

Words of swords in the Caucasus: About a leading indicator of conflicts

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Running head: Words of swords

### Abstract

We analyze the statements of the President of Georgia, Mikheil Saakashvili, to scale the risk of conflict between Georgia and the Russian Federation (January to August, 2008). The objects of conflict are the separatist regions of Abkhazia and Southern Ossetia. We compare the Georgian documents over the same period to statements by the President of the Russian Federation, Dmitry Medvedev. We also compare them to statements by international parties in the conflict. The marker of risk of conflict is the gap between power words (increasing) and affiliation words (decreasing) in texts (McClelland, 1975). The larger the gap, the greater the risk. The statements of President Saakashvili lean toward appeasement, but also toward vagueness. President Medvedev manages to use both conciliating words while simultaneously displaying a growing power motivation about the Georgian question. The Russian national revival movement of Eurasianism offers insight to grasp the meaning of the events of August 2008.

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We analyze, for the period January to August, 2008, the risk of escalation of the conflict between Georgia and Russia over the separatist regions of Abkhazia and Southern Ossetia. We rely on words in public documents available to everybody on the Internet. These documents are 1) the statements of the President of Georgia, Mikheil Saakashvili, 2) those of the President of the Russian Federation, Dmitry Medvedev, and 3) those of the international community. Our interest is in what leaders say, not what happened. We may reasonably suspect the goal of many political documents is not precision but effect, raising the question of how much deceit is present in these documents. The difficulty is that deceptive language causes the speaker to leak out vague words (Burgoon & Buller, 1994; Newman, Pennebaker, Berry, & Richards, 2003). What solves the difficulty is that vagueness is quantifiable (Hiller, 1971).

To analyze reports of conflicts, we need a theory of conflict, a tool to assess it, and a procedure (see the method section) that guarantees the same treatment for each document. About a theory of conflict, McClelland (1975, pp. 314-359) shows how the reformist zeal of visionary moralism is often the link between an *imperial motivation pattern* (measured by the spread created between high need for power and low need for affiliation) and later wars. Hear Woodrow Wilson's campaign address in Jersey City, NJ on May 25, 1912. "*We are chosen and prominently chosen to show the way to the nations of the world how they shall walk in the paths of liberty*" (<http://www.wilsoncenter.org/index.cfm>). This mystique runs like a recurring figure through many conflicts. Another illustration is Melvyn Leffler's (2007) book title "*For the soul of mankind*", which fleshes out the role of moral conviction at the origin of the Cold War. In McClelland's theory, the need for affiliation refers to the uncomplicated traffic of shared love. Positive emotional relations with a person define the need of affiliation, instanced and much craved for in Robert Putnam's book "*Bowling Alone*" (2001). The need for power refers to the need to get control over people. Affiliation and power are often in disagreement with each other: The crest of one then coincides with the troughs of the other, spreading a pattern of conflict or appeasement depending on the momentum of each need. We best understand affiliation and power by contrast with what each is not for the other. The complexity to make up power and affiliation with each

other matches Robert Reich's (2007, p. 114, "*inequality* [of wealth] *undermines solidarity and mutuality*") argument that it is difficult for capitalist power not to sacrifice solidarity and loyalty.

About the tool (detailed in the method section) to assess the risk of conflict, we use words of affiliation and words of power to build up a "motive dictionary" (Table 2). We then measure the gap between the relative frequency of power words and the relative frequency of affiliation words. The wider the gap, the greater the risk of conflict. A persistent upward trend in the "Power-minus-Affiliation" gap is a warning that a conflict is becoming more likely. It is not a magic formula for identifying a point at which one can say, "The war starts tomorrow". There is a difference between predicting the factual outbreak of a conflict and getting intelligence that a conflict is becoming more likely. Wars, like earthquakes, are complex and open-ended. Likelihood does not exclude randomness. To assess the likelihood of an event is to admit that you do not and cannot know for sure whether it will take place. Imponderable events like idiosyncratic bias of political decision-makers may blur geostrategic logic. The arrangement proposed here concentrates on a motivational model that offers insights for predicting the outbreak of wars or the coming of peace. Detecting the likelihood of a conflict provides the information which would make possible to evaluate its risk. Knowledge of that risk leads naturally to the possibility to gain control over it. Contrary to prospective however, prediction does not imply a concerted action to influence events. We made up the computer-readable Motive Dictionary out of power and affiliation words to crack these motives in texts. The result is a leading indicator geared to scale the risk of conflict in documents. The risk of conflict is a menace in motion. We filter texts using the thesaurus and look for prevailing trends.

Winter (1993, 2004) and his team have amply confirmed McClelland's theory in predicting the outbreak of conflicts. An example. Langner and Winter (2001) show that "concession making is positively associated with affiliation motivation and negatively associated with power motivation" (p. 711). But the motive imagery is also present in the workings of terrorism (Allison, 2008): Terrorist groups were significantly higher than comparison groups in power motive imagery. Motive imagery is also relevant in psychological and physical abuse in intimate relationships (Dutton & Strachan, 1987;

Mason & Blankenship, 1987): A higher need for power in men increases the risk of domestic violence. Finally, production of progesterone goes with affiliation and testosterone with power motives (Schultheiss, Wirth, & Stanto, 2004).

