

Iran: An advanced indicator of risk of war

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*"Dem Sieg geweiht, vom Krieg zerstört, zum Frieden mahnend"*

(Dedicated to victory, destroyed by war, calling for peace)

(The Victory Arch –*Siegestor*– in Munich)

The single red line that traverses this and Graesser's, Louwse's, and Pennebaker's contributions in this volume is that a simple computer can detect significant patterns in texts. A suitable software and a few semantic filters to go with it is all that's needed. We'll get briefly to details in a minute.

Two warnings before continuing. First, there is nothing new here. In 1966, the team guided by the late Philip Stone, published "The General Inquirer", the first ever published software of computer-aided content analysis (Stone, Dunphy, Smith, and Ogilvie, 1966). Hogenraad, McKenzie, & Péladeau (2003) reviewed the major traditions of the practice of computer-aided content analysis since Stone's work. Secondly, none of these software is easy to use. Compared with the ease of questionnaires, continuous language and the tools to analyze it are complex. Even to these days, not many academic heavies or would-be ones are willing to cross frontiers and risk their careers –and the comfortable salaries that go with it—in the uncertain business of computer-aided content analysis.

The software (PROTAN) and semantic filters –which we dub dictionaries-- we have developed have provided evidence of their power for analyzing literary texts (Hogenraad, Daubies, Bestgen, & Mahau, 1995; Hogenraad, Bestgen &

Durieux, 1992; Hogenraad, 2002). In the present chapter, we use the PROTAN software equipped with a new “motive dictionary” to predict the outbreak of geopolitical conflicts from the analysis of political documents. We predicted previously the outbreak of the war in Iraq (March 17, 2003-), based on a computer-assisted content analysis of the speeches of George W. Bush (Hogenraad, 2005). Now we timely apply an advanced indicator of risk of war to two sets of political records about Iran. The records concern the Iranian claim to nuclear power. The first set is about the news archives of the Iranian Presidency collated since January 2006. The second is about the remarks and speeches on Iran by Secretary of State Condoleezza Rice since January 2006.

It is possible to detect ahead signals of forthcoming conflicts. We capture these signals through the analysis of the words contained in political documents describing the moments before a conflict breaks out. Our advanced indicator of risk of war rests on the state of motivation of political decision-makers as drawn from the content of their messages. We present in a moment the model used to assess the state of motivation of political leaders.

With much of social science today, you feel you are walking through a museum after closing time. In the event, our take on predicting war cuts across morals and economics. Morals –wars cause damage beyond repair– because, failing to prevent war, we can predict it, should this come true. And useful too, as for economic planners eager to integrate the risk of war (or its opposite) into their business plans. Koyama and Tanaka (2006) for example report different possible impacts of the risk of war (or chance of peace) on the oil market.

Come to think of it, there is a second big red line that traverses, not a few chapters in this volume, but all of it. It is apt to mention it here. The first victim of ideologies is usually language (Hogenraad, in press). Whether in the press or in political statements, we hear everyday of censorship, propaganda, gagging, misinterpretations, omissions, deceit, half-truths, and sheer lies, well enough, at any rate, to assign a mission to empirical students of literature. The mission is to remediate to man's vulnerability to ideologies by tying back words to their empirical realities, using computers if necessary. When retired U.S. Army Officer Ralph Peters (2006) writes that "*Arab societies can't support democracy as we know it*", unembedded literature scientists have work. And follow the steps taken by Victor Klemperer in his 1933-1945 diary. Interned in a Nazi camp during World War II, Klemperer (1975, chapter 9) analyzed how for example the German word "*fanatismus*" became more and more positively evaluated in newspapers and in the speeches of the Third Reich leaders. In Orwell (1990), "Newspeak", the Oceania official language made of simple concrete items that everybody can understand, was designed to reduce the range of thought. A cheapened language indeed. Klemperer, Orwell, like Woolf (Hussey, 1992), Revel (1992), Ogden and Richards (1989), even Pound (1973) on economic science (Desai, 2006; Joseph, 2006), each assigned a role for himself or herself, that of finding and restoring meaning in trouble. A flip role for empirical studies of literature.

