle and Alexander illustrate the use of qualitative system dynamics as a “rapid analysis” tool for articulating and exploring the forces and interactions behind a nation’s drug trade.

The remainder of this section describes the qualitative model by “unfolding” a causal loop diagram that elucidates the dynamics behind the evolving international interactions associated with the Iranian nuclear program. This discussion is given in three parts. In Part I, we use causal loop diagrams to visually represent the potential means by which RADAP ideology could grow among the Iranian leadership. Part II summarizes the dynamics that are implied by the conventional thinking behind current international efforts to address Iran’s continued pursuit of nuclear technology. Finally, we explore some of the ways that the RADAP dynamics would interact with the existing conventional wisdom to create a dangerous set of self-reinforcing dynamics that could rapidly escalate toward a nuclear confrontation.

PART I: POTENTIAL GROWTH IN RADAP IDEOLOGY AMONG THE IRANIAN LEADERSHIP

Setting the scene for RADAP (Figure 1)

Within a Shi’a Islamic religious context, RADAP adherents believe they have a critical role in creating conditions that will usher in the Mahdi’s global reign. This is represented for the Iranian leadership in the simple causal loop diagram in Figure 1. This diagram includes two named system variables: Leadership commitment to RADAP and Intent to user in the Mahdi’s reign. These are quantities that, over time, can change in level. Throughout this discussion, references in the text to the system variables in
the figures will be underlined. In order to follow the argument it is important that the reader refer to the diagrams as referenced in the text. Note that the diagram does not imply that the Leadership commitment to RADAP ideology is high, but rather that this commitment is a quantity that can evolve over time and that this in turn influences the level of Intent to usher in the Mahdi’s reign. The arrow is a causal link that indicates direction of the causal influence. The lettered label on the arrow indicates the causal polarity. This polarity can be either “S” (effected variable moves in the SAME direction as the causal variable) or “O” (effect moves in the OPPOSITE direction from the cause). For example, the S polarity in Figure 1 indicates that when Leadership Commitment to RADAP either increases or decreases, the level of Intent to usher in the Mahdi’s reign changes in the SAME direction.

Migration Toward Radicalism: RADAP’s Framing Capacity and the External Environment (Figure 2)

Individuals or groups come to embrace RADAP as a result of a complex milieu of psychological and environmental factors. Borum summarizes a taxonomy of social processes whereby individuals or groups are “radicalized” toward violence and terrorism. Most pertinent to the present discussion is the school of thought referred to as Framing Theory, which describes how
movements and social collectives construct, produce, and disseminate meaning. This is a recursive process in which the movements' idea entrepreneurs attempt to frame messages in ways that will best resonate with interests, attitudes, and beliefs of its potential constituency. Then, as people accept the movement’s frames of references, they increasingly come to identify with the collective movement.

This theory suggests that there is an ongoing conversation in which existing and potential adherents to an extremist ideology such as RADAP engage in an ongoing process of “debate” and “dissemination” that challenges them to evaluate how well that ideology squares with their own experience and perceptions of the environment. The more credible the explanation provided, the greater the “framing capacity” of the ideology, and the greater the “conversion rate.” The RADAP framing capacity in Figure 2 affects the level of Leadership commitment to RADAP and is itself directly affected by the extent to which the prominent belief system and environment create conditions whereby
RADAP’s interpretation of the environment “... resonate(s) with interests, attitudes, and beliefs...” among the Iranian leadership.

Figure 2 shows three particular factors that impact RADAP’s framing capacity. The most important of these is the Leadership acceptance of the six RADAP Reality Suppositions mentioned earlier in this paper. Again, these suppositions are:

- Juergensmeyer’s three “cosmic war” suppositions (the scope of the struggle is cosmic, bigger than just humans; there is total certitude about winning; winning the struggle occurs on a divine plane of reality)
- the enemy is inherently evil
- violence is salvific and a legitimate means to trigger the endtime
- the faithful are instrumental in creating circumstances for the Mahdi’s return (active eschatology)

The Leadership acceptance of the six RADAP reality suppositions exerts an S-polarity causal influence on the RADAP framing capacity, meaning that increases in this variable will increase the RADAP framing capacity.

