



The Predictive Potential of Political Discourse

Leah Windsor
Institute for Intelligent Systems
The University of Memphis
leah.windsor@memphis.edu





How can we use political discourse
to explain and predict socio-
political instability and crisis?



THE UNIVERSITY OF
MEMPHIS.

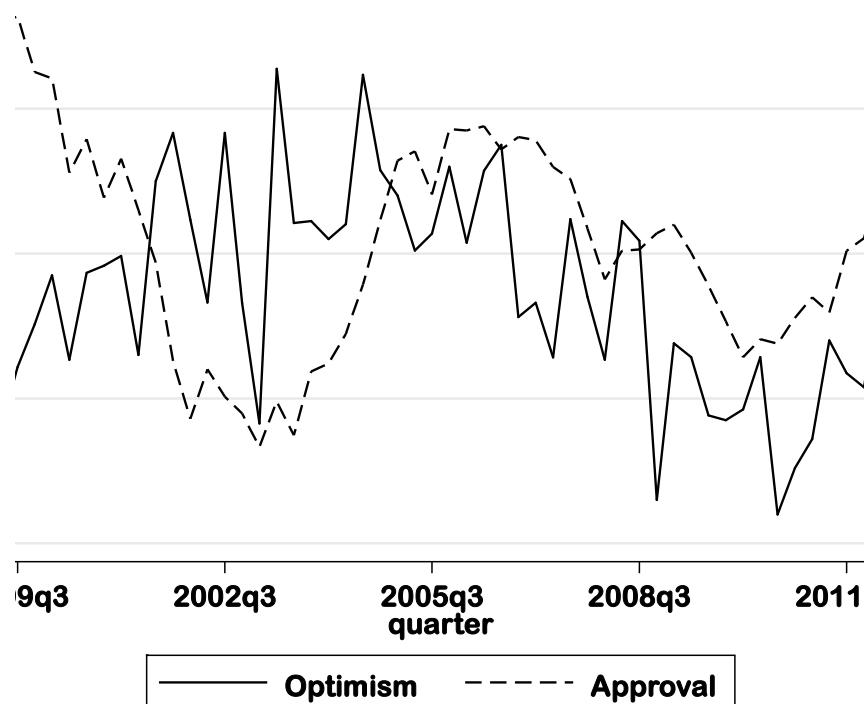
Challenges in the international system

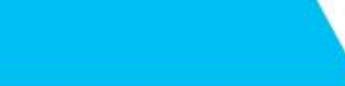
- Authoritarian leaders and violent non-state actor groups act unpredictably
- Credible threats and bluffs are challenging to distinguish
- Changes in leadership structure are often difficult to observe in opaque political environments
- Contagious large-scale political changes

Language is a rich source of information about political phenomena.

- Relatively few actors set the tone for global issues
- Violent and non-violent social movements often provide real-time information about political activities
- Language serves as a leading indicator of the changing political climate

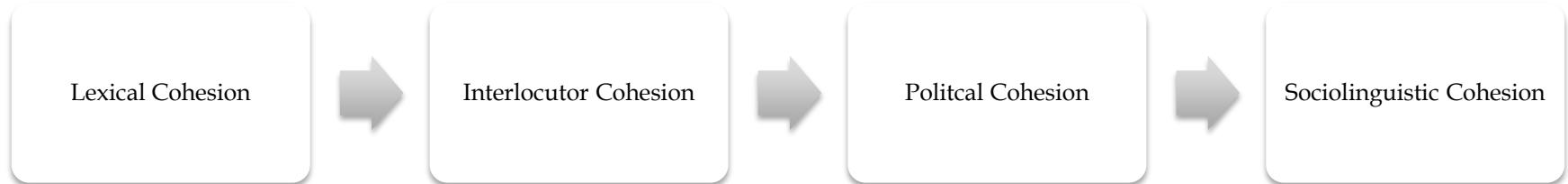
Language and Populism in Venezuela Under Hugo Chavez





