

**PUAF689V: Forecasting and Analyzing Political Violence**  
**Spring 2016**  
**Wednesday 1:30-4:00**  
**Room VMH 1207**

Course Faculty:

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Office Hours: Wed. 4:00-5:00pm

### **Overview**

On December 17, 2010, when twenty-six year old fruit vendor Mohamed Bouazizi lit himself on fire in front of a police station in the small Tunisian town of Sidi Bouzid, there was no indication that this would be the flame that would engulf the entire Middle East and North Africa region in protests and civil violence and lead to the collapse of several governments.

Research in the field of civil violence and political instability has yielded important baseline information about general conditions associated with the emergence of mass violence, political instability and state failure, making it possible to identify a range of countries that might experience political violence in the near future. Unfortunately, current methods of predicting future instability are of little use to a policy maker, analyst or practitioner who needs to know in real time which of the violence-prone countries might be moving towards political upheaval and how that process is unfolding.

Civil violence, state collapse and political protests all share a common theme as non-linear emergent events that are intrinsically challenging to forecast, track and interpret. These types of events do not follow simple linear models of small events having a small impact and a large event having a large impact. As the recent protest events in North Africa clearly demonstrate, the small action of a single protester significantly outweighs the overwhelming response of the government.

### **Course Description**

The course introduces students to the theoretical approaches of emergent phenomenon, political instability and political violence forecasting. It provides students an opportunity to design and develop new and innovative solutions to forecast and analyze emerging political dynamics through hands-on practical group projects. The course reviews the history and current techniques used in political violence analysis, from both the practitioner and user perspective. The course

also examines case studies, methodologies used by political forecast practitioners and organizations, software used to help make political risk forecasts and trend analysis.

The theoretical portion of the course will build on three literatures:

- Complex and emergent systems (game theory, systems dynamics theory, & network analysis)
- Political violence (state failure & protest dynamics)
- Forecasting and risk analysis (analytical processes, forecasting methodologies, & decision matrices)

### **Course Objectives**

- Review the relevant theoretical arguments for emergent behavior and how that applies to political instability.
- Explain the key attributes and processes professional analysts have identified in assessing the political dynamics and instability in a specific country.
- Identify the current models for state failure and forecasting and their application in working projects by the UN, ICG, State Failure Task Force, etc.
- Develop student's analytical skills to discern the critical variables needed to assess a particular risk problem and to develop forecasting techniques for particular analytical situations.
- Apply the course knowledge to designing and developing alternative approaches to political forecasting and risk analysis.

### **Course Structure**

The course is structured to provide the students with maximum hands-on experience of country risk analysis. There will be no pre-requisites, although previous course work in economics, statistics, international finance, or political economy will be helpful. While some basic understanding of quantitative methods is necessary to interpret and understand various quantitative forecasting models, this is not a modeling course. The focus is on understanding the underlying premises and inputs for various models as well as when human analytical ability is a more useful asset.

The course will be interactive and involve intense student participation. The class sessions will be a mixture of lecture, student led discussion, and group presentations. It will be organized around a series of books and supplemental readings from journal articles as needed to supplement the material in the books.

This course takes an integrated approach to identifying, tracking, analyzing, and responding to civil violence and state collapse and is open to students of all concentrations and academic focus. Understanding emergent phenomenon and specifically intractable problems of civil violence requires input from multiple disciplines.

## Course Requirements

Students who take this course must satisfy four requirements:

### 1. *Classroom Participation* 20%

Graduate students are expected to complete each week's readings and participate in class discussions. Everyone will be called upon to speak at least once each week and will be asked to reflect on the readings. This is an important requirement. If you are preparing for a career as an analyst, challenging each other's ideas and offering reasons for disagreements will be a critical part of your career. Honing your ability at respectful and insightful discourse is an invaluable work skill.

### 2. *Mid-term Paper* 20%

I will assign at least two analytic questions focusing on the first-half of the course at the end of class on March 2nd. An analytical brief of about 1500 words (about 3 single spaced pages) will be due by midnight on the 9<sup>th</sup>.

### 3. *Team Projects* 10% (5% students/5% teacher) x 3 projects = 30%

The class will be randomly seeded into teams at the start of the course. There will be three in class presentations of about 25-30 minutes as well as short written executive summaries (500-800 words). The composition of the teams will change for each assignment to give maximum interaction among course participants. A portion of each student's grade will be comprised of a peer evaluation from their fellow team members. Over the course of the semester each student will receive approximately 12-15 evaluations. Some amount of course time will be allocated for groups to meet to reduce outside of class scheduling. These projects provide several real-world benefits for graduate students:

- 1) Learn how to give evaluations to peers. Evaluation is a key skill that students in government or business will regularly be required to demonstrate, but rarely ever gain practice or experience in evaluating other students.
- 2) Learn to receive evaluations from their peers. Learning to receive an evaluation and focus on ones strengths and weaknesses is the first step towards learning and maturing as a professional.
- 3) Learn how to work in teams to solve complicated problems. Students have to learn how to work through the challenges and difficulties encountered in group dynamics. Because the teams will be mixed and changed throughout the semester, they will have the opportunity of assessing different interactions and dynamics.

