### History of Economic Thought 2019-2020 December 2019

## Seminar 2.6

The current orthodoxy and different alternatives

## **Robert Solow**

#### 1970

"the old notion of a business cycle is **not very interesting anymore**"

(in 1970, Economic Historic Review, 23, p.410)

#### 1972

"today's graduate students have never heard of Schumpeter's apparatus of Kondratieffs, Juglars, Kitchins, and would find it quaint if they had"

(in Zarnowitz, V. ed, 1972, *The Business Cycle Today*, NY, p.167)



## The change of mood of Solow: his non "exculpatory observations" (2008)

"First, I restricted the applicability of the model to tranquil **trajectories without** stormy intervals."

"Second, I deliberately **avoided recourse to the optimizing representative agent** and instead used as building blocks only aggregative relationships that are in principle observable."

"Third, I immediately warned the reader of the possibility of aggregative imbalances that would not fit into the model. I feel guilty about some things, but not about 'modern macro'.""

### The drama of Robert Lucas

Lucas 2008:

"I'm changing my views on bank regulation every week. It was an area I saw under control. Now I don't believe that"

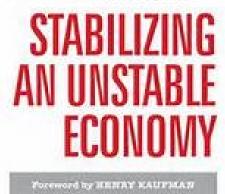


# The financial instability theories



"Ryman Minsky specif much of his sarror advanting the idea that financial systems are inherently manopilles to body of specification that, if they isst long energie, end to class. Enders, the Minsky Manent has become a such planae on Wall Street? -The Wall Street Journal





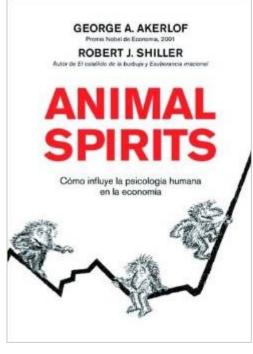
## Hyman Minsky

Financial Instability Hypothesis, against Efficient Market Hypothesis

In the long term, increase in risk, excess of lending and debt, sales of stocks, spiral of panic and demand for cash, the Minsky moment (Ponzi economy)

Facts: 2003, decrease of interest rate and flux of foreign money, real estate boom, securitization of mortgages leading to externalization of risk





## **Robert Shiller**

#### *Irrational Exuberance*, 2000 *Animal Spirits*, 2009, with Akerlof

"The Efficient Market Hypothesis is one of the most egregious errors in the history of economic thought."

#### House bubble

Return to Keynes ("animal spirits") and behavioral economics (Fehr, Kahneman,...) Ex: wrong incentives (Enron and subprime contracts)

## Adaptive market hypothesis



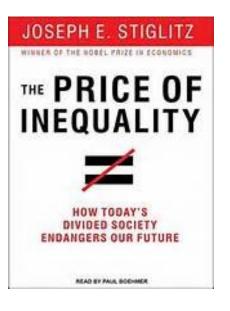
#### Andrew Lo, MIT:

"There are periods when the market is highly efficient, and there are those that aren't . . . The better question is: What is the relative efficiency at a given point in time? That is something that can be measured."



# Joseph Stiglitz: financial pollution

Externalities of financial pollution (mortgages)



The price of inequality: efficiency and fairness

- Liquidity is not enough, a reform is needed:
  - Regulation

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- Change in the structure of demand
- Redirect investment for saving resources Fiscal renewal

Some new frontiers for economics

- Experimental economics and game theory
- · Neuro-economics
- Complexity and simulation
- · Behavioral economics