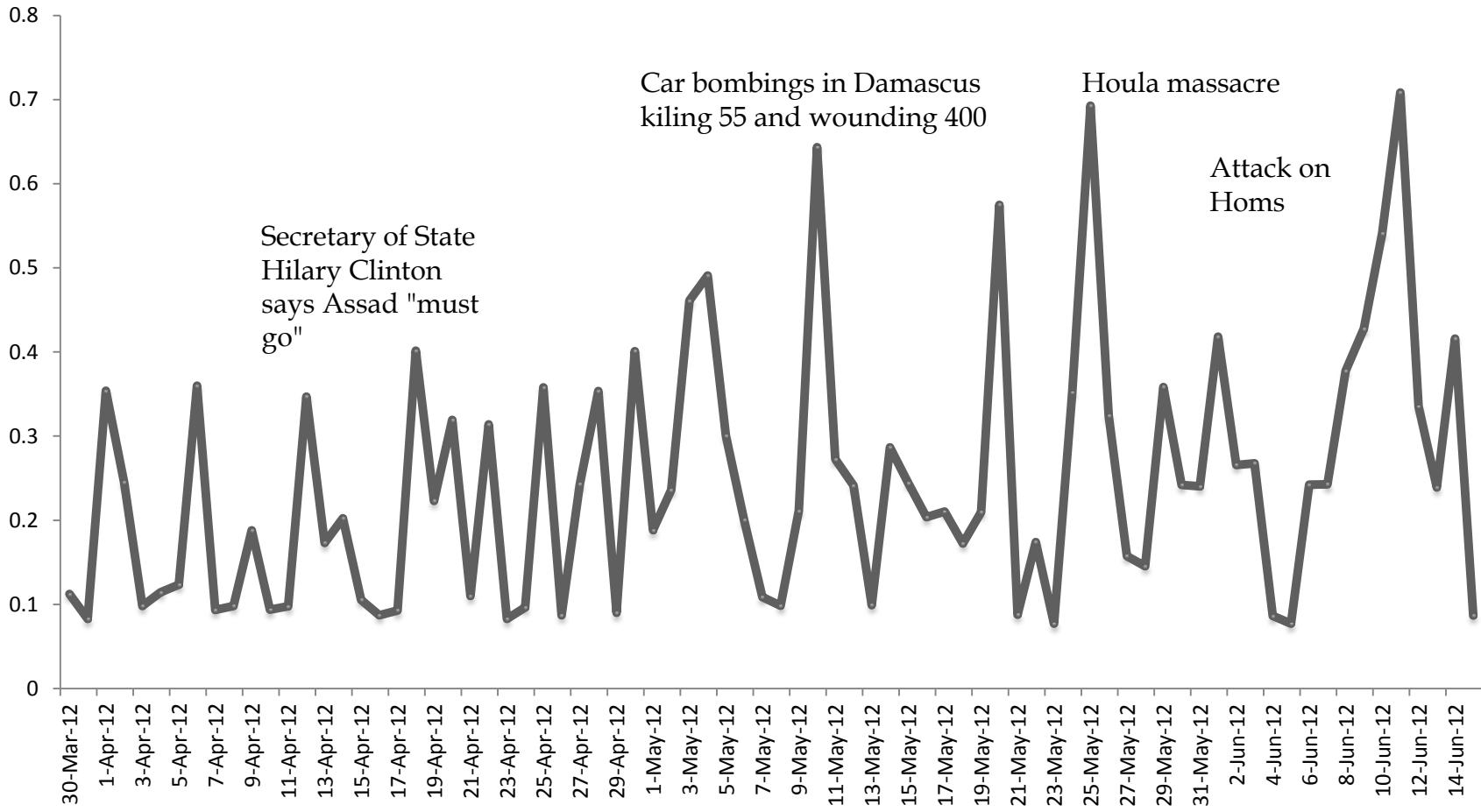
Questions to inform collaboration between social and behavioral scientists and the intelligence community

What linguistic features indicate group cohesion or fragmentation?



