Narrative Economics Revisited

Robert J. Shiller
Yale University
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Narrative Economics Defined

• The *Palgrave Dictionary of Political Economy* (1894) defined Narrative Economics as Economists writing chronological stories of economic events

• I define it (American Economic Association Presidential Address 2017, “Narrative Economics) as the study of popular narratives, trying to understand the role of others’ stories and theories in economic dynamics.

• Ideas are conveyed in context of contagious human interest stories

• Constellations of narratives

• Confluence of narratives

• Attempts to quantify narratives
Figure 1: JSTOR Counts of Word “Narrative” as Percent of All Articles, by Discipline
Average survey responses about the probability of a crash in the next six months on the scale of October 19, 1987 or October 28, 1929
Compare with Multiplier-Accelerator Model (Samuelson 1939)

The national income at time \( t \), \( Y_t \), can be written as the sum of three components: (1) governmental expenditure, \( g_t \), (2) consumption expenditure, \( C_t \), and (3) induced private investment, \( I_t \).

\[
Y_t = g_t + C_t + I_t.
\]

But according to the Hansen assumptions

\[
C_t = aY_{t-1}
\]

\[
I_t = \beta [C_t - C_{t-1}] = a\beta Y_{t-1} - a\beta Y_{t-2}
\]

and

\[
g_t = 1.
\]

Therefore, our national income can be rewritten

\[
Y_t = 1 + a[1 + \beta] Y_{t-1} - a\beta Y_{t-2}.
\]
Kermack-McKendrick SIR Disease Epidemic Model 1927

- \( S = \) fraction of population susceptible, \( I = \) fraction of population infected and now contagious, \( R = \) fraction of population recovered and now immune, \( S + I + R = N \), \( c = \) contagion rate, \( r = \) infection 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
$N=100$, $I(0)=1$, $c=0.005$, $r=0.05$
Google Ngrams Search for Famous Economists 1800-2008
Google Ngrams: Albert Einstein 1878-1955 vs. Erwin Schrödinger 1887-1961
Google Ngrams for Karl Marx (1818-1883) and Zeus
Google Ngrams (Books) Counts for Some Major Macroeconomic Models 1940-2008
“Trade War” Proquest News & Newspapers 1800-2018
Size of Epidemic Determined by $c/r$

- $dS/dR = -(c/r)S$
- $S = (N - I_0)e^{-(c/r)R}$
- $I_\infty = 0$
- $\frac{c}{r} = R_\infty^{-1} \log \frac{N-I_0}{N-R_\infty}$
- Size of epidemic depends only on ratio of contagion rate to removal rate
- Speed of epidemic holding $c/r$ constant depends on their levels
Profiteer Counts as Percent of Database each Year in New & Newspapers, Books, 1900-2008-16
“Stock Market Crash” Counts as Percent of Database each Year
Luddite and Technological Unemployment
1800-2008
Why Did the U.S. Stock Market (S&P Composite) Lose 86% of Its Value (82% Real) from Sept 7, 1929 to June 1, 1932?
“Great Depression” Counts as Percent of Database each Year
A Revolution Underway in Financial and Macro-Economics

• Vast new databases, digitized records of human thinking big data, relating to human thinking
• Not only news media, also diaries, sermons, focus groups, etc.
• Parallel revolution in behavioral economics, neuroeconomics
• Semantic search, coupled with historical method