*The advanced indicator of risk of war: Solidarity and power, the yin and yang of motivation*

McClelland's predictive model of war (1975) involves the need for

affiliation and the need for power. Intimacy, friendship, and positive emotional contacts with a person, define the need for affiliation. The will to power, to have an impact on people or to get control over them, forms the essential of the need for power. These two criss-cross threads, power and affiliation, are always difficult to patch up with each other. What is out there in McClelland's model of war is reasonable enough for the model to survive. The use of one's own power to save others –call it the rage to convince if you want– is often the link between an “imperial motivation pattern” and later wars. That pattern is the gap created by high need for power and low need for affiliation. The wider the gap, the greater the risk of war.

McClelland (1975) argues how reform movements have the unintended outcome of creating “*an action orientation that makes war possible (...). This atmosphere of righteous action has led to war in too many instances in the history of the United States and England for such consequences to be accidental*” (p. 355). Circumstances and opportunities transform local reform movements into pressing needs for “regime change” in other nations. President Bush press conference with Prime Minister Blair (April 6, 2002, <http://www.whitehouse.gov/news/releases/2002/04/20020406-3.html>) shows this need for regime change. Indeed, power hates diversity in any of its forms, linguistic, religious, skin color or sexual orientation (Arendt, 2005, p. 5, extract from her “Denktagebuch” of September 1951). In the words of a world leader, “*You are either with us, or you are with the terrorists*” (President Bush, September 20, 2001, retrieved March 22, 2007 from

<http://www.whitehouse.gov/news/releases/2001/09/20010920-8.html>). Whatever is virtuous in universalism always feeds a non-commendable form of imperialism (Bacevich, 2005, p. 75). Universalism replaces whatever was good in the past by something supposed to be even better in the future, blurring differences again.

It seems a bit naive to dissolve war into a couple of psychological motives. But we think that with this advanced indicator of risk of war, we have put the finger on one of the composites of the chemistry of war. The proof of a method is what happens when we apply it. Until now, our advanced indicator of risk of war has never produced a false positive throughout the many tests we performed (Hogenraad, 2003, 2004, 2005, in press).

## Method

### *Texts*

From <http://www.president.ir/eng/>, we collated the news archives of the Iranian Presidency since January 1<sup>st</sup>, 2006 to September 20, 2006. We also collated the interviews and speeches about Iran by Secretary of State Condoleezza Rice since January 12, 2006 to September 19, 2006 (<http://www.state.gov/p/nea/ci/c9604.htm>). Both series of texts are in English (Table 1). What we record is the number of days on which either the Iranian or the American leader has intervened with a speech, a statement, an interview, or a written paper. This explains why Secretary Rice totals 267,153 words over 60 days of intervention while the Iranian President totals only 199,627 words over 204 days of intervention.

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Insert Table 1 about here

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With a language as subtle as Farsi, translation causes some nuances to be lost. One problem occurred for example about the words “wiped off the map” used by President Ahmadinejad about Israel ([http://commentisfree.guardian.co.uk/jonathan\\_steele/2006/06/post\\_155.html](http://commentisfree.guardian.co.uk/jonathan_steele/2006/06/post_155.html)). It turns out a more correct translation would have been “wiped away from the pages of history”. See also Juan Cole’s web site <http://www.juancole.com/> and, for a different view,

<http://www.nytimes.com/2006/06/11/weekinreview/11bronner.html?ex=1307678400&en=efa2bd266224e880&ei=5088&partner=rssnyt&emc=rss>. The archives we collate are the official ones available from the Iranian Presidency web site. When nuances are lost in translation, we may think the translators judged them secondary. Also, the Iranian archives report the Presidential speeches in an indirect style, amended in passing, at least in the English translation, by political comments. (On Iran, see Goldstone, 2006; Hersh, 2006; Jones, 2006; Lowe & Spencer, 2006). Secretary Rice’s speeches are in direct style.

#### *Content analysis and semantic filters*

We analyzed the texts using the PROTAN software of computer-aided content analysis (Hogenraad, Daubies, Bestgen, & Mahau, 1995). Our purpose is to separate and purify the constituents of a text. Equipped with proper semantic filters, content analysis packs an astonishing amount of information by filtering out the redundancies of speech. Filtering out allows us to keep only what we are looking

for. A semantic filter, in content analysis, is a list of words organized into categories, that is, words with a role in a hierarchy. When one applies a semantic filter to a text, one looks for matches between a word in the filter and a word in the text. One then shoves the text words into categories, counts the number of word matches in each category and takes the percentage of the number of word matches.

