

**Russia, the Federal Reserve, and the *New York Times*: Machine-Learning
Models of How Elites Interpret Policy Announcements**

David Sylvan Jean-Louis Arcand Ashley Thornton
Graduate Institute of International and Development Studies

International Studies Association

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Two goals

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- Project
- Announcements and interpretations
- An example: the Federal Reserve
- An example: U.S.-Russian relations
- Facts and figures
- Annotation: specifying interpretations
- Annotation: Example
- Machine learning
- Domain specificity
- Multiplicity
- The Fed vs Russia: a first pass

- Overview of our project
- Preliminary analysis of domain specificity of foreign policy

Project

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Announcements and interpretations

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- State agencies and officials routinely make announcements about policy (press releases, speeches, answers to questions)
- These are interpreted by various actors: politicians, business executives, investors, interested citizens, foreign leaders, journalists
- The interpretations characterize announcements as:
 - What policy is, or was, or will be
 - What policy might or will not be
 - Reasons for the policies, goals and timing of the policies
- Use ML techniques on the announcement-interpretation pairs to generate interpretations from announcements

An example: the Federal Reserve

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“The F.O.M.C. meeting ended at 12:55 PM; there is no further announcement.” (Fed press release, December 22, 1998)

“The Federal Reserve voted today to hold interest rates steady, judging that three rate reductions in the fall had given the economy a big enough kick to keep it growing at a healthy pace into the new year.” *NYT* article, December 23, 1998

Semantic information: what the F.O.M.C. is and what it usually does; also knowledge about the world and recent decisions.

An example: U.S.-Russian relations

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“We already, as you know, provide non-lethal aid. We do everything working with the London 11 and a group of partners, some of whom provide other things to the opposition coalition. And we will continue ... as President Obama said, standing next to President Hollande to look at every option that is open to us to see what else we can do to be helpful.” (State Dept. background briefing on Syria, February 14, 2014)

“Diplomats here said the administration might consider stepping up an existing covert program to train and arm the moderate Syrian opposition or even weigh the threat of military force to compel the delivery of humanitarian aid.” *NYT* article, February 15, 2014

Semantic information: what the U.S. and U.S. allies are doing, what “helpful” means. Syntactic information: what the temporal scope is of “will continue ... to look”

Facts and figures

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- Two issue areas: monetary policy and foreign policy
- Two cases (so far): U.S. Federal Reserve and U.S. policy towards Russia
- Fed policy: approximately 1,700 separate announcements from 1967-2018
- Fed policy: approximately 3,000 NYT newspaper articles (multiple passes using different search parameters)
- Russia policy: no count yet on announcements (still doing it; many more sources than for Fed case), from 1993-2016
- Russia policy: so far (2007-2016), approximately 1,400 articles (searching much more complicated)

Annotation: specifying interpretations

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- Standardized sentence (container):
- Reference document (required)
- Act (required; text plus summary)
- Actor (required)
- Motives (goal)
- Evidence (what spurred policy)
- Scope (when occur, how long)
- Attribution (if a recommendation)
- Russia Link (required for foreign policy case; text plus summary)