### 4. *Final Paper* 30%

I will assign at least two analytic questions focusing on the second-half of the course at the end of class on May 4<sup>th</sup>. An analytical brief of about 3000 words (about 6 single spaced pages) will be due by midnight on May 11th.

## Course Readings and Schedule

### Required Books

Schelling, Thomas, *Micromotives and Macrobehavior*, New York: W.W. Norton & Company, 2006. (M&M)

Silver, Nate. *The Signal and the Noise*, New York: The Penguin Press, 2012. (S&N)

### Recommended Books

Bracken, Paul, Bremmer, Ian, and Gordon, David, eds. *Managing Strategic Surprise*. Cambridge: Cambridge University Press, 2008. (MSS)

Bernstein, Peter L., *Against the Gods: The Remarkable Story of Risk*, New York John Wiley & Sons, Inc., 1996. (AG)

Taleb, Nassim Nicholas. *The Black Swan: The Impact of the Highly Improbable*. New York: Random House, 2007. (BS)

### Canvas/ELMS

I will be posting reading materials (such as journal articles, reference articles) on Canvas throughout the course. **All papers will be submitted through Canvas as WORD docs in the following format: LASTNAME\_ASSIGNMENT**, for example, Jones\_Midterm or Jones\_Final

#### 1. January 27: Course Overview and Intro to Risk and Forecasting

- Hounshell, Blake, “Dark Crystal - Why Didn't Anyone Predict the Arab Revolutions?,” *Foreign Policy*, (July/August 2011).

#### 2. February 3: Probability and Forecast Theory

##### Book Readings:

- M&M pg. 11-19, pg. 36-43
- N&S pg. 61-73, Ch.4 (108-141)

##### Article Readings:

- Hannah Christensen, “Banking on better forecasts: the new maths of weather prediction”, *The Guardian*, January 8, 2015.
- Benoit Mandelbrot and Nassim Nicholas Taleb, “Mild vs. Wild Randomness: Focusing on those Risks that Matter”, Forthcoming, *The Known, the Unknown and the Unknowable in Financial Institutions*, eds. Frank Diebold, Neil Doherty, and Richard Herring, Princeton: Princeton University Press.
- Nicholas Taleb and Avital Pilpel, “Epistemology and risk management”, *Risk and Regulation*, Summer 2007.
- Bremmer, Ian, “Managing Risk in an Unstable World,” *Harvard Business Review*, June 2005, p. 51-60.

### 3. February 10: Forecasting and Political Risk Analysis

#### *Book Readings:*

- M&M Ch. 3 (pg. 83-133)
- NS pg. 240-261,

#### *Article Readings:*

- Jarvis, Darryl s. and Griffiths, Martin, "Learning to Fly: The Evolution of Political Risk Analysis," *Global Society*, Vol. 21, No. 1, (January, 2007).
- Eurasia Group, 2011 & 2012 top risks
- Anja Linder and Carlos Santiso, "Assessing the Predictive Power of Country Risk Ratings and Governance Indicators," SAIS Working Paper Series, WP/02/02.

### 4. February 17: Political Risk Analysis

#### *Book Readings:*

- NS Ch. 6
- MSS Ch. 8 (PDF to be posted)

#### *Article Readings:*

- Bunn, D. W.; Mustafaoglu, M. M., "Forecasting Political Risk," *Management Science*, Vol. 24, No. 15. Nov. 1978, pp. 1557-1567.
- Howell, Llewellyn D., Xie, Donald, "Asia at Risk: The Impact of Methodology in Forecasting," *Management Decision*, Vol. 34, No. 9, (1996).
- PRS Methodology, PRS Group
- ICRG Methodology, PRS Group

### 5. February 24: 1<sup>st</sup> Presentation

### 6. March 2: Civil and Political Violence

#### *Book Readings:*

#### *Article Readings:*

- J. Joseph Hewitt, Jonathan Wilkenfeld and Ted Robert Gurr, *Peace and Conflict 2012*, College Park, MD: Center for International Development and Conflict Management, 2011.
- Nicholas Sambanis , "A Review of Recent Advances and Future Directions in the Quantitative Literature on Civil War", *Defence and Peace Economics*, 2002, Vol. 13(3), pp. 215-243.
- Paul Collier and Nicholas Sambanis, "Understanding Civil War: A New Agenda", *The Journal of Conflict Resolution*, Vol. 46, No. 1, (Feb.,2002), pp. 3-12.
- Sambanis, Nicholas," Using Case Studies to Expand Economic Models of Civil War," *Perspectives on Politics*, June 2004, Vol. 2/No. 2. pgs. 259-279.