### *Nation-building in the Caucasus*

Motley ethnic groups, Georgians, Svans, Azeris, Armenians, Pontic Greeks, Abkhazes, Russians, Ossetes (<http://www.joshuaproject.net/countries.php>; Central Intelligence Agency, 2008) characterize Georgia. Many former Soviet republics experience different degrees of historical consciousness on the way to reinvent itself (Garagozov, 2008). As one Azeri scholar has it, “nation building continues in this region” (Mammadov, 2008, p. 4). There is a difference between nation-building in the West and in the Caucasus. In the West, nation-building occurred before any popular demands for democratic rights or any possibility to defend the rights of minorities. In the West, ethnic unifications and forced changes of identities did not stir any protest abroad. Nation-building and managing minority rights are problematic in multi-ethnic societies. “Democratization and nation-building [are] antithetical in circumstances of ethnic diversity” (Welsh, 1993, p. 44). Of the three South Caucasus states, two, Azerbaijan and Georgia, are multi-ethnic. Armenia became monoethnic after it deported 150,000 Azeris from Armenia between 1948 and 1952 (Yunusof, 2005) and drove away another 200,000 between 1988 and 1989. Some ethnic groups rebelled against their respective states. Armenians rebelled in Azerbaijan, and Abkhazes and Ossetes in Georgia, mostly for territorial motives. The ethnic groups that rose were the ones the Soviet administration had granted autonomy to. This administration had indeed mixed up in the same regions ethnic groups with competing collective memories and identities.<sup>1</sup> Now and then, this artificial partitioning pitted one ethnic group against another, for economic or political reasons, but not only (Kaufman, 2001; Wertsch, 2006). The deep source of these conflicts was in the historical consciousness of these groups (Garagozov, 2006).

## Method

### *Texts*

We collated documents and periodized them by day’s counts (Table 1). We collated the documents of the President of Georgia from <http://www.president.gov.ge>.

We also collated documents (April 4 to August 9, 2008) of the “Georgia Update” service of the Georgian government from <http://georgiaupdate.gov.ge/en/updates>). After August 8, 2008, we completed the “Georgia Update” documents using the “Georgia Updates” site of the US “Georgian Daily” (<http://georgiandaily.com>). Its pages contain statements by United Nations Security Council Members, the Organization for the Security and Cooperation in Europe, and other European Union intervening parties in the conflict. That series of “Georgia Updates”, from now on ‘international community’, is a mix of documents from proxies of the international community speaking in favor of Georgia. The fact the Georgian leadership joined them in the same database grants them the logical connection we need to handle them together and analyze them separately from the other documents. The texts by President Medvedev we collected from <http://www.kremlin.ru/eng/sdocs/speeches.shtml>. We collated 73 Presidential documents spread over 35 days from May 26 to September 11, 2008, each document having to contain at least one instance of the entry “Georgia”. We had to filter out the statements by President Medvedev that did not concern Georgia; not doing so would have brought in the corpus texts about agricultural issues, crime reports, and other irrelevant issues about the internal affairs of Russia. Filtering out was unnecessary with the statements by President Saakashvili: All his statements concerned the separatist regions.

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Insert Tables 1 and 2 about here

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*Computer-aided content analysis and dictionaries*

We analyzed the texts using the PROTAN (for “Protocol Analyzer”) software of computer-aided content analysis (Hogenraad, Daubies, Bestgen, & Mahau, 1995). Content analysis with PROTAN involves first entering the texts in their natural sequential order, with codes to periodize them. Then changing declensions into the root forms of the words, and looking for matches between an entry in a dictionary and the word in the text. A dictionary, in content analysis, is a list of words organized into cut-outs, that is, words with a role in a hierarchy. Using a dictionary consists of comparing the words of a text to the words of the dictionary. Each time one finds a match between a word of the dictionary and a word in the text, the dictionary category substitutes for the text word.

One then records the substitution in the unit in which it occurred. When one has made all the comparisons, one totals the recorded matches by category and takes the percentage of the number of word matches.

We set up two categories of “need for affiliation” (*nAff*) (*mate, sweetheart, affable*) and “need for power” (*nPow*) (*ambition, captive, terrorize*) of the motive dictionary (Table 2). Any word assigned to one subcategory cannot be present in another one except in a higher-up one. The present 2008 edition of the motive dictionary has 810 entries for affiliation, and 1,556 for power. We measure the risk of conflict by computing the average difference (the gap) between the score for power (*nPow*) and the score for affiliation (*nAff*) by statement. The Motive Dictionary (Table 2) we clinched into PROTAN is available in English, French, and soon in Spanish. Each version contains over 2,000 entries of affiliation and power words.