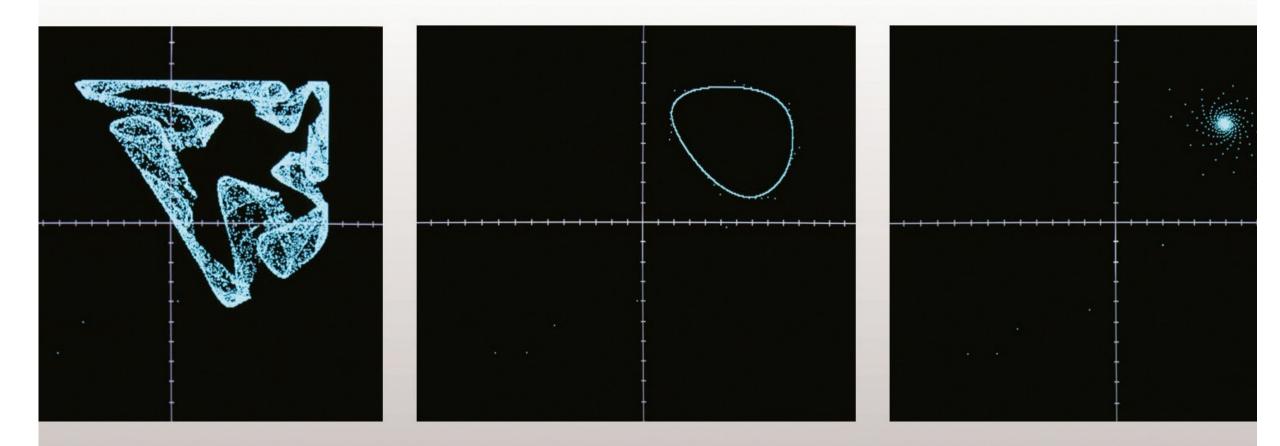
Computational simulation

#### Lorenz Attractor



$$\begin{aligned} \frac{dx}{dt} &= \sigma(y-x) \\ \frac{dy}{dt} &= x(\rho-z) - y \\ \frac{dz}{dt} &= xy - \beta z \end{aligned}$$

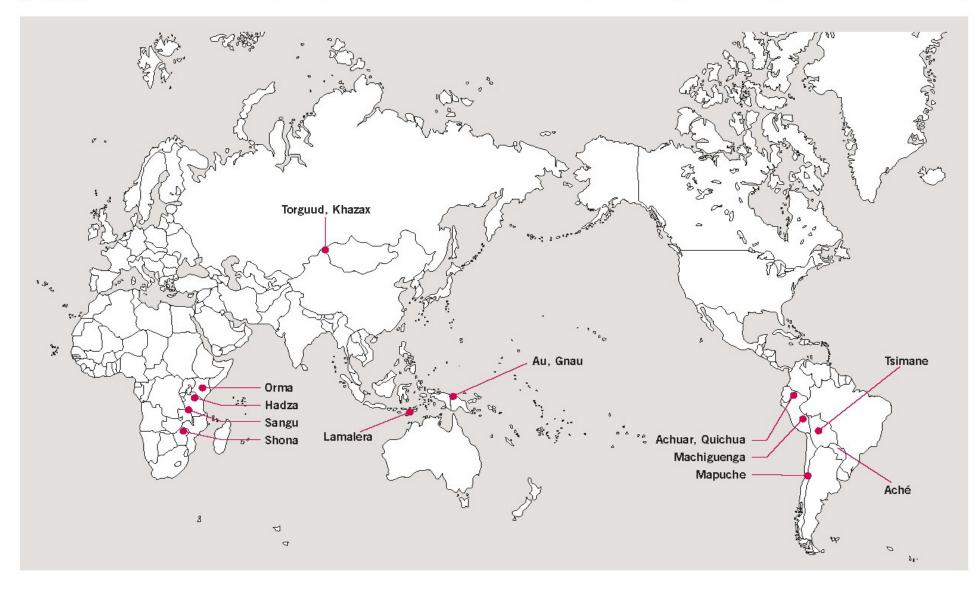
#### Figura 12.2. Imagens do mesmo processo não-linear