## 7. March 09: Political Violence Forecasting

### *Book Readings:*

### *Article Readings:*

- David Backer, Jonathan Wilkenfeld and Paul K. Huth, *Peace and Conflict 2014*, College Park, MD: Center for International Development and Conflict Management, 2013, p. 1-17.
- Goldstone, Jack A., Bates, Robert H., Epstein, David L., Gurr, Ted Robert, Lustik, Michael B., Marshall, Monty G., Ulfelder, Jay, Woodward, Mark, "A Global Model for Forecasting Political Instability," *American Journal of Political Science*, Vol. 54, Issue 1, (January 2010).
- Daniel C. Esty, et al. "Failed States and International Security: Causes, Prospects, and Consequences" *The State Failure Project: Early Warning Research for U.S. Foreign Policy Planning*, Purdue University, West Lafayette, February 25-27, 1998
- Philip A. Schrodt, "Forecasts and Contingencies: From Methodology to Policy", Paper presented at the American Political Science Association meetings, Boston, 29 August - 1 September 2002.
- "The Science of Civil War," *Economist*, April 21, 2012, available at <http://www.economist.com/node/21553006/print>

**March 16**

**SPRING BREAK**

## 8. March 23: Political Forecasting: Comparing Models (1)

### *Book Readings:*

- TBD

### *Article Readings:*

- David Backer, Jonathan Wilkenfeld and Paul K. Huth, *Peace and Conflict 2014*, College Park, MD: Center for International Development and Conflict Management, 2013, p. 44-56.
- Michael D Ward , et al. "The Perils of Policy by p-value: Predicting Civil Conflicts", *Journal of Peace Research* 2010 47: 363
- O'Brien, Sean P., "Crisis Early Warning and Decision Support: Contemporary Approaches and Thoughts on Future Research," *International Studies Review*, Vol. 12, Issue 1, March 2010, pp. 87-104.
- How the Failed States Index is made: FAQ & Methodology, Failed States Project
- Gerd Hagemeyer-Gaverus & Mikael Weissmann, "Early Warning Indicators for Preventive Policy," Stockholm International Peace Research Institute, Working Paper, March 2003

## 9. March 30: Geospatial Analysis of Conflict

### *Book Readings:*

- TBD

*Article Readings:*

- TBD

**10. April 6: 2<sup>nd</sup> Presentation**

*Book Readings:*

- M&M Ch. 4

*Article Readings:*

- Jonathan Rauch, "Seeing around corners," *Atlantic Monthly*, April 2002, pg. 35-48.
- Philip A. Schrodt, James Yonamine, and Benjamin E. Bagozzi, "Data-based Computational Approaches to Forecasting Political Violence," in V.S. Subrahmanian (ed.) *Handbook of Computational Approaches to Counterterrorism*, New York: Springer Science+Business, 2013.
- Jack A. Goldstone, "Understanding the Revolutions of 2011," *Foreign Affairs*, Vol 90 No. 3, pg. 8.
- Grimm, Sonja, Schneider, Gerald, "Predicting Social Tipping Points: Current Research and the Way Forward," Working paper, German Development Institute, (August 2011).

**11. April 13: Political Forecasting: Comparing Models (2)**

*Book Readings:*

*Article Readings:*

- Gerald Schneider, Nils Petter, and Sabine Carey, "Forecasting in International Relations: One Quest, Three Approaches," *Conflict Management and Peace Science*, 28:5, 2011.
- Shirky, Clay, "The Political Power of Social Media," *Foreign Affairs* (Jan/Feb 2011).
- "Civil Movements: The Impact of Facebook and Twitter," *Arab Social Media Report*, Dubai School of Government, Vol 1, No. 2, May 2011

**12. April 20: Political Forecasting: Alternative Models**

*Book Readings:*

- NS pg 47-61

*Article Readings:*

- V. S. Subrahmanian, "Cultural Modeling in Real Time," *Science*, v. 317, (September 14, 2007), 1509-1510
- Leetaru, Kalev H., "Culturonomics 2.0 - Forecasting Large Scale Human Behavior Using Global News Media Tone in Time and Space," *First Monday*, University of Illinois Chicago, Vol. 16, Number 9 (September 2011).

- David Weinberger, “The Machine That Would Predict the Future,” *Scientific American*, November 15, 2011, p.14
- Menand, Louis, “Everybody Is An Expert,” *New Yorker*, (December 5, 2005).
- Ormerod, Paul and Riordan, Shaun, “A New Approach to the Analysis of Geo-Political Risk,” *Diplomacy and Statecraft*, 15(4): 643–654, p. 643.
- Holly Donaldson, et al, *An Analysis of the Accuracy of Forecasts in the Political Media*, Course Paper

### **13. April 27: Political Forecasting: New Models**

#### *Book Readings:*

#### *Article Readings:*

- Malcolm Gladwell, “Small Change: Why the revolution will not be tweeted,” *New Yorker*, (October 4, 2010).
- Bill Wasik, “#Riot: Self-Organized, Hyper-Networked Revolts—Coming to a City Near You,” *Wired*, (December 16, 2011).
- Jay Ulfelder, “Predicting Coups,” *Dart Throwing Chimp Blog*.
- Ian Steadman, “Big data and the death of the theorist,” *Wired* (January 25, 2013)
- Chris Anderson, “The End of Theory: The Data Deluge Makes the Scientific Method Obsolete,” *Wired*, (June 23, 2008).

### **14. May 4: 3rd Presentation/ Guest Lecturers**