In addition to the Leadership acceptance of the six RADAP Reality Suppositions, the RADAP framing capacity is also enhanced by the extent to which external events are interpreted as fulfillments of greater or lesser signs of the Mahdi’s return, as identified in popular apocalyptic Shi’ite interpretation. Some of these are Greater/lesser signs found in US/Ally actions (a principle source for Iranian RADAP propaganda), and others are Greater/lesser signs found in other current events.
Closing the Loop: The Self-Reinforcing Lens created by RADAP Ideology (Figure 3)

RADAP is an all-encompassing worldview that interprets all of life in light of the RADAP framework. As the ideology takes root and gains momentum in a group, it provides a lens for reinterpreting events and others in ways that reinforce its fundamental tenets. This self-reinforcing cycle is shown in Figure 3 where causal links are added to show how the Leadership commitment to RADAP increases (S polarity) the degree to which Greater/lesser signs are found in current events and Greater/lesser signs are found in US/Ally actions. In addition, the greater the Leadership commitment to RADAP, the greater (S polarity) the Leadership acceptance of the six RADAP Reality Suppositions, which in turn enhances (S-polarity) the RADAP framing capacity of the ideology. This dynamic builds momentum toward the belief that RADAP reliably gives meaning to the current state of affairs and to Iran’s own position as the nation that is uniquely appointed to initiate the Mahdi’s reign. Figure 3 also adds some new notation. The three circular arrows labeled as “R1a – R1c” represent three reinforcing feedback loops. Each of these is a closed chain of cause-effect that “feeds back” on itself to reinforce or amplify changes. Each loop represents a feedback dynamic that that can build.
momentum toward ever greater influence in RADAP among the leadership.

**Summary of RADAP Dynamics (Figure 3)**

Any growth in the influence of RADAP ideology in the Iranian leadership would be the result of a long-term process of dialogue, debate, and dissemination in which potential adherents must weigh RADAP’s framing capability against other competing frameworks. If RADAP ideology gains a significant foothold among the Iranian leadership, the self-reinforcing nature of the ideology implies that significant momentum toward ever more RADAP influence could develop (see the reinforcing feedback loops R1a-R1c in Figure 3). Actions by western nations could fuel this dynamic, as discussed in Part III below.

**PART II: DYNAMIC IMPLICATIONS OF THE CONVENTIONAL WISDOM**

There is no clearly defined international consensus on how to respond to Iran’s nuclear ambitions. However, among the U.S., its Allies, and even China and Russia, there are several common beliefs about Iran’s strategic culture, goals, decision making calculus, and interactions with the rest of the world. These beliefs may be summarized as follows:

1. Iran’s nuclear ambitions are rooted in part in its desire for (a) security from its adversaries (i.e. Israel, the U.S., etc.) and (b) a prominent leadership role in the Islamic world, particularly in order to advance its version of “the Islamic revolution.”
2. The risks of a nuclear Iran include the potential to (a) ignite a nuclear arms race in one of the most volatile parts of the world, (b) provide nuclear weapons technology to terrorist groups, (c) enable Iran to project power and serve as a “bully” in the region, and (d) potentially attack its enemies.\textsuperscript{xxvi}

3. Iran’s leadership is a “rational actor” when faced with the potential of its own annihilation, in that the leadership will act to preserve the nation and government.

We now outline in Figures 4-8 the dynamics that emerge from these beliefs.

\textit{Iran’s Nuclear Program as a Path to Regional Influence (Figure 4)}

Figure 4 shows Iran’s strategy for achieving regional influence through development of nuclear weapons. This diagram highlights feedback loop B1: Iran’s pursuit of regional influence. The circular label “B1” indicates that this is a \textbf{balancing feedback loop}. The italicized text (“Iran’s pursuit of regional influence”) next to the loop label provides a brief description of the dynamics represented by that feedback loop. Unlike reinforcing feedback which builds momentum and creates an unstable environment, balancing feedback provides a self-correcting force that can drive the system toward some
equilibrium. Because of this, balancing feedback loops are sometimes called **goal seeking loops**. Loop B1 represents Iran’s efforts to develop nuclear power in order to achieve a (perhaps not fully articulated) level of regional influence. The greater the **Influence gap** between Iran’s current influence and its desired level of influence (represented by the variable **Iranian goal: High regional influence**), the greater (S polarity) will be Iran’s nuclear development effort, which over time increases (S polarity) Iran’s nuclear weapons capability, thereby enhancing (S polarity) Iran’s regional influence and reducing (O polarity) the Influence gap, closing the loop.