English tweet Cohesion in Syria

March 25-June 17 2012

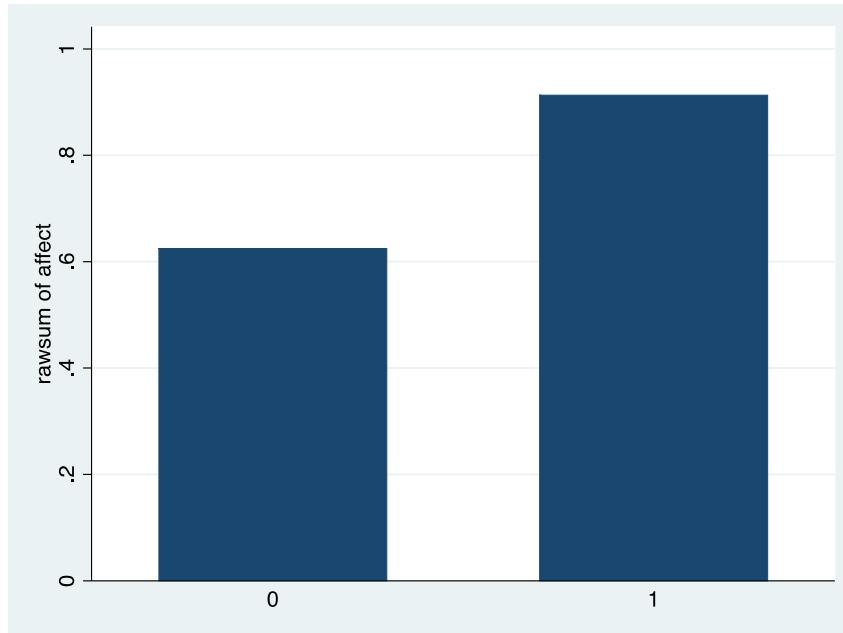


When are leaders bluffing, and when are they making credible threats? Specifically, what linguistic features of threatening and deceptive communications characterize credible threats and bluffs? Do leaders lie (a lot)?

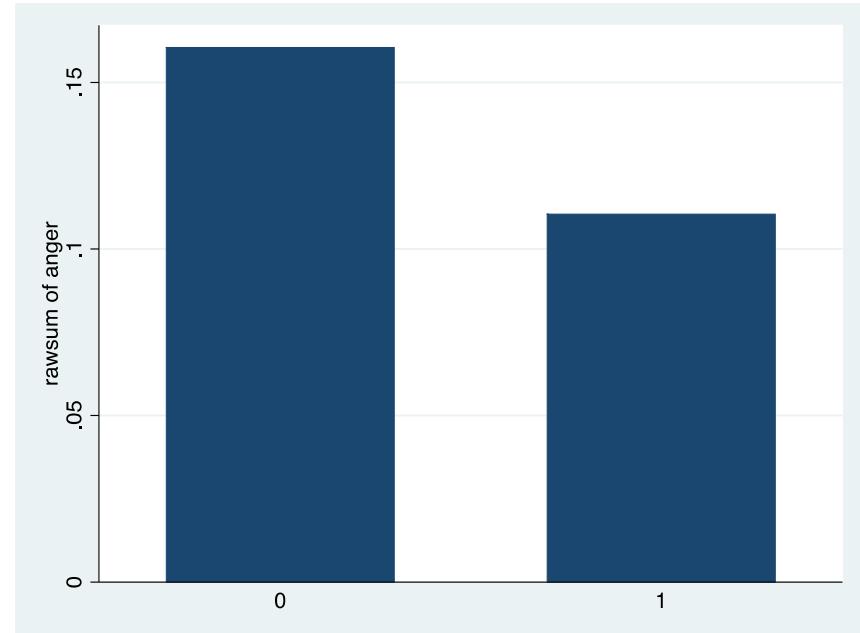
- Mearsheimer says no.
 - Bold-faced lies are rather rare
- Schelling says that they may do it unintentionally (change their minds).
- The deception detection literature (Chung & Pennebaker; Mihalcea et al.) suggests that it is far more frequent.