We found the theory and the tool to assess it to be regularly valid where we expected it to be fitting. We used fictional texts and historical documents in which the risk of conflict passed through different phases. We then checked if the dictionary scores, especially the rises and falls of the gap between power and affiliation in the texts, confirmed the rises and falls of the risk of conflict in the stories or in history. Our leading indicator of conflict never produced a false positive throughout the tests we performed (Hogenraad, 2003, 2005, 2006, 2007). For example, we have seen the indicator at work (Hogenraad, 2005) in the diplomatic archives of the twelve days (July 24–August 4, 1914) that preceded the outbreak of WWI. We succeeded too (Hogenraad, 2005) in detecting the increasing risk of war in Iraq from the speeches (September 11, 2001–March 20, 2003) of President G. W. Bush and PM Blair before the Anglo-American action in Iraq in 2003. We also succeeded in detecting the trend toward appeasement in the 1962 13-day Cuban Missile Crisis (October 16-28) (Hogenraad, 2007), a trend already noted by Winter (1993, p. 540; see also Winter, 2003). And in the Irish Republican Army (IRA) negotiations (Hogenraad, 2008a) that lasted from 1996 to 2007 until the St Andrew’s agreement of October 2006 ending a 38-year British campaign. Finally, our analyses of the speeches of Iranian and American leaders (January–September 2006) allowed us to surmise there would be no war between these two, at least for the moment (Hogenraad, 2008b).

With the motive dictionary, a dwindling gap augurs a peace settlement; an increasing gap foreshadows a possible confrontation. The dictionary is economical in time and means compared with hand-scoring documents using trained coders. One example is the integrative complexity of Suedfeld and Tetlock (1977), also a leading indicator of conflicts using human coders. With the advantage of speed, the motive dictionary showed as efficacious for analyzing the outbreak of World War I and the Cuban missile crisis as the integrative complexity (Guttieri, Wallace, & Suedfeld, 1995; Hogenraad, 2005, p. 138). Web access further allows quasi-live analyses of conflicts (Cohn, Mehl, & Pennekaker, 2004; Mehl, 2005). Fast analyses combined with predictive tools can be efficient instruments of early warning. Also, we can exploit it in other forms of conflicts, in management, in domestic violence, or in terrorism.

Losing nuances of the texts is the major weakness of computer-readable dictionaries (Shapiro, 1997). The density measure (that is, the number of different words that hit a category) brings out some nuances a frequency count misses. We will signal when the density measure adds extra information. Finally, we quantified how much vagueness there was in the documents. By vagueness, we mean one's temporary psychological state when one is lacking command of the facts, knowledge, or understanding to communicate effectively. We used Hiller (1971; Hiller, Marcotte, & Martin, 1969) list of 362 vague and ambiguous words and expressions (*more or less, about, sort of, considerations, many, process, variety, situation, very*). Hiller's scales detect items clarity in questionnaires (Ford, Stetz, Bott, & O'Leary, 2000). The scales also correlate with writing quality in students' essays (Hiller et al., 1969). More relevant to us, Ruth Wodak (2007) found vagueness and ambiguity in the speeches of right-wing politician Jörg Haider.

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Insert Table 3 about here

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## Results

Results integrate statistical treatments like removing autocorrelations and resampling statistics. To ensure independent observations, we randomize the data. It is

impossible to randomize textual data, because the temporal order is part of the information carried by them. There are reasons to believe that, for example, the rate of emotional intensity in speech no. 5 of a political decision maker depends to some degree on the rate of emotional intensity in the preceding speech. Such a dependency, when it becomes systematic, creates a seeming change without any genuine change. A systematic dependency in a temporal series is an autocorrelation. It is possible to calculate and to remove such dependencies from serial data. The principle consists of correlating the rate of the variable in text 1 with the rate in text 2, then the rate in 2 with the rate in 3, and so on. We then remove this dependency if there is one when we regress the rate of the variable over the series of texts (Hogenraad, McKenzie, & Martindale, 1997).

Textual documents are unique and unrepeatably. But unique events pose a problem about the confidence we can have in a statistical test done on data when there is no real sampling error. Resampling statistics (Cohen, 1994; Diaconis & Efron, 1983) consists of simulating what we cannot have. In Hogenraad and McKenzie (1999), we treat the scores of each variable of interest as if they were the population, and recreate several thousands samples from it by sampling with replacement. For each simulated version, we calculate the statistical estimator we have an interest in. Each of the simulated versions of the speech is therefore like an experiment – a clone – containing a minor or sometimes major change of the original.

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Insert Figures 1, 2 and 3 about here

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### *Risk of conflict and vagueness*

We removed the autocorrelations from the series when appropriate and based confidence intervals systematically on 20,000 resamplings (Table 2 for a summary of the results). The trend for the risk of conflict in President Saakashvili's messages is decreasing (Figure 1). In contrast, the risk of conflict in the statements of the international community is increasing (Figure 2). The risk of conflict in President Medvedev's statements increases until August 18, 2008, and decreases afterwards (Figure 3). President Saakashvili's statements contain more different vague words over time (Figure

4) while President Medvedev's statements gain in precision (not shown). The international community shows no significant trend on vagueness.