Loop B1 also includes an example of an **O polarity causal link**. That is, when the causal variable changes, the effected variable will move in the OPPOSITE direction (all other things being equal). In this case, the greater Iran’s regional influence, the less the Influence gap between the Iran’s actual and desired level of regional influence.

**Iran’s Nuclear Program as a Path to National Security (Figure 5)**

Under the assumptions of the conventional wisdom, Iran is pursuing nuclear weapons because of perceived threats from some of its adversaries. Figure 5 adds a second balancing feedback loop (**B2: Iran’s response to external threats**) to Figure 4 in order to represent the dynamics associated with this second goal. This loop is shown with bolded arrows. The greater Iran’s fear of aggression by its neighbors, the greater the leadership’s motivation to accelerate (S polarity) Iran’s nuclear development effort, thereby enhancing (S polarity) Iran’s nuclear weapons capability, reducing (O polarity) Iran’s fear of aggression by its neighbors, closing the loop.
The Regional Response to a Nuclear Iran (Figure 6)

In response to Iran’s pursuit of nuclear weapons, there is a risk that neighboring countries will pursue nuclear weapons in order to create a deterrent to Iranian aggression. This is represented as loop B3: *Regional response to mitigate Iranian threat* in Figure 6. This outermost loop involves the four variables around the outside boundary of Figure 6. This has the unintended consequence of igniting a self-reinforcing regional arms race in which Iran’s nuclear capabilities result in growing nuclear programs among its neighbors, which in turn creates a growing threat to Iran, motivating even more efforts at nuclear weapons development. See Loop R2: *Regional nuclear proliferation* in Figure 6, which involves the following causal chain: Increases in the Iranian nuclear threat will increase the Neighbor’s nuclear development effort. This
results in greater **Nuclear power of Iran's neighbors**, and exacerbates Iran’s fear of **aggression by neighbors**.

As a result, Iran’s nuclear efforts increase, eventually enhancing Iran’s nuclear weapons capability, increasing the **Iranian nuclear threat** even more.

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**Figure 6:** The Regional Response to a Nuclear Iran: Loop B3 represents the motivation for Iran’s neighbors to respond in kind to Iran’s nuclear program – i.e. to provide a deterrence against a nuclear Iran. Loop R2 represents the unintended consequence of this action – a self-reinforcing regional nuclear arms race.
The Response of the Broader International Community (Figure 7)

Given Iran’s continued noncompliance with the Nuclear Non-Proliferation Treaty and its lack of cooperation with the UN’s International Atomic Energy Agency (IAEA), the U.S. and its Allies have applied punitive international interventions (Figure 7), including: economic sanctions, covert attacks on nuclear resources, and public rhetoric renouncing Iran’s activities. In addition, more extreme actions, including overt military strikes, are possible. According to conventional wisdom, these actions will “raise the costs” of Iran’s nuclear program and serve as a deterrent. Assuming Iran is a rational actor, once these costs exceed Iran’s perceived benefits of its nuclear ambitions, it should lay them aside. This is represented in Figure 7a by the bolded arrows circumventing loop B4: Raising the costs of Iran’s nuclear program. In addition, the military capabilities of an international community that is united in its opposition to Iran’s nuclear program will presumably provide a significant deterrence to Iran’s use of nuclear weapons, should it achieve nuclear weapons capability. This is shown in Figure 7b by the bolded arrows defining loop B5: Constraining influence of international military power.
Figure 7: Response of the Broader International Community (US and Allies). Part (a): Loop B4 - Motivate Iran to back away from nuclear ambitions by raising the costs (financial, social, etc). Part (b): Loop B5 - The threat of military action of the international community will serve as a deterrent to Iran’s use of nuclear weapons.
Summary of The Dynamics Surrounding the Conventional Wisdom (Figure 8)

