Narrative Economics and COVID-19

Webinar with Markus

Introductory remarks by

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PAST AND FUTURE SPEAKERS

- **Last**
  - Mike Spence
  - “Tracking the Global Pandemic Economy”

- **Today**
  - Bob Shiller
  - “Narrative Economics and COVID”
  - Related: Tyler Cowen

- **Next webinars**
  - Arminio Fraga
  - “Brazil’s Perfect Storm”
  - Richard Zeckhauser
  - “Climate Policy: Moving Beyond Ostriches and Pollyannas”
WHAT’S A NARRATIVE?

- Simplified consistent story
  - connected events

- Persuasion is often an exchange of narratives/stories
The power of **simple** stories/models
   - Models are simplified pictures of reality
     - Irrationality of people “living in models” appear stretched, but …
     - Rational paradigm to behavioral/psychological paradigm in economics

External vs. Internal consistency of models/stories
   - Internal: fully rational ... but compromise how well model reflects reality
   - External: make short-cuts in solving model, but match complex model

World is getting increasingly complex
   - How to measure complexity?
     - Layers of reasoning/thinking
     - Brunnermeier-Oehmke (2009), Arora et al.

The more complex the world, the bigger the trade-off: Avoid oversimplification vs. inclusion
STORIES AND THE PUBLIC SPHERE

- Public exchange of ideas – public sphere (Jürgen Habermas)
  - Starting early 1800s in coffee houses, clubs, journals
  - Crucial for open society and democracy

- Divided public spheres: Echo chambers
  - Cognitive dissonance
  - “Group think”

- COVID conspiracy theories and hoax stories

- The role of a common language
  - Divides public debate along national boundaries
BATTLE OF IDEAS IN ECONOMICS

- Different economic philosophy

- Role of common language: Intellectual debate is via international media
  - The Economist, FT, ...

- Interests/incentives are interpreted through the lens of ideas
GLOBAL SOCIAL MEDIA? (SHARING NARRATIVES/STORIES)

- From national to digital boundaries: Divide countries/language areas in new “digital areas/bubbles”
  - Age groups, sociological groups, ...
  - “Digital currency areas” along online platforms

- How to regulate global social media?
  - Law is national vs. public sphere is within digital/virtual boundaries
  - Fight for control/power of social media companies

- Key: **Inclusive** public sphere across “digital areas” virtual territories/bubbles”
  - To share narrative/stories
  - Bridges: role of public intellectual (and popular science)
NARRATIVES AND (ASSET) BUBBLES

- How a narrative spreads/persuades?
  - across groups
  - Measure: Asset bubbles “when the liftboy buys shares”

- “Irrational exuberance”, extrapolative expectations/beliefs

- Rational riding bubbles (on others’ extrapolative expectations)

Abreu Brunnermeier (2003)
POLL QUESTION

1. The persuasive power of stories/narratives is typically
   a. Underestimated
   b. Correctly evaluated
   c. Overestimated

2. Global society is split across
   a. Not national boundaries but “digital communities”
   b. National forces are still more powerful
   c. Class forces are still very powerful

3. Narratives economics in economics
   1. Can be understood within a rational economic paradigm
   2. Necessitates behavioral/psychological elements
Narrative Economics and Covid-19

Robert J. Shiller
Sterling Professor of Economics, Yale University
Princeton BCF Webinar Series
Date: Friday, July 10, 2020
Time: 12:30 p.m. ET
Robert J. Shiller

narrative economics

How Stories Go Viral & Drive Major Economic Events
Figure 1 from Shiller *Narrative Economics* 2019: JSTOR Counts of Word “Narrative” as Percent of All Articles, by Discipline
First Edition (Updated): Real Stock Prices 1871-2013
Actual (Blue) and Ex-Post Rational (Red)
Based on Shiller (Am. Econ Rev. 1981)
Real Home Prices and Fundamentals 1890-2019
(Since 1975 Home Prices are Real S&P/CoreLogic/Case-Shiller National Home Price Indices)
II. Learning from Medical Epidemiology: Example of Epidemic Curve

Ebola Outbreak, Lofa County Liberia, June-November 2014 (CDC)
Coronavirus Task Force Press Conference
March 31, 2020 Anthony Fauci, Deborah Birx
Epidemic Curve for New York COVID-19 as of July 8, 2020, IMHE University of Washington
Kermack-McKendrick SIR Disease Epidemic Model, 1927 (Compartmental or SIR Model)

$S=$ fraction of population susceptible, $I=$ fraction of population infected and now contagious, $R=$ fraction of population recovered and now immune, $S+I+R=1$, $c=$ contagion parameter, $r=$ recovery rate

\[
\frac{dS}{dt} = -cSI
\]

\[
\frac{dI}{dt} = cSI - rI
\]

\[
\frac{dR}{dt} = rI
\]
Figure 2: Time Paths of S, I, and R in Kermack-McKendrick Model

$I(0)=.0001\%, \ c=0.28, \ r=0.14$
Size of Kermack McKendrick Epidemic Determined by $c/r$

- $dS/dR=-(c/r)S$
- $S = (1 - I_0)e^{-(c/r)R}$
- $I_\infty=0$
- $\frac{c}{r} = R_\infty^{-1} \log \frac{1-I_0}{1-R_\infty}$
- Size of epidemic depends only on ratio of contagion parameter $c$ to removal rate $r$, ratio called basic reproduction number or $R_0$
- Speed of epidemic holding $c/r$ constant depends on their levels
Size of Epidemic in Kermack-McKendrick 1927 Model \( I(0) = 0 \)
IHME Flattening the Curve
Epidemics in Waves

Three Possible Scenarios for COVID-19 2020-2022 from the Center for Infectious Diseases Research and Policy (University of Minnesota) April 30, 2020

New coronavirus cases in the US vs. the EU

Soaring daily reported cases in the US and low EU numbers show why Americans are facing a European travel ban.
Mutations (in Virus, Narratives) Can Cause Waves of Epidemic

- Contagion rate may be increased by change in effectiveness of story telling due to details
- Pandemic of public concern about police brutality
Google Ngrams (Books) Counts for Some Major Macroeconomic Models 1940-2008
Google Ngrams Search for Famous Economists 1800-2008
1. Panic vs. Confidence Narratives
“Great Depression” Counts as Percent of Database each Year 1900-2019
4. Technological Unemployment
Albert Einstein on Technological Unemployment, 1933

- According to my conviction it cannot be doubted that the severe economic depression is to be traced back for the most part to internal economic causes; the improvement in the apparatus of production through technical invention and organization has decreased the need for human labor, and thereby caused the elimination of a part of labor from the economic circuit, and thereby caused a progressive decrease in the purchasing power of the consumers.
IV. The Future of Narrative Economics

- New technology will affect contagion, recovery rates
- New data availability—digitized text and speech
- New forms for economic theory
- Collecting better information on popular economic narratives should start now