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Insert Tables 4, 5, and Figure 4 about here

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### *The words that matter*

As the statements of especially Medvedev and Saakashvili evolve in opposite directions, one may wonder if it is possible to find traces of these divergences in the words used by each protagonist. Indeed, using dictionaries does not allow knowing the content of the divergences. There is a simple way to solve the problem and a complex one. We expound on the simple one while also launching ideas for future studies about possible new analyses of the early data. The simplest way to address the question of the words that make a difference between two corpuses consists of centering on word frequencies. The complex one consists of looking for the contiguities between words of a corpus. The contiguity idea, which Iker (1974) showed has a long history, consists of applying multivariate reduction techniques to matrices containing all possible pairwise coefficients of association drawn from word-word covariations (Weber, 1983). Spence and Owens (1990) showed frequency of co-occurrence in the 1-million-word Brown corpus (Kučera & Francis, 1967) correlated with association strength. By factor analyzing word-word correlations in texts, it is then possible to identify main themes in a corpus (Louwerse & van Peer, 2002).

For now, we return to the mere word frequencies to get a feeling of the divergences between corpuses and a hint of possible new analyses. We focus on the differences between the words of President Medvedev on the one hand and those of the President of Georgia and the international community on the other hand. We went in two steps, first running a series of t-tests between all the words with an arbitrary frequency greater than 10 in the Medvedev corpus and that of Saakashvili and of the international community, taken two by two. We then ran a second t-test on the average frequency (the rate) of the cloud of words that characterized each actor. In Medvedev versus Saakashvili, the value of the rate is 10.1 for Medvedev, and 6.4 for Saakashvili (difference = 3.7). These two mean values are different from each other, the  $t$  value is

-9.4 ( $p < .0001$ ). In Medvedev versus the international community, the rate is 16.0 for Medvedev and 10.2 for the international community (difference = 5.8), the  $t$  value is -10.9 ( $p < .0001$ ). The word clouds in Tables 4 and 5 reflect the topics that are on the minds on the actors of the conflict. These clouds are the most frequent words that distinguish the statements of the Russian leadership from those of the Georgian leadership and from those of the international community. For example, conciliating words such as “*agree, colleague, collect, cooperate, discuss, meet, organisation, relate, with*” characterize President Medvedev compared to the words used by the international community (Table 5). Inversely, President Medvedev significantly underuses words such as “*Abkhaz, Abkhazia, airspace, democracy, effort, election, ethnic, European Union, fly, force, foreign, Georgian, government, integrity, international, military, Moscow, North Atlantic Treaty Organisation, Organization for Security and Co-operation in Europe, peacekeeping, radar, rebels, Rice, Russia, separatist, sovereignty, Tbilisi, Ukraine, United Nations*”, all words which we find among the international community. We notice President Medvedev manages to use conciliating words while simultaneously displaying a growing power motivation about the Georgian question. In the same vein, value-laden words like “*democracy, future, history, importance, should, together, unite, value*” (Table 4) characterize the moral uplift style of President Saakashvili opposite the international community. These value-laden words match the imprecision noticed earlier in his statements. His contrasts with the matter-of-fact style of the international community, on words such as “*air, airspace, conflict, EU, force, foreign, military, separatist, sovereignty*”, words which Saakashvili does not use, or less often (table not shown).

### Discussion and conclusions

What do we know now that we did not know before? In contrast with the international community and the Russian leadership, President Saakashvili tended towards appeasement, until the tipping point of August 8. The unexpected broke in. Did we fail to predict the outbreak of August 8, 2008 while we had succeeded elsewhere? Perhaps not. The increasing evasiveness of President Saakashvili’s friendly tone undermined his statements. Blurred messages sent mixed signals that added to the confusion. Vagueness and confusion cause the Saakashvili’s statements to become less

convincing. At the opposite, Medvedev's messages were becoming more precise, signaling an efficacious crisis communication.

And yet, mere facts are not enough to understand the sense of what happened. We already know that we have to learn more about the history of the Caucasus, a history in which Russia has an engrossing distinctive share. But we need also to know more about Russia itself. Russian Eurasianism (Laruelle, 2008; Matern, 2007; Sidorov, 2006, esp. pp. 335-340) is now a fashionable patriotic doctrine among Russian political and intellectual circles (Laruelle, 2008, p. 143). Its origin dates from the Russian emigration after World War I (Trubetzkoy, 1920/1991). Modern Eurasianism fills the need of the Russian leadership and of some Newly Independent States for an unofficial ideology of greatness encompassing as much as Central Asia, the Caucasus, and Asia Minor. Hear President Putin on September 4 2004 after the Beslan attack

([http://www.kremlin.ru/eng/speeches/2004/09/04/1958\\_type82912\\_76332.shtml](http://www.kremlin.ru/eng/speeches/2004/09/04/1958_type82912_76332.shtml)):