As seen in Figure 8, the conventional wisdom about Iran’s motivations for pursuing nuclear weapons and the consequences (intended or otherwise) of actions by Iran’s neighbors and the broader international community comprises a complex set of interacting feedback dynamics. Some of these dynamics represent Iran’s goals (regional influence and national security, loops B1 and B2). Other dynamics represent the intended countervailing force exerted by Iran’s neighbors and the international community to deter aggression by a nuclear Iran (loops B3-B5). Loop R2 represents the potential for a run-away regional nuclear arms race. It is impossible to predict which of these loops will dominate in the future. However, if the countervailing influence of loops B3-B5 weaken in any way, the potential for a nuclear Iran (loops B1-B2) and a subsequent regional arms race (R2) increases. We show in the next section how a growing influence of RADAP ideology in Iran’s decision making calculus can in fact create such a scenario in which the countervailing influence of loops B3-B5 is weakened.
Figure 8: Summary of the Conventional Wisdom Dynamics. A complex set of interacting feedback dynamics.
PART III: RADAP AS A POTENTIAL GAME CHANGER

Mutual Interactions Between RADAP and Conventional Wisdom – The Risk of Escalation

(Figure 9)

Should RADAP grow to have sufficient influence on the leadership decision making calculus, a new set of interactions emerges. These interactions imply that each set of dynamics (RADAP and conventional wisdom) impacts the other in ways that mutually reinforce entrenched misperceptions. This in turn could precipitate actions that could rapidly escalate into a disastrous international crisis.

Figure 9 combines the RADAP dynamics (Figure 3) with the conventional wisdom dynamics (Figure 8) and introduces three new variables and several new bolded causal links to articulate the relationship between RADAP dynamics and the dynamics associated with conventional wisdom. At the top of the figure, three bolded causal links lead from Intent to usher in the Mahdi’s reign. These represent the fact that a growing level of a RADAP-fueled Intent to usher in the Mahdi’s reign will increase Iran’s nuclear development effort and embolden Iran toward more aggressive behavior. The deterrent effect of retaliation (loops B3 and B5) or the cost-based calculus associated international sanctions (loop B4) will be minimized, since a new calculus is in play – a calculus that no longer holds as paramount the survival of the Iranian state, but that cherishes foremost the impending reign of the Mahdi. Each of these three bolded causal links works to counteract one or more of the countervailing feedback dynamics that (under conventional wisdom) might keep Iran’s ambitions in check (loops B3-B5).
Figure 9: Mutual Interactions Between RADAP and Conventional Wisdom. The Risk of Escalation.
The bolded link from the Intent to usher in the Mahdi’s reign to the Iranian nuclear threat also serves to amplify the influence of the runaway regional nuclear arms race (loop R2). Since loop R2 is a reinforcing loop, this means that a growing influence of RADAP ideology adds momentum to a dangerous dynamic that can overcome the mitigating influence of the balancing feedback associated with the conventional wisdom (B3-B5). Tracing the logic on Figure 9, as the Leadership commitment to RADAP increases, the Intent to usher in the Mahdi’s reign also increases, which leads to higher Iranian nuclear threat. This will in turn increase regional Neighbors’ nuclear development effort and eventually the Nuclear power of Iran’s neighbors. All of this will feed Iran’s fear of aggression by its neighbors. As a result, this fuels Iran’s nuclear development effort even more, and subsequently, Iran’s nuclear weapons capability and hence Iran’s nuclear threat.

At the bottom of Figure 9 are three new variables:

1. **US/Ally sensitivity to RADAP ideology** – This represents the extent to which the U.S. and its Allies take into account Iran’s potential interpretation of US/Ally actions as a violation of its Islamic values.

2. **US/Ally actions that violate Shi’ite Islamic values** – As the US and its Allies act to curb Iran’s ambitions, or in the broader efforts against terrorism, they run the risk of allowing actions that significantly challenge the identity or values of Shi’ites. Examples of such actions would be: physical abuse and humiliation of prisoners, killing of women and
children or other innocents (by accident or otherwise), or burning copies of the Qur’an.

3. **Iranian perception of US/Allies as oppressors** – This is a direct result of actions that violate Shi’ite Islamic values.