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Insert Table 2 about here

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We used two semantic filters for this study, subcategories “need for affiliation” (*nAff*) and “need for power” (*nPow*) of the new “motive dictionary” (Table 2). We designed the dictionary so any word assigned to one category could not be present in another one except in a higher-up category. The present English version 4.0 of March 20, 2007 has 792 entries for affiliation, and 1,439 for power. We measure the risk of war by computing the average difference, we call it gap, between the score for power (*nPow*) and the score for evaluation (*nAff*) by day of intervention. The risk of war increases when the gap increases. We controlled the power of the dictionary using fictional texts and historical documents in which the risk of war passed through different phases (Hogenraad, 2003, 2005).

#### Results: No “Google War” for the moment

There is no significant change in the indicator of risk of war in the archives of the Iranian Presidency, as if the Iranian Presidency was on cruise control. Figure 1 has no regression line in it because there is no significant change in the risk of

war. In Figure 1, each dot represents one day on which the Iranian President made one (or several) interventions. The smoothing line in the figure is a moving average that removes the smaller ebbs and flows from the data. If a trend exists in the data, smoothing them will make the trend visible. But we already know there is no significant change in the risk of war in this case. The smoothing line in Figure 1 merely reflects the erratic nature of the data. In each figure, we also tagged in the graphs the Israel-Lebanon conflict, that is, from July 12 to August 14, 2006. The outbreak and end of this armed conflict did not exert a strong influence. All in all then, as represented in Figure 1, the speeches of President Ahmedinejad do not argue for any warning of a rise in the risk of war.

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Insert Figure 1 about here

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What about the other side on the potential conflict, the United States? The rate of change in the indicator of risk of war in the speeches of Secretary Rice increases significantly [ $R^2 = .13$ ,  $F(2, 54) = 4.0$ ,  $p < .05$ ] until August 16. And Figure 2 has a U-shaped regression line in it, in the form of the interrupted line. In Figures 2 and 3, each dot represents one day on which Secretary Rice made one (or several) interventions. After 20,000 resamplings (Diaconis & Efron, 1983; Péladeau, 1996), the average degree of curvilinearity for the linear model is  $-.08$  (95% ci  $-.15$  to  $-.01$ ), and that for the quadratic model is  $.002$  (95% ci  $.0003$  to  $.003$ ). This latter result gives weight to the U-shaped regression line. From June 2006 on, yet before the Lebanon conflict, there is a tendency in Secretary Rice's

communications to go up towards a higher risk of war (the smoothing line runs up). However, on June 25, 2006, Arab militants abducted Israeli Cpl. Gilad Shalit just before the start of “Operation Summer Rains” on June 28, 2006. The kidnapping of the Israeli soldier may explain in part the change of tone in Secretary Rice’s communications. The rate of change in the indicator of risk of war becomes non-significant when we include Secretary Rice’s talks on September 12 and 19. For that reason, there is no regression line in Figure 3. Her three September talks score lower than those of June to August (the smoothing line plummets). These last three scores suggest some degree of thawing on the Iranian question. But they also remind us how data are fleetingly unstable, and how we should always remain suspicious of them.

The average value of “risk of war” (power minus affiliation) is 2.3 for the Iranian archives, and .2 for Secretary Rice’s talk (difference = 2.1). Here we want to ask if these two independent mean values are different from each other over 9 months. They are, the  $t$  value is 7.3 ( $p < .0001$ ). After 20,000 resamplings, the  $t$  value is 8.2 (95% ci 4.5 to 14.0) and the mean difference is 2.1 (95% ci 1.5 to 2.6).