Experiments: lessons from the Ultimatum

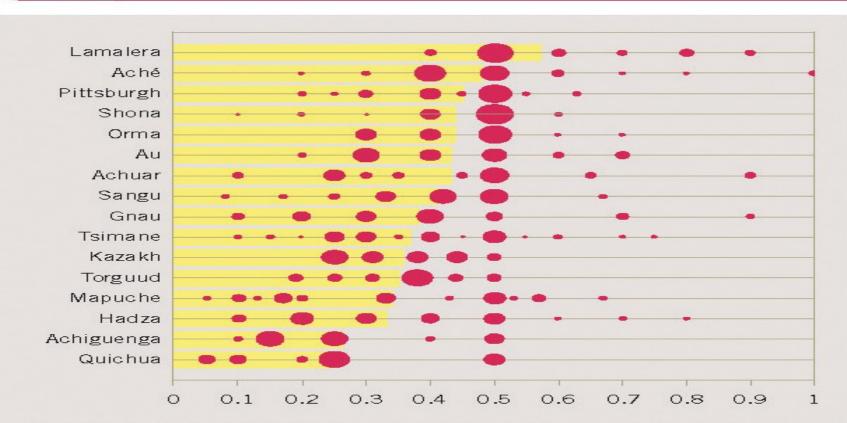


MAPA 12.1. AS QUINZE SOCIEDADES ESTUDADAS PELAS EQUIPAS DE SAMUEL BOWLES





#### GRÁFICO 12.5. OFERTAS NO JOGO DO ULTIMATO



As bolas indicam a distribuição das ofertas do primeiro jogador. A dimensão da bola indica a proporção dos primeiros jogadores que fizeram a oferta indicada em abcissa, e a bola maior é a moda da distribuição. O limite da linha amarela indica a média das ofertas dos primeiros jogadores. Para efeitos de comparação, no mapa dos resultados é incluído o de uma experiência realizada com estudantes da Universidade de Pittsburgh (EUA).

Fonte: Bowles et al. (2006)

#### Do monkeys accept inequality?



https://www.youtube.com/watch?v=meiU6TxysCg&feature=youtu.be

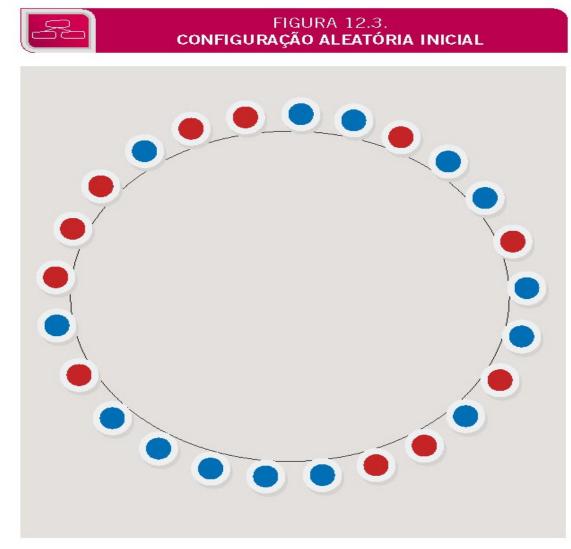
#### **Thomas Schelling (2005 Nobel Prize)**