Bluffs and credible threats are linguistically different

Affect

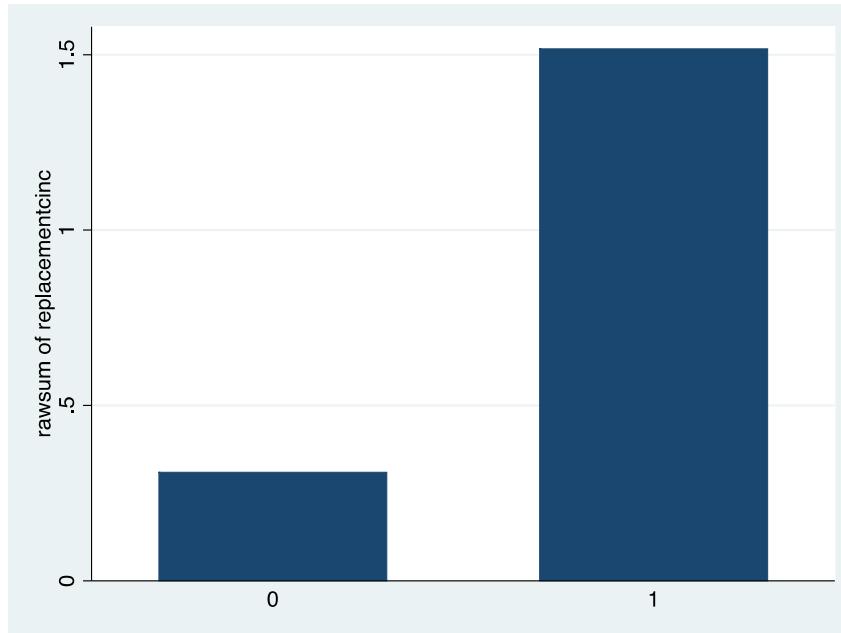


Anger

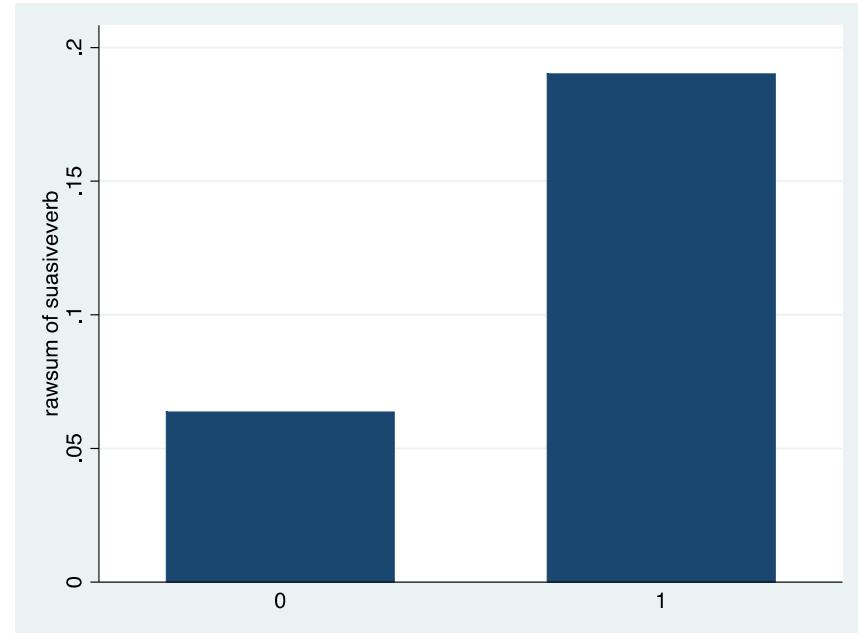


Bluffs and credible threats are linguistically different

CINC Score

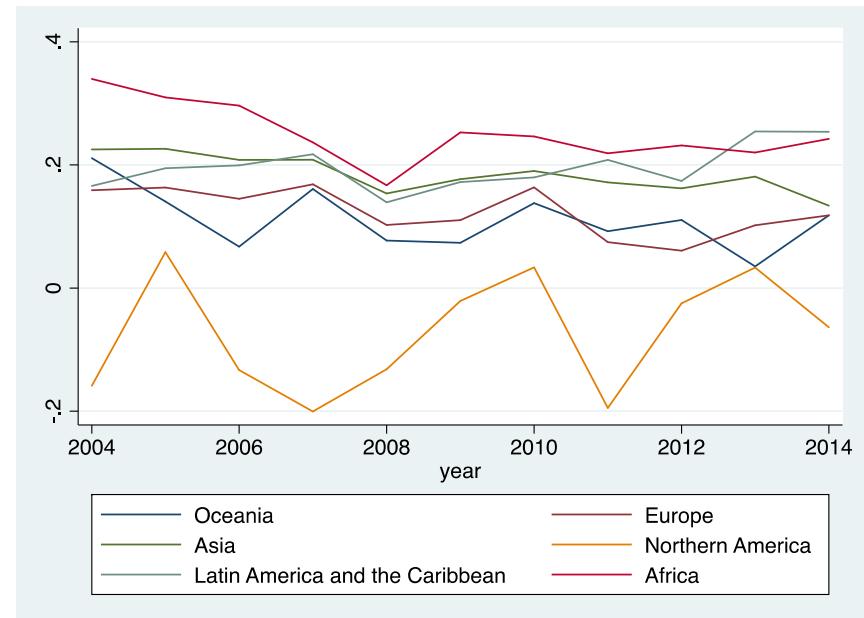


Suasive



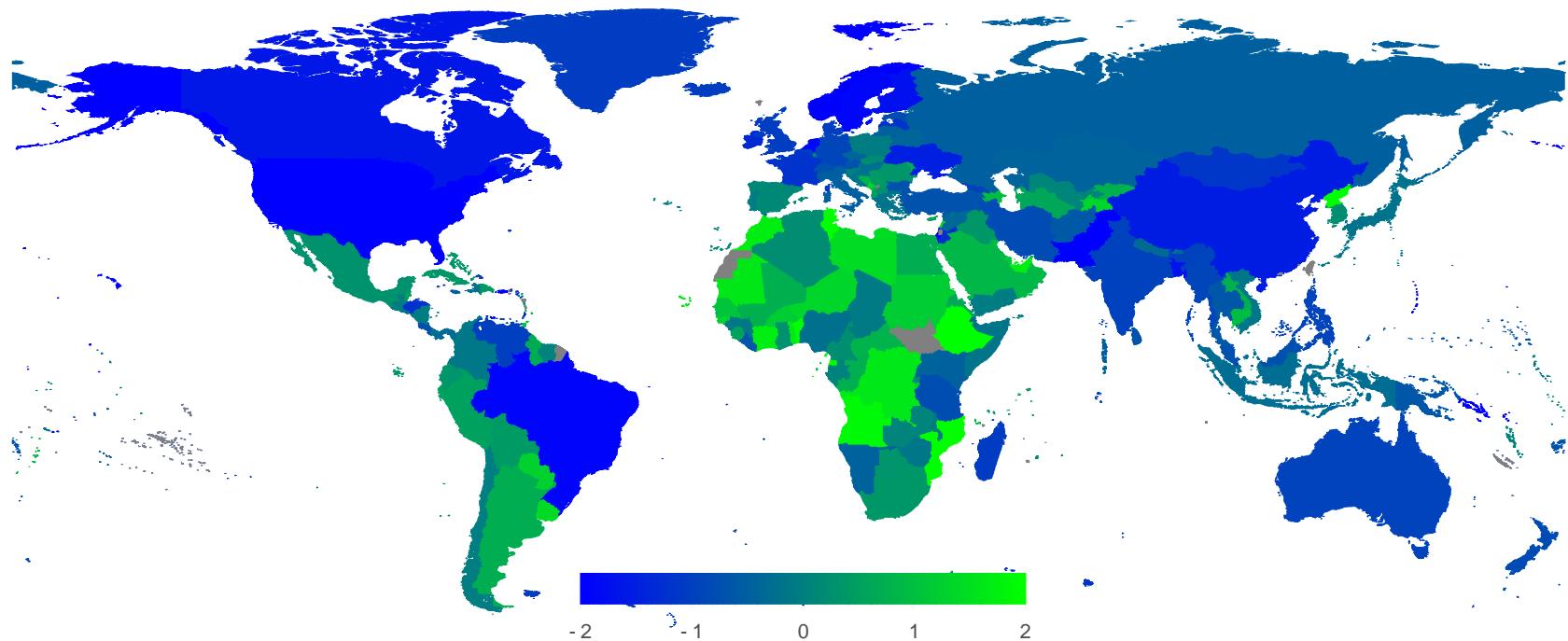
What linguistic features indicate democratization and democratic backsliding as well as transitions toward and away from improvements in human rights practices?

- Research suggests that leaders of non-democracies use more formal language because they share less common ground – both with each other and with democracies – and because they leverage their language to bolster their credibility and legitimacy and overcompensate for their out-group status.