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Figures 2 and 3 about here

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#### Closing remarks

Distal indicators deliberately crossed off here –military alliances, economic rivalries, arms races– are also at work (Russett & Oneal, 2001). The analysis of

“the words of war in the making” is no substitute for a political analysis, but it makes it a little more difficult to pass by. The critical test of a model is whether it enables us a better understanding of events. On today, September 21, 2006, there is a zero rate of change of the risk of war in the Iranian documents over nine months, as if Iran was sitting out the instability of its neighborhood. On the Iranian side, the threat is steadily high (average “risk of war” of 2.3 versus .2 for Secretary Rice). That low threat on the U.S. side is open to interpretations, but contrasts with the volatile rate of change of the risk of war in the documents of the US Department of State. Meanwhile another history has been written. We have no competence to decide, let alone to judge. It is not for us to debate the right of nations to increase their security and the right of other ones not to decrease theirs (Jervis, 1978). What is for us to analyze, however, are facts, which we cannot afford to ignore. They are evidence that we can predict conflicts because they always break out the same way –because of leaders and nations believing they have been chosen to impose unity on others (Arendt, 1985, chapter 7, “Race and Bureaucracy”).

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Table 1. The corpus

Texts	Divisions	Total N. of words	N. different words
Iranian Presidency	January 1, 2006- September 20, 2006 (204 days of intervention)	199,627	9,201
Secretary Rice	January 12, 2006 – September 19, 2006 (60 days of intervention)	267,153	7,778

Table 2. Affiliation and Power categories of the MOTIVE DICTIONARY

Category	Subcategory	N. of entries	Examples
Affiliation		792	
	Affection	105	mate, sweetheart
	Social behavior	79	answer, escort
	Affiliation	448	accompany, courteous
	Affect loss	23	alone, indifference
	Affect participants	59	dad, mistress
	Affect words	44	family, nostalgic
	Positive affect	35	affable, thoughtful
Power		1,439	
	Power	785	ambition, justice
	Power gain	40	emancipate, nominate
	Power loss	55	captive, weak
	Power ends	9	plead, recommend
	Power conflicts	227	adversary, invade
	Power cooperation	64	arbiter, reciprocal
	Power authoritative participants	70	patriarch, detective
	Power ordinary participant	25	emissary, orator
	Power doctrine	24	conservatism, dogma
	Power authority	31	legitimate, reign
	Residual power words	109	colonialism, terrorize

## Figure captions

Figure 1. Rate of change of the risk of war in the news archives of the Iranian Presidency (January 1, 2006 – September 20, 2006).

January:	archives 1 to 24	June:	archives 114 to 134
February:	archives 25 to 44	July:	archives 135 to 163
March:	archives 45 to 63	August:	archives 164 to 179
April:	archives 64 to 87	September:	archives 180 to 204
May:	archives 88 to 113		

Figure 2. Rate of change of the risk of war in the speeches and interviews on Iran by US Secretary Rice (January 12, 2006 – August 16, 2006).

January:	archives 1 to 3	May:	archives 28 to 37
February:	archives 4 to 8	June:	archives 38 to 42
March:	archives 9 to 16	July:	archives 43 to 48
April:	archives 17 to 27	August:	archives 49 to 57

Figure 3. Rate of change of the risk of war in the speeches and interviews on Iran by US Secretary Rice (January 12, 2006 – September 19, 2006).

January:	archives 1 to 3	June:	archives 38 to 42
February:	archives 4 to 8	July:	archives 43 to 48
March:	archives 9 to 16	August:	archives 49 to 57
April:	archives 17 to 27	September:	archives 58 to 60
May:	archives 28 to 37		