Arms race Racial conflict Global climate change

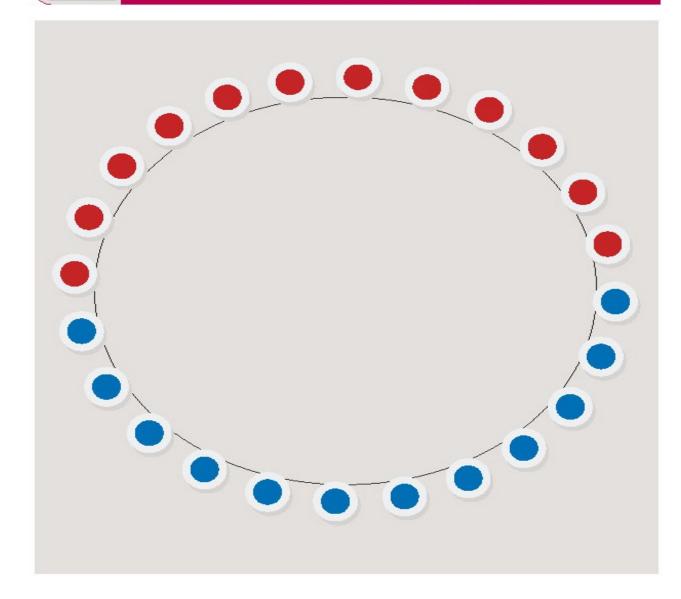
Agents based models complexity

# The Schelling model of segregation (1969)



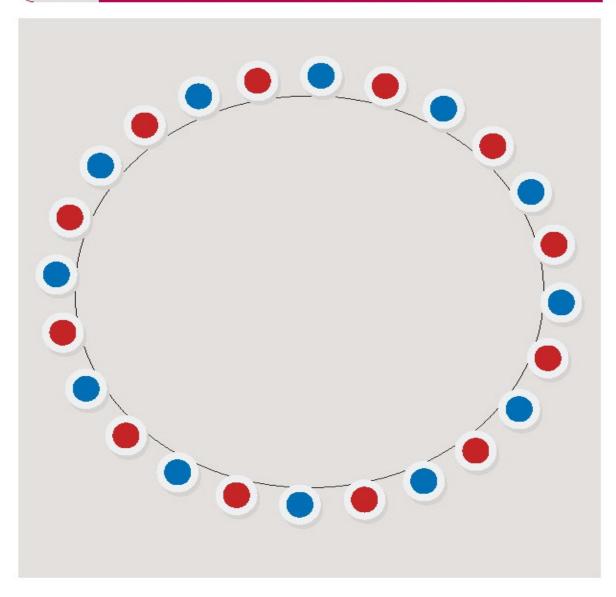
#### FIGURA 12.5. PADRÃO SEGREGADO ESTÁVEL

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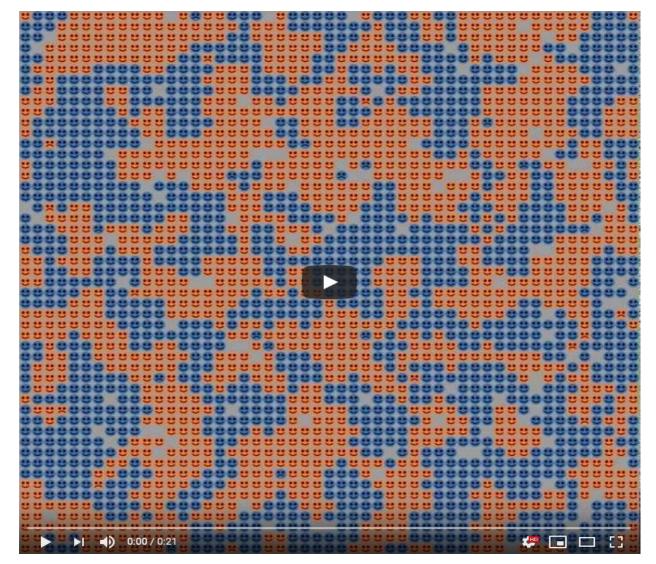


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### A representation of Schelling's experiment