*“Today, we live in a time that follows the collapse of a vast and great state, a state that, unfortunately, proved unable to survive in a rapidly changing world. But despite all the difficulties, we were able to preserve the core of what was once the vast Soviet Union, and we named this new country the Russian Federation.”* It is possible to extract from the different Eurasianist currents some common denominators. One is the insistence on the “cultural unity and historical destiny of the Russian and non-Russian people of Russia, the former Soviet Union, and part of Asia” (Laruelle, 2008, p. 203). We attend here to an ambiguous “us versus them” double move (Connor, 1994, Chap. 5 ‘Illusions of homogeneity’, pp. 118-143) consisting of 1) wiping out the differences inside the group, while 2) stressing one’s inalterable specificity toward or even against the outside world, that is, the West. This cultural unity and historical destiny remind one of the patriotism (unity) and nationalism (destiny) factors shown by Feshbach (1990; see also Druckman, 2001). Yet, there could be more than patriotism and nationalism in the Russian Eurasianist Parousia. In particular, unity and destiny further allow suppressing any collective work of memory brought about by the tales of the groups and cultures. There is nothing to remember, why indeed remember that one is the same as one’s neighbor. Being inassimilable to Western culture by essence, the former countries of the Soviet Union ought to remain together -- matryoshka-like distinct but contained in each other

(Wiederkehr, 2007). As one of our correspondents had it: “*We all have somewhere in our genes a feeling of an empire*” (Anonymous, personal communication, March 15, 2009).

So President Medvedev’s words on August 8 2008

([http://www.kremlin.ru/eng/speeches/2008/08/08/1553\\_type82912type82913\\_205032.shtml](http://www.kremlin.ru/eng/speeches/2008/08/08/1553_type82912type82913_205032.shtml)): “*Russia has historically been a guarantor for the security of the peoples of the*

*Caucasus, and this remains true today.*” The Eurasianist world-view of Russian-Asian greatness is no doubt multiform and ambiguous. Nevertheless it taps neatly into the events of the South Caucasus to make them fall into place. We better grasp, if not the cause, at least the roots of the 2008 Georgian conflict. That Georgia might open itself to the West is simply not an alternative for a Russia that considers Caucasus as irreducible, by essence, to a Western model. Perhaps we have now an insight from which to speculate on the future of the South Caucasus. The internal logic is one of a patriotic idea of rebirth. We may dispute Russian Eurasianism, but not ignore it. One should expect Russian impatience wherever the solution of incidents in what was the Soviet Union would discount Russian cooperation. The deadlocked conflict between Armenia and Azerbaijan about the Nagorno-Karabakh is a case in point. On February 13, 2009, the RIA-Novosti news agency (Abbasov, 2009) quoted Alexander Dugin, the influential intellectual Russian party leader of the “International Eurasianist Movement”

(<http://www.arctogaia.com/public/eng/> or [www.arcto.ru](http://www.arcto.ru) in Russian; Laruelle, 2008, chap.

4) saying “*Nabucco has to be wrecked at any cost because we are talking about gas geopolitics. If we need to initiate new military conflict for this purpose, we should do it without hesitation*”. (“Nabucco” is the pipeline transporting the natural gas from Baku to Turkey by way of Tbilisi to the European Union.) About ideas of further studies, we could analyze Eurasianism further in depth, first by collating a new computer-readable dictionary comprised of categories of nationalism and patriotism. Then by completing this abstract map with what would come out from thematic analyses, alluded to earlier (Louwerse & van Peer, 2002), of statements of Russian leaderships and elites. That, at any rate, is the idea.

We entered this study analyzing statements about the Georgian conflict and left it with the project of clarifying a political ideology. Our cameo is a bit like closing the stable door long after the horse had bolted. Yet not so if, in hindsight, it helps some, by

accessing to a vision beyond, to clear up what happened. The present documents come from popular forms of government, like those produced 70 years ago by equally popular forms of government, Great-Britain and France, Germany, and Czechoslovakia, over another territorial demand. CBS broadcaster William Shirer (1941/2002) witnessed how the German claim over Czechoslovakia's Sudetenland in 1938 only met a wanting politics of appeasement, especially from Prime Minister Neville Chamberlain, to the advantage of Germany who did not return the favor. The European Union too continues to encourage a "Europe of the Regions" (Borrás-Alomar, Christiansen, & Rodríguez-Pose, 1994). Insisting on regionalism may have unpredictable or uncontrollable outcomes. Nuhoğlu Soysal (1994, p. 161) brings up the possibility of passing from regionalism to separatism. A Google search on "Europe of the regions" yielding 29,900 responses on September 21, 2008 marks off the impact of the theme in Europe. As we reel from the Georgian conflict, it would be instructive to trail the language of the European Union about regionalisms, say, from President Delors (1985-1995) to President Barroso (2004- present).

## Footnotes

1. The Soviet administration created in three Caucasus States the following administrative divisions. (1) In Georgia, the Adjara Autonomous Republic mainly includes Muslim ethnic Georgians; the Abkhazian Autonomous Republic is made up mostly of Abkhazes and Georgians; and the Southern Ossetia Autonomous Area is made up of Ossetes and a minority of Georgians. (2) In Azerbaijan, the Nagorno-Karabakh Autonomous Area includes Armenians and a minority of Azerbaijanis. (3) Armenia had no such division, regardless of its 300,000 ethnic Azeris living there.