Annotation is done in TagTog
Output is a file in JSON format

Annotation: Example

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"1" "TheFed'sMessage:Exhale.STAT_2017-03-15...The economy will keep growing just enough to put more Americans back to work, but without overheating to generate excessive inflation. American workers will see gradual pay raises that keep compensation rising faster than inflation. Interest rates will rise gradually, while staying low by historical standards. And that's all before accounting for any major stimulative policies that may emerge from the Trump administration and Congress. That was the view of the economy sketched by the Federal Reserve chairwoman, Janet Yellen, at her first news conference of 2017 on Wednesday. In short, the Fed believes that after nearly eight years of trying to nurse the economy back to health, its work is nearly done. The general sense of rosiness isn't really anything new -- for years, Ms. Yellen and her predecessor, Ben Bernanke, have forecast that the economy will steadily converge toward a Goldilocks-like state of being neither too hot nor too cold. Two things have changed. First, that day now feels imminent, with the unemployment rate at 4.7 percent and inflation closing on the 2 percent the Fed thinks best. That is a key reason the Fed raised its interest rate target Wednesday. Second, markets now believe the Fed's message that higher rates are on the way; bond markets suggest that the Fed will actually follow through with its intentions on gradual interest rate rises. You couldn't say that a year ago. "The simple message is: The economy is doing well," Ms. Yellen told reporters. The overwhelming message was of gradualism -- both on the rate of economic improvement and the Fed's own efforts to wind down its era of low interest rates. She suggested no urgency toward a tightening of the money supply that might suggest a hair-trigger readiness to accelerate interest rate increases. Ms. Yellen evinced little fear that the Fed is behind the curve, suggesting that two more interest rate increases are on the way over the remainder of 2017. This will, if these plans stay in force, remain the slowest cycle of interest rate increases in modern history. She also displayed little of the fear of setback that has been pervasive at the Fed for years. The central bank has spent the last eight years trying to help the recovery along with a series of monetary interventions; more than any other institution in Washington, it owns the recovery. That has also meant that the Fed has acted with haste to signs of softening. In the winter of 2016, for example, barely a year ago, the central bank backed off plans for more rate increases after a steep stock market sell-off and a rise of economic pessimism. After years of persistently undershooting its 2 percent goal for inflation, the Fed explicitly, if subtly, raised the possibility on Wednesday of erring in the other direction. The central bank's policy committee said it would be monitoring "actual and expected inflation developments relative to its symmetric inflation goal." In this context, "symmetric" implies that it aims for 2 percent inflation and would be equally displeased by inflation that was too high or too low. That implies that the Fed is not inclined to overreact to the possibility that inflation could drift slightly -- and in the Fed's view temporarily -- above 2 percent in the coming months. After the announcement, the interest rates on Treasury bonds actually fell. That implies that markets were ready for signals of even more aggressive rate rises. And the clearest signal that the Fed is in steady-as-she-goes territory was in how Ms. Yellen talked about the possibility of new tax cuts or

Document Labels

Document_note

Document_note

Entities

total 28 not normalized 28

Group/filter entities ▾

- The economy will keep growing just enough to put more Americans back to work, but without overheating to generate excessive inflation. American workers will see gradual pay raises that keep compensation rising faster than inflation. Interest rates will rise gradually, while staying low by historical standards. And that's all before accounting for any major stimulative policies that may emerge from the Trump administration and Congress. That was the view of the economy sketched by the Federal Reserve chairwoman, Janet Yellen, at her first news conference of 2017 on Wednesday. In short, the Fed believes that after nearly eight years of trying to

Machine learning

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- Train the program on the actual StSts, with an eye to generating them from the announcements
- Size problem: on the one hand, the corpora are small by computational linguistics standards; on the other hand, the announcements are too large and require either preliminary tagging or repeated sampling
- To date, can produce a syntactic graph as input to ML; are now working on doing the same for semantic graph

Domain specificity

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- Standardly done via topic modeling; but ignores context of words except when researcher assigns label
- Media studies about framing: coverage, responsibility; but is far more detailed than specific domains
- Instead, do by the type of journalistic problem and the general structure of articles

Multiplicity

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- Problem: to show that foreign policy is unitary when there are multiple agencies carrying it out (contrast with monetary policy, which is carried out by voting)
- Expect to see greater number of distinct announcements discussed in foreign policy articles
- How to show that acts carried out over time are indicative of a single policy (contrast with monetary policy, for which new policy acts supersede old ones)
- Expect to see longer time frame for announcements in foreign policy articles

The Fed vs Russia: a first pass

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	Min	Max	Median	Q1	Q3	Median absolute deviation	Mean	Standard deviation	95% confidence interval	Skewness
FOMC-2015: $N = 49$										
Number of reference documents in the article (Count)	1	7	2	1	2	1.48	1.92	1.26	0.36	1.88
Distance between earliest reference document and article (Number of days)	0	365	2	1	15	1.48	17.78	53.62	15.40	5.79
US-RUSSIA (2015): $N = 126$										
Number of reference documents in the article (Count)	1	7	2	1	2.75	1.48	2.03	1.30	0.23	1.62
Distance between earliest reference document and article (Number of days)	0	2287	2	1	13	1.48	101.79	310.92	54.82	4.44