The third of these variables has a direct causal influence on the **Leadership acceptance of the six RADAP Reality Suppositions** because four of the six are closely linked to an identity of oppression (Juergensmeyer’s three cosmic war suppositions and the characterization of the enemy as Evil). In addition, the perception of the US and its Allies as oppressors encourages the interpretation of their actions as fulfilling some of the greater or lesser signs that the Mahdi’s return is imminent.

**Fueling Momentum Toward Entrenched Positions (Figure 10)**

Embedded in Figure 9 are several reinforcing feedback loops involving RADAP dynamics and the dynamics associated with the conventional wisdom. All of these loops have the same overall effect of entrenching both Iran and the US/Allies in opposing and tragically misinformed perceptions of one another’s actions, leading to an escalation in conflict. For illustration, figure 10 isolates one of these important loops. The R3 loop in figure 10 demonstrates that as Iran’s **Leadership commitment to RADAP** grows, this fuels actions by Iran that provoke ever greater **Punitive international interventions**. Unfortunately, these interventions assume an Iranian cost-benefit calculus based on the conventional wisdom, which is increasingly less applicable to the reasoning framework of Iran’s leadership. These interventions can unintentionally reinforce the framing capacity for the Iranian RADAP ideology. For example, if RADAP thinking is driving Iran’s
intransigence with respect to its nuclear development, increased pressures from the international community (such as increasingly stringent sanctions or military intervention) could backfire, strengthening the influence of RADAP amongst Iran’s leadership and deepening their resolve to develop and use nuclear weapons.

**CONCLUSION: IMPLICATIONS FOR INTELLIGENCE AND POLICY**

This paper provides six Reality Suppositions that distinguish violent, radical apocalypticism (RADAP) from peaceful apocalypticism. To aid analysts in assessing the presence and extent of these Suppositions, and hence of the RADAP worldview, we identify six RADAP Measures obtainable from OSINT that analysts may use to evaluate evidence from the public speech and actions of individuals or groups.
A preliminary application of these Measures indicates the possibility that RADAP ideology shapes the thinking of President Ahmadinejad and the Supreme Leader Khamenei, establishing the plausibility that RADAP ideology could play an important role in the decision making calculus of some key members of Iran’s leadership. More analysis is needed, both to ascertain the extent of RADAP thinking held by these and other key Iranian leaders, and to determine whether or not RADAP adherents could gain control of Iran’s complicated decision making system and whether they could act on their goals, which might include building and using nuclear weapons.

Finally, we have developed a qualitative systems model that articulates how the assumptions of the conventional wisdom driving the current international response could interact with the dynamics created by a growing RADAP influence in the Iranian leadership. We show that, if RADAP ideology prevails in the Iranian leadership’s reasoning framework and if the U.S and its Allies fail to recognize this development, a set of runaway dynamics could emerge, leading to an escalating crisis whose outcome could be catastrophic.

Given the “game-changing” potential of RADAP, it is critical that analysts monitor the degree of influence that RADAP exerts. Policymakers must develop a deeper appreciation for the high symbolic value that the Iranian leadership might attach to those US/ Ally actions that violate Islamic values (including isolated incidents perpetrated by individuals, as well as punitive actions sanctioned by policy). In the presence of RADAP ideology, the symbolic significance of such actions can be amplified to dangerous levels. This would deepen resolve amongst Iranian RADAP adherents and
lend further credibility to the RADAP worldview, potentially motivating Iran to extreme actions. When nuclear weapons are involved, the consequences can be dire.

The emergence of RADAP ideology in Iran is the outcome of an ongoing internal debate between moderates and radical voices. This debate is not isolated from actions by the U.S. and its Allies. Hence, the judicious use of punitive and preventative interventions, as well as incentives, informed by a deep awareness of the contending worldviews in Iran, offers the best hope for a positive international outcome.