## 2. Distribution of President Saakashvili's documents per month

(1) January: doc 1	(4) April docs 5-11	(16) July: docs 20-22
(2) February: doc 2	(8) May: docs 12-17	(19) August: docs 23-25
(3) March: docs 3-4	(14) June: docs 18-19	

## 3. Distribution of the Georgian Updates documents per month

(1) April: docs 1-9	(3) June: docs 24-25	(5) August: docs 33-39
(2) May: docs 10-23	(4) July: docs 26-32	

## 4. Distribution of President Medvedev's documents per day

(1) May 26: doc 1	(13) Aug. 11: docs 20- 23	(25) Aug. 26: docs 47- 52
(2) Jun. 6: doc 2	(14) Aug. 12: docs: 24- 28	(26) Aug. 28: docs 53-o 57
(3) Jun. 18: doc 3	(15) Aug. 13: doc 29	(27) Aug. 29: doc 58
(4) Jun. 21: doc 4	(16) Aug. 14: docs 30- 33	(28) Aug. 30: doc 59
(5) Jun. 27: doc 5	(17) Aug. 15: docs 34- 36	(29) Aug. 31: doc 60
(6) Jul. 3: doc 6	(18) Aug. 16: doc 37	(30) Sep. 2: docs 61-63
(7) Jul. 5: doc 7	(19) Aug. 17: doc 38	(31) Sep. 3: doc 64
(8) Jul 7: docs 8-10	(20) Aug. 18: docs 39-40	(32) Sep. 5: docs 65-67
(9) Jul. 18: doc 11	(21) Aug. 19: doc 41	(33) Sep. 8: docs. 68-69
(10) Aug. 8: doc 12	(22) Aug. 21: doc 42	(34) Sep. 9: docs 70-71
(11) Aug. 9: docs13-15	(23) Aug. 22: doc 43	(35) Sep. 11: docs 72-73
(12) Aug. 10: docs 16- 19	(24) Aug. 25: docs 44- 46	

## Authors' notes

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Table 1. The corpus			
Texts	Divisions	Total number of words	Number of different words
President Saakashvili's statements	25 documents over 21 days (January 24 – August 10, 2008)	32,571	3,735
“Georgia Updates”, a service of the government of Georgia	39 documents over 30 days (April 4 - August 9, 2008)	36,283	4,334
President Medvedev's statements	73 documents over 35 days (May 26 – September 11, 2008)	49,079	4,228

Table 2. Motive dictionary: “need for affiliation” (*nAff*) and “need for Power” (*nPow*)

Category	Subcategory	N. of entries	Examples
<i>nAff</i>		810	
	Affection	106	mate, sweetheart
	Social behavior	82	answer, escort
	Affiliation	460	accompany, courteous
	Affect loss	23	alone, indifference
	Affect participants	60	dad, mistress
	Affect words	42	family, nostalgic
	Positive affect	38	affable, thoughtful
<i>nPow</i>		1,556	
	Power	865	ambition, justice
	Power gain	43	emancipate, nominate
	Power loss	58	captive, weak
	Power ends	10	plead, recommend
	Power conflicts	235	adversary, invade
	Power cooperation	64	arbiter, reciprocal
	Power authoritative part'ts	76	patriarch, detective
	Power ordinary participant	26	emissary, orator
	Power doctrine	24	conservatism, dogma
	Power authority	33	legitimate, reign
	Residual power words	122	colonialism, terrorize

Table 3. Summary of statistical results						
	R <sup>2</sup>	df	F	p	lin / quad	ci 95%
<b>Saakashvili</b>						
risk of war	.21	1,19	5.0	<.05	x	-.17/-.009 lin
vagueness*	.43	1,19	14.5	<.001	x	.04/.11 lin
<b>G. Updates</b>						
risk of war	.19	1,28	6.6	<.01	x	.02/.14 lin
vagueness				( <i>ns</i> )		
<b>Medvedev</b>						
risk of war*	.34	2,31	7.8	<.001	x	.11/.51 lin
					x	-.013/-.002 quad
vagueness*	.12	1,32	4.2	<.05	x	-.06/-.003 lin

\* Density measure takes into account the number of different hits per day rather than the total number of hits.

Table 4. The words that make a difference: President Medvedev compared to President Saakashvili
20 words that characterize the 73 documents of President Medvedev
agree, August, begin, colleague, collect, discuss, in, international, meet, on, Ossetia, partner, President, relate, Russia, security, set, situation, Southern, with
56 words that characterize the 25 documents of President Saakashvili
able, ago, all, be, because, before, big, but, come, country, create, democracy, election, experience, for, free, future, Georgia, Georgian, get, government, great, history, I, importance, into, it, know, many, must, nation, no, offer, one, opposition, or, Parliament, peace, person, politics, process, she, should, territory, time, together, try, unite, value, very, want, we, when, will, world, year