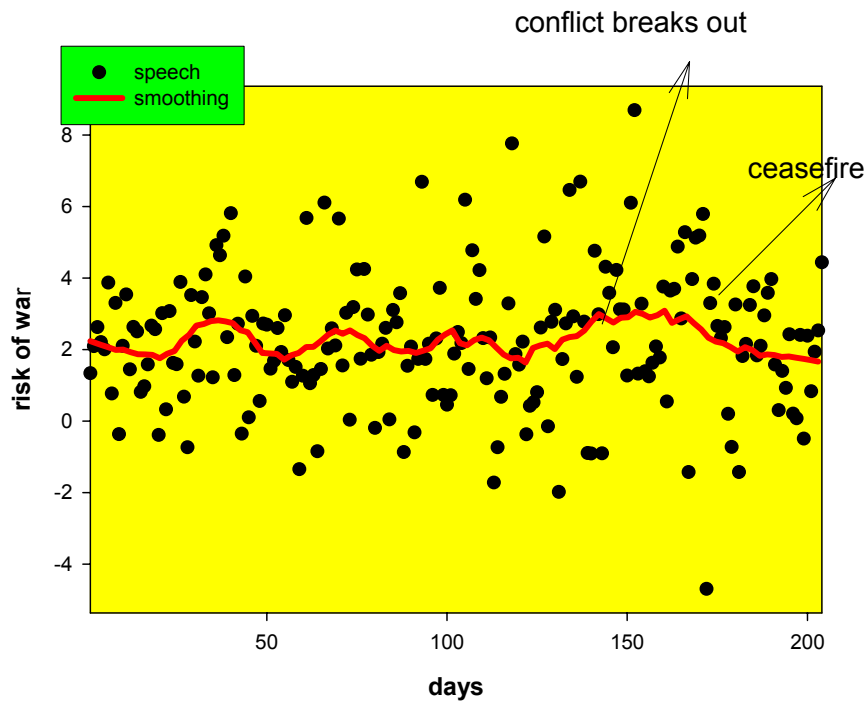


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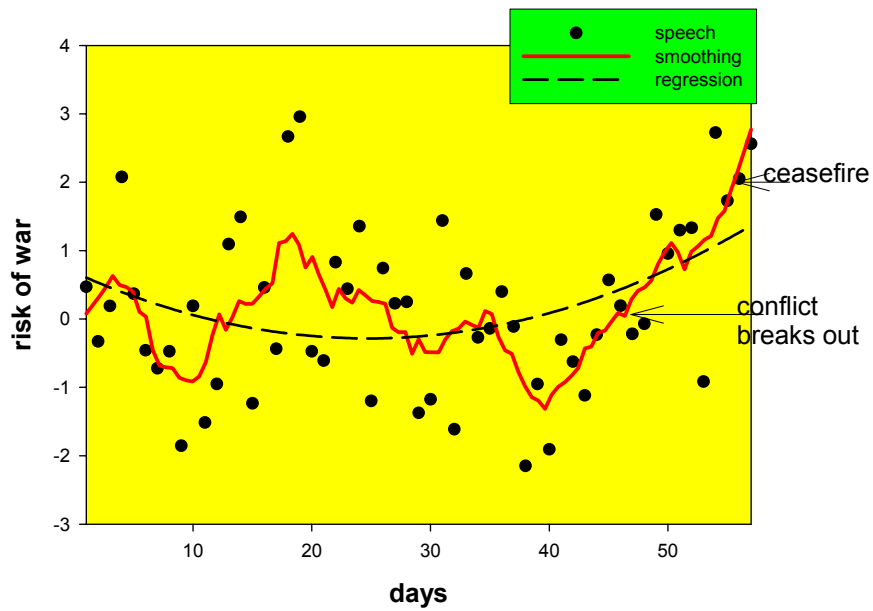


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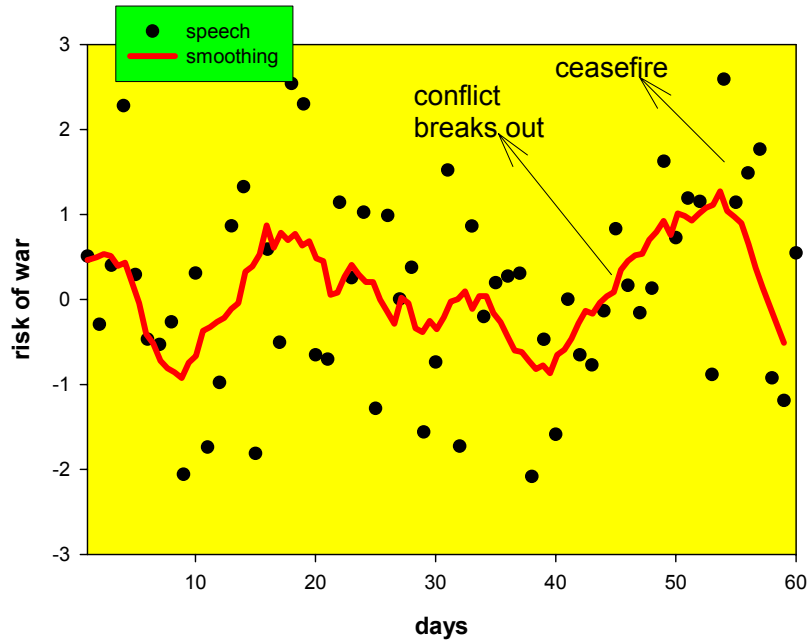


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