REFERENCES


v Takeyh, *Hidden Iran*, pp. 138-139.


xiv “Evil” here is capitalized to indicate a cosmic force, not just the cumulative effect of actions deemed by some to be evil in a society. See especially Hanson, “Apocalypse, Genre,” pp. 28-34.

xv Unlike in popular culture, scholarship on apocalypticism carefully distinguishes between “apocalypticism” and “eschatology,” as well as “apocalyptic eschatology,” which is eschatology that is characteristic of apocalypticism. This last category applies best to our discussion of Shi’ite Islam in Iran, but is confusing for the non-technical reader. See Collins, *Apocalypse*, pp. 9, 14-18.


xviii While an improvement over past intelligence studies on religion and politics, Eisenstadt and Khalaji’s distinction between “the traditional, conservative quietist approach,” “the revolutionary activist approach,” and “the violent apocalyptic approach” is confusing in its non-normative use of “apocalyptic,” which basically equates “apocalyptic” with “violent,” despite their note that indicates that they do not mean to do so. See Eisenstadt and Khalaji, *Religion and Politics*, 6, n. 34. The present study aligns its categories with previous scholarship on apocalypticism and provides a conceptual apparatus for distinguishing between peaceful and violent apocalypticism across cultures, beyond its application to Shi’ism or Islam.


xxiii A study in 2009 by the Combating Terrorism Center at West Point that conservatively used only terrorist attacks for which Al-Qaeda claimed responsibility determined that Al-Qaeda has killed eight times more Muslims than Westerners. Scott Helfstein, Nassir Abdullah, Muhammad al-Obaidi, *Deadly Vanguards: A Study of al-Qa‘ida’s Violence Against Muslims* (Occasional Paper Series; New York: CTC at West Point, 2009).


xxv See, for example, the chapter entitled “Soldiers for Christ,” in Juergensmeyer, *Terror in the Mind of God*, pp. 19-44.


xxix Cook, “Messianism in the Shi’ite Crescent.”


xxxi This is the case, for instance, in the documentary sponsored by President Ahmadinejad’s Cabinet, entitled *The Coming is Upon Us*. An English translation is
These measures were developed through an analysis of the belief systems of over 70 apocalyptic groups, both violent and non-violent.

Thaler, *Mullahs, Guards, and Bonyads*.


Stahelski, *Terrorists are Made*.


Eshraghi, “Ahmadinejad Promoted Shrine.”

Scholar David Cook visited Qom during June 2007 and collected 48 books and pamphlets on apocalypticism and the Mahdi, plus 25 additional books at other Iranian sites, signifying a huge shift in popular Iranian expectations of the Mahdi. See David Cook, “Messianism in the Shiite Crescent,” p. 103, footnote 22. The 120 million dollar figure is taken from Eshraghi “Ahmadinejad Promoted Shrine.”

Mokfi and Recknagel, “Could Ahmadinejad’s Mix of Mysticism and Politics Lead to a Power Grab?”

Cook, “Messianism in the Shi’ite Crescent.”


This is the conclusion of Eisenstadt and Khalaji, Religion and Politics, 8.

Khomeini tried and punished Ayatollahs, such as Shariatmadari, largely silencing his opponents. Other clerics who now accept that sharia should form some basis of the Islamic Republic still theoretically expect that it cannot fully be implemented until the Mahdi arrives again to reign. Mehdi Khalaji, “The Iranian Clergy’s Silence,” Current Trends in Islamist Ideology, Vol. 10, 12 July 2010, accessed 21 October 2011, http://www.currenttrends.org/research/detail/the-iranian-clergys-silence#.

Eisenstadt and Khalaji, Religion and Politics, p. x.


Eisenstadt and Khalaji, Religion and Politics, p. 23.

Ibid., pp. 16-17.


Ibid.
lxiv Ibid.
lxvii Ibid.
lxviii Ibid.
lxxii For a detailed discussion of the notation used in CLD’s, see Sterman, Business Dynamics: Systems Thinking and Modeling for a Complex World.
lxxiv Ibid., p. 18.
lxxv Much more could be said about the nature of this ongoing process of internal debate and dissemination. In Iranian society, part of the debate occurs among the population of clerics, who in turn have influence over the culture. In addition, some of the debate occurs among the Iranian leadership (clerics and non-clerics). The complex dynamics among the various elements of the Iranian government further complicates the discussion. The details of how these dynamics work is less important to the current discussion than the fact that the external environment does have an impact on the framing capacity of RADAP ideology. This will be clearer as the discussion proceeds.