Table 5. The words that make a difference: President Medvedev compared to the international community
66 words that characterize the 73 documents of President Medvedev
about, agree, all, and, base, be, because, big, but, can, case, colleague, collect, common, cooperate, country, course, Collective Security Treaty Organisation, develop, discuss, do, exist, Group of 8, give, global, go, good, happen, here, I, issue, just, like, Medvedev, need, now, organisation, out, partner, person, position, problem, relate, same, set, sign, situation, take, there, therefore, they, thing, think, this, today, very, want, way, we, what, who, will, with, work, year, you
59 words that characterize the 39 statements of the international community
Abkhaz, Abkhazia, act, air, airspace, April, by, call, Council, democracy, effort, election, ethnic, European Union, fly, force, foreign, free, from, Georgia, Georgian, government, he, increase, integrity, international, into, it, July, military, Moscow, nation, North Atlantic Treaty Organisation, observe, or, Organization for Security and Co-operation in Europe, over, Parliament, peace, peacekeeping, politics, radar, rebels, recognize, region, report, Rice, Russia, Russian, say, separatist, sovereignty, Tbilisi, territory, troop, Ukraine, United Nations, unite, urge

Figure captions

Figure 1. The risk of conflict as assessed from the documents of President Saakashvili (January 24 to August 10, 2008) (n = 21) <sup>2</sup>

Figure 2. The risk of conflict as assessed from the documents of the international community (“Georgia Updates”) (April 4 to August 9, 2008) (n = 30) <sup>3</sup>

Figure 3. The risk of conflict as assessed from the documents of President Medvedev (May 26 to September 11, 2008) (n = 35) <sup>4</sup>. (Document 41 of day 21 --August 19-- has been filtered out).

Figure 4. The rate of vagueness in the documents of President Saakashvili (January 24 to August 10, 2008) (n = 21) <sup>2</sup>

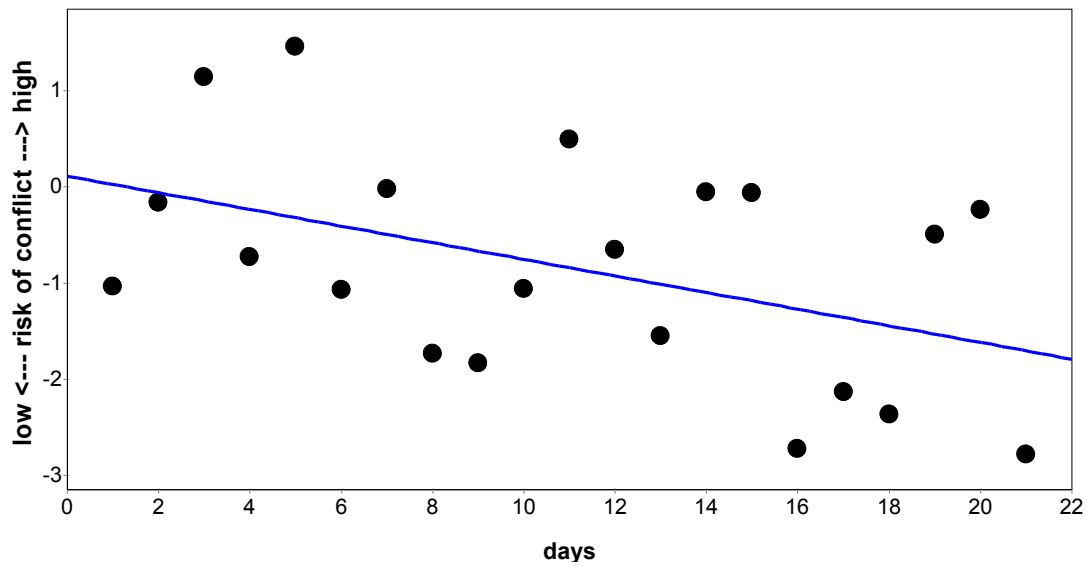


Figure 1. The risk of conflict as assessed from the documents of President Saakashvili (January 24 to August 10, 2008) (n = 21) <sup>2</sup>