https://www.youtube.com/watch?v=dnffIS2EJ30



## A fight for environment: Nordhaus versus Weitzman



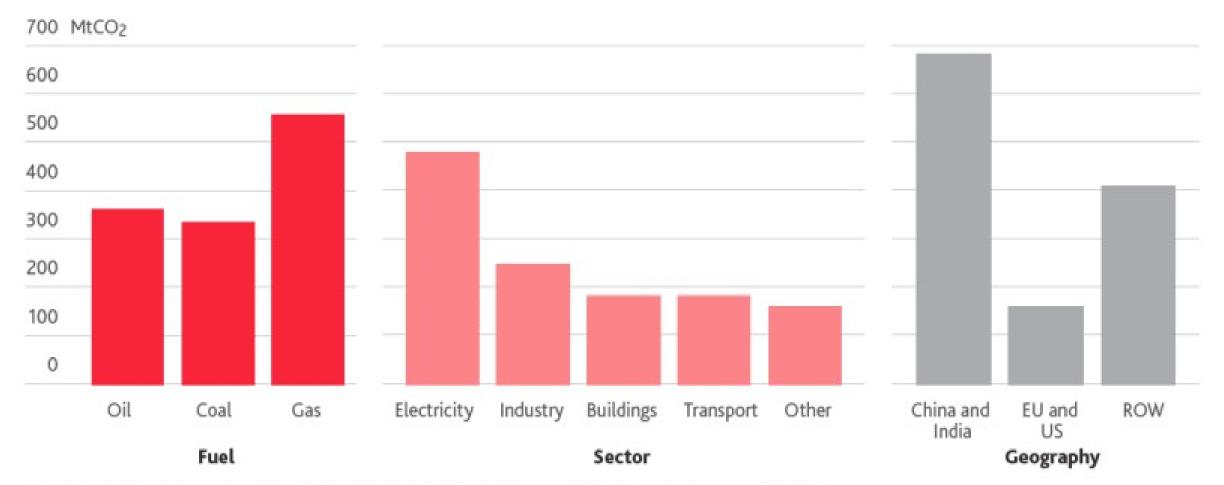
### The debate Nordhaus-Weitzman: How to compute the future?

A quarrel on the computation of the costs of repairing the future:

if we take a discount rate of **3%**, more than 80 billion are required each year to pay the damages of 1 trillion in 2010;

if you take **7%**, twenty times less.

#### FIGURE 1. Fuel, sector and geography of global emissions growth, 2016-18

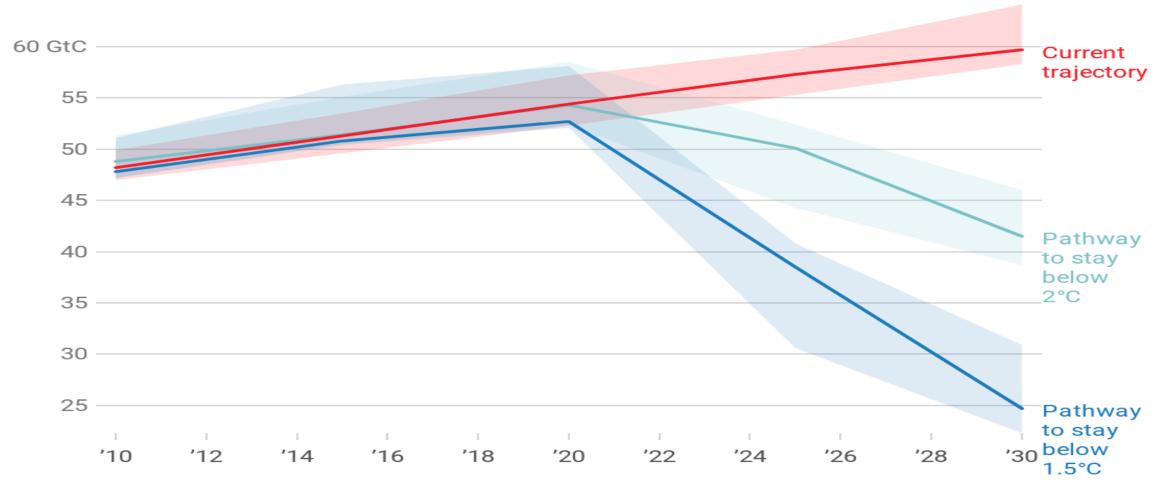


Notes: Electricity includes heat production. Other includes agriculture and non-electricity transformations and non-energy uses. EU = European Union with 28 members. US = United States. ROW = Rest of the World.

Source: Authors based on data from (Enerdata, 2019)

#### The greenhouse gas emissions gap remains massive

In order to keep global temperatures from rising more than 2°C over preindustrial levels, the world needs to dramatically reduce its annual greenhouse gas emissions by 2030.



Measured in gigatonnes of equivalent carbon dioxide

Chart: Elijah Wolfson for TIME • Source: UNEP • Created with Datawrapper

## Identity economics

Akerlof, G. A. & Kranton, R. E. (2010),

Identity Economics: How Our Identities Shape Our Work, Wages, and Well-Being

Princeton: Princeton Univ. Press.