Formality is an indicator of common ground and affiliation

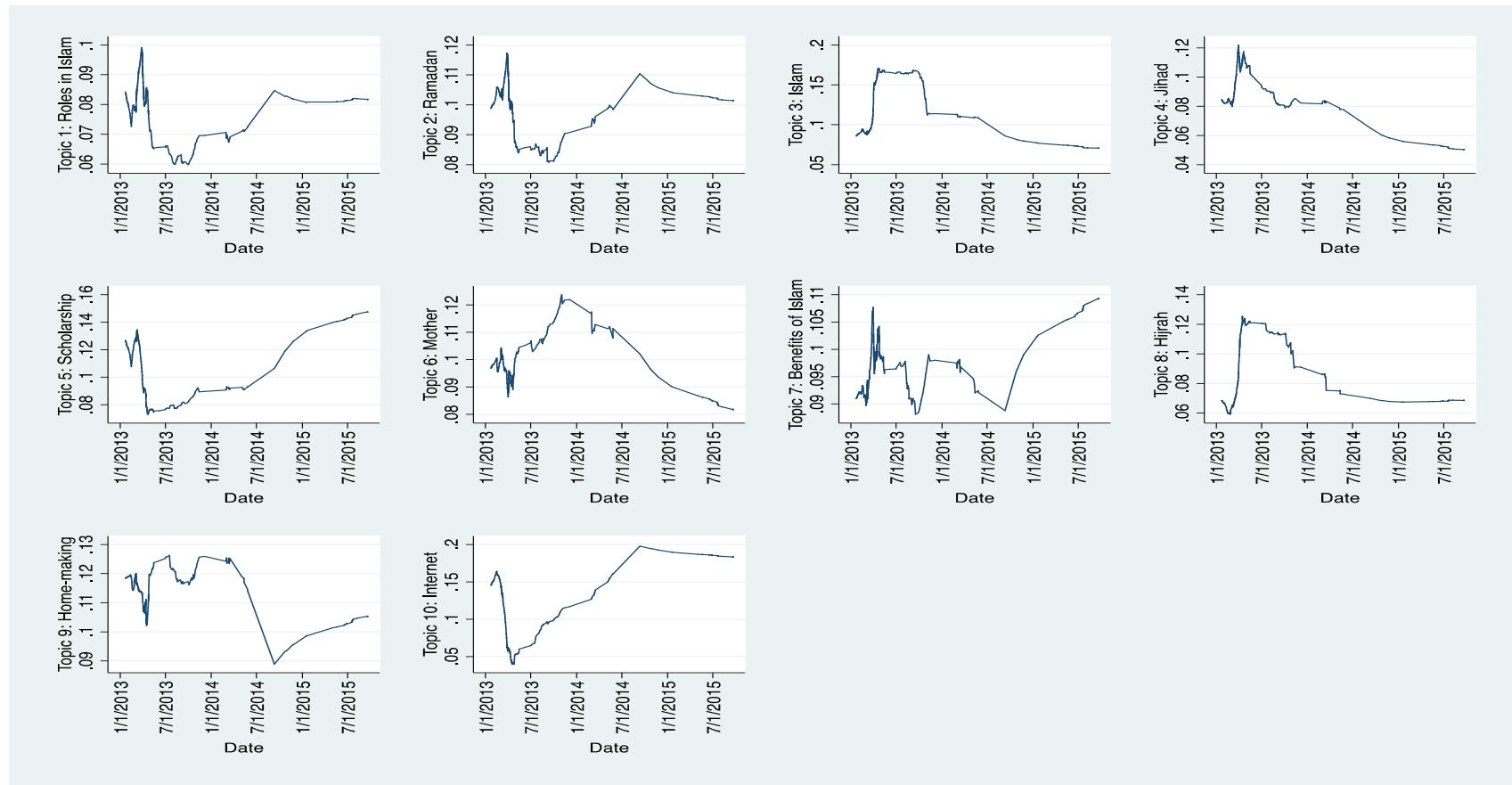
Average Std. Formality by Country



What type of language indicates shifts in internal regime dynamics, like coup-proofing, as well as waxing/waning allegiances in the international system?