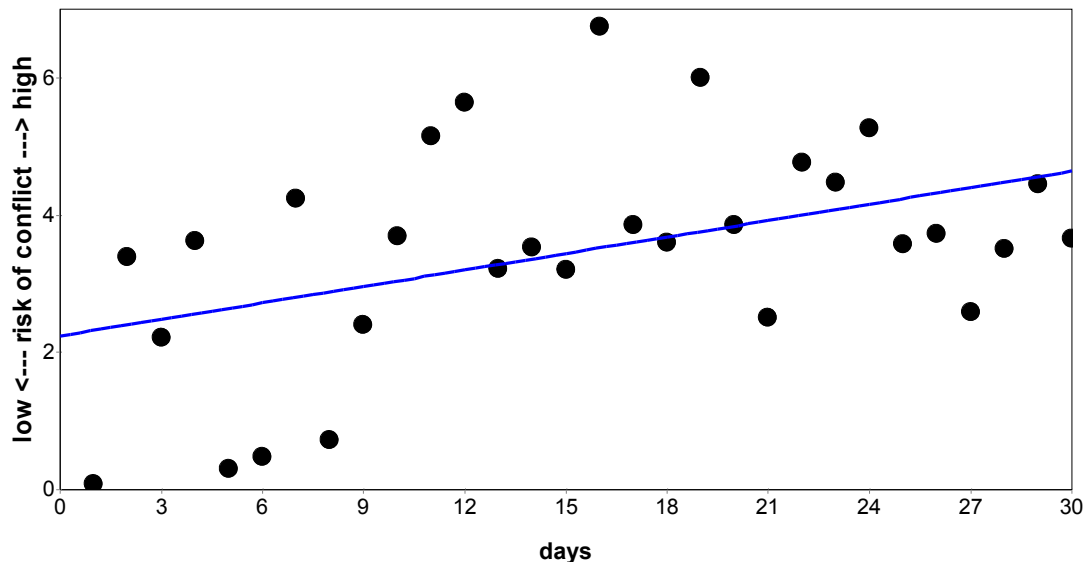


Figure 2. The risk of conflict as assessed from the documents of the international community (“Georgia Updates”) (April 4 to August 9, 2008) (n = 30) <sup>3</sup>

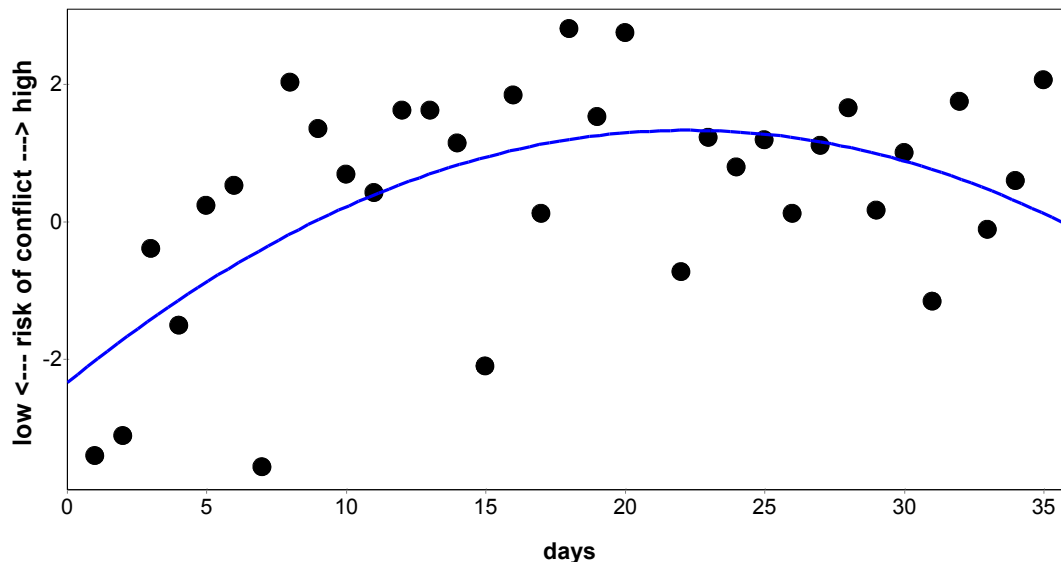


Figure 3. The risk of conflict as assessed from the documents of President Medvedev (May 26 to September 11, 2008) ( $n = 35$ )<sup>4</sup>. (Document 41 of day 21 --August 19-- has been filtered out).

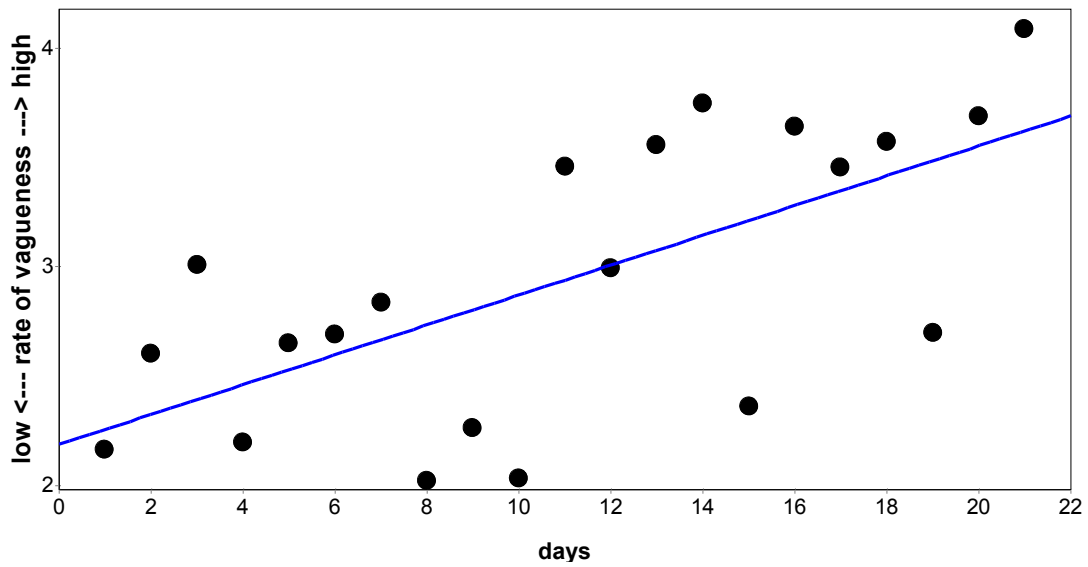


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