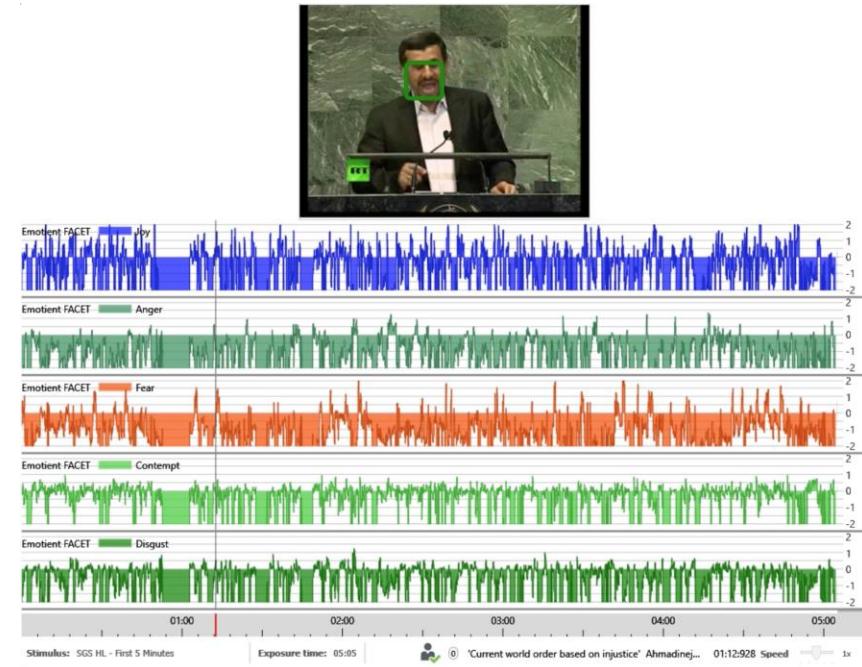
- Language can reveal changes in organizational structure in opaque political environments.
- The linguistic style matching literature would suggest that countries with similar priorities and repeated interactions should align their speaking styles. Latent semantic analysis (LSA) can help identify these types of trends and help predict which vulnerable countries might exit the ICC or other international organizations.

How does language change over the course of an individual's political radicalization?



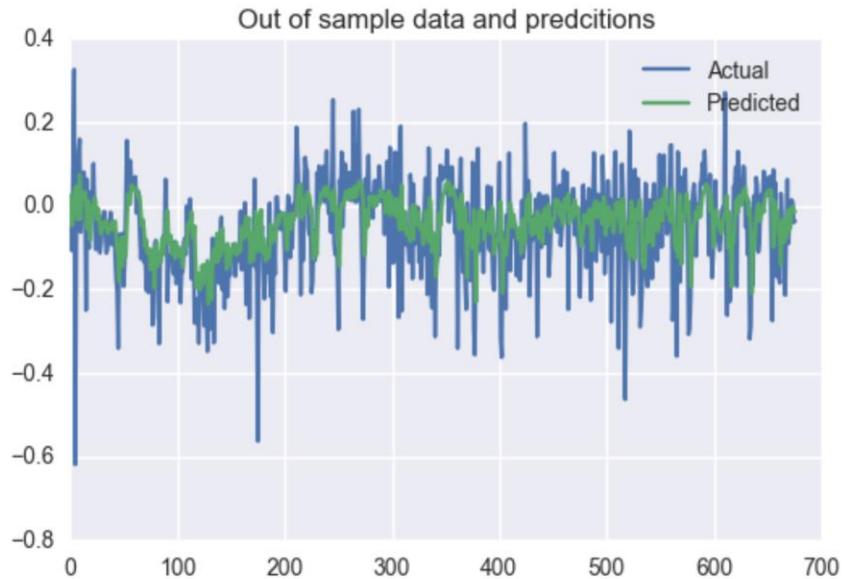
Which persuasion strategies do leaders of countries and non-state organizations use in propaganda?

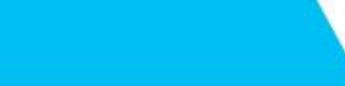
- Saying vs. Conveying
 - Language, nonverbal cues, and audiovisual elements can send congruent or mismatched signals about the sender's intentions
- Computational linguistics and neurobiometric instruments provide a holistic picture
 - Audiovisual analysis
 - Participants/subjects



When leaders use more cooperative language, is this associated with more cooperative events? Or, when leaders use more belligerent language, do they in turn act more combatively in the international system?

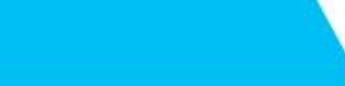
- Event data is linguistic data
- What language is associated with which events?
- Preliminary results indicate that deep neural networks using long short-term memory (LSTM) accurately predict direction but not intensity





The strengths of the Intelligence Community and Social and Behavioral Sciences can inform mutually beneficial research insights and policy applications

- Efficient computational programs to assist human intelligence
- Rapidly growing digitized corpora needing analysis
- Uniform data streams for speech acts
- Access to declassified Department of Defense data and documents, like those that existed in the archives of the Conflict Records Research Center at the National Defense University.
- Increased attention to the valuable role that political discourse and computational linguistics can play in modeling international behavior and forecasting trends.



THE UNIVERSITY OF
MEMPHIS.

Thank you!

Leah Windsor
Institute for Intelligent Systems
The University of Memphis
leah.windsor@memphis.edu
<http://polx.weebly.com>