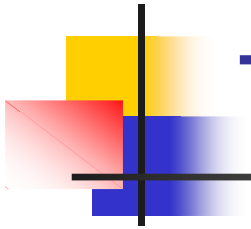
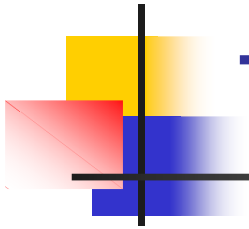
Evolutionary economics

- Outline
  - Founding members
  - Main assumptions of the neo-classical economics
  - Main assumptions of the evolutionary economics



Theories

- Evolutionary economics
- Schumpeterian economics
- Neo-Schumpeterian economics
- Behavioral economics
- Heterodox economics
- Non-equilibrium economics



Theories

- **Evolutionary economics**
  - Schumpeterian economics (innovation)
  - Behavioral economics (bounded rationality)
    - Evolutionary biology

Theories

Simon (1916-2001)

Schumpeter (1883-1950)

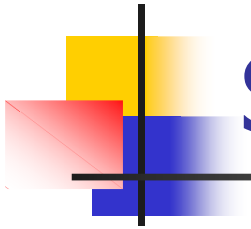
Schumpeter

Young

Theory of Economic Development (1911)

Old

Capitalism, Socialism and Democracy (1942)

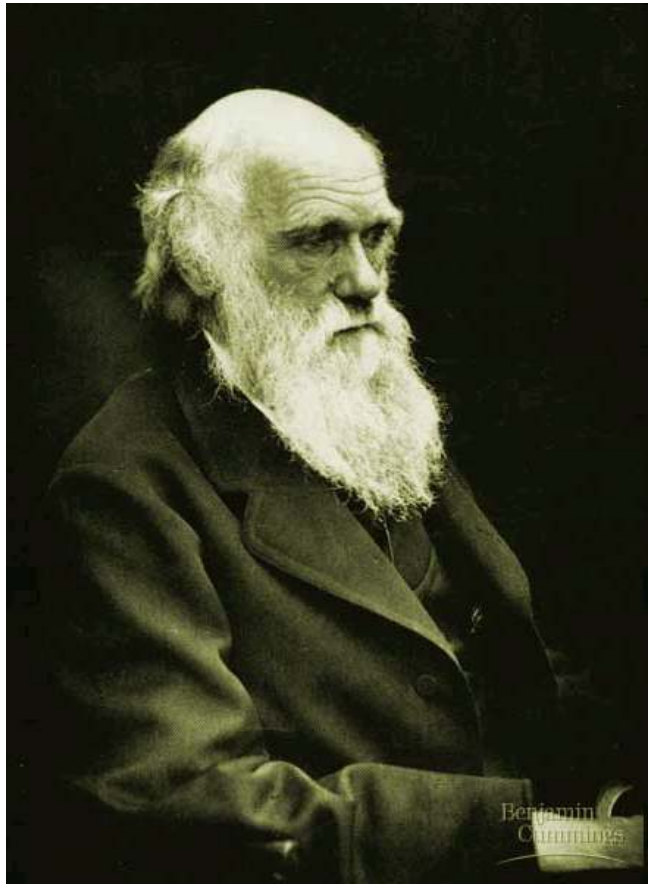


Schumpeter

- Schumpeter Mark I
  - Innovations are carried out by individual entrepreneurs who create new firms
- Schumpeter Mark II
  - Innovations are permanently performed by many large corporations in their monopolistic competition
  - The innovation process is organised by departments of research and marketing
  - Government may influence this process

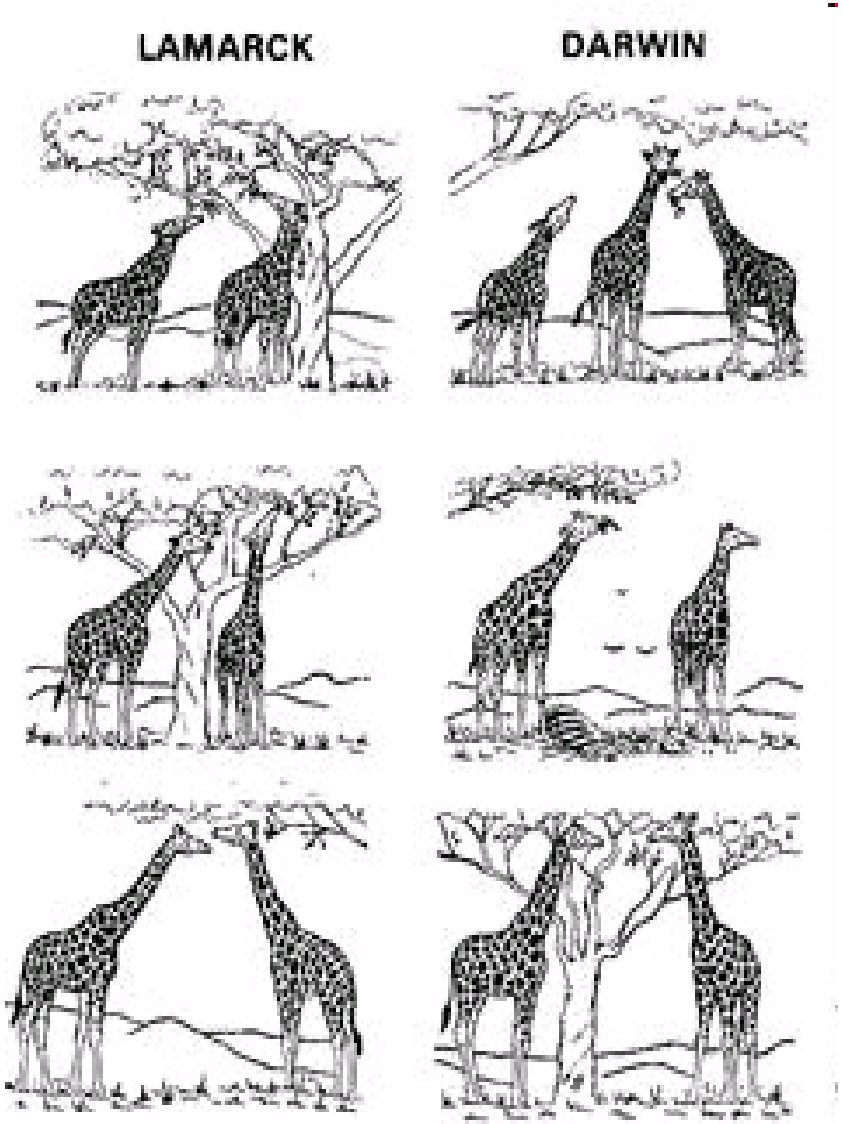
Evolution

Darwin (1809-1882)



Lamarck (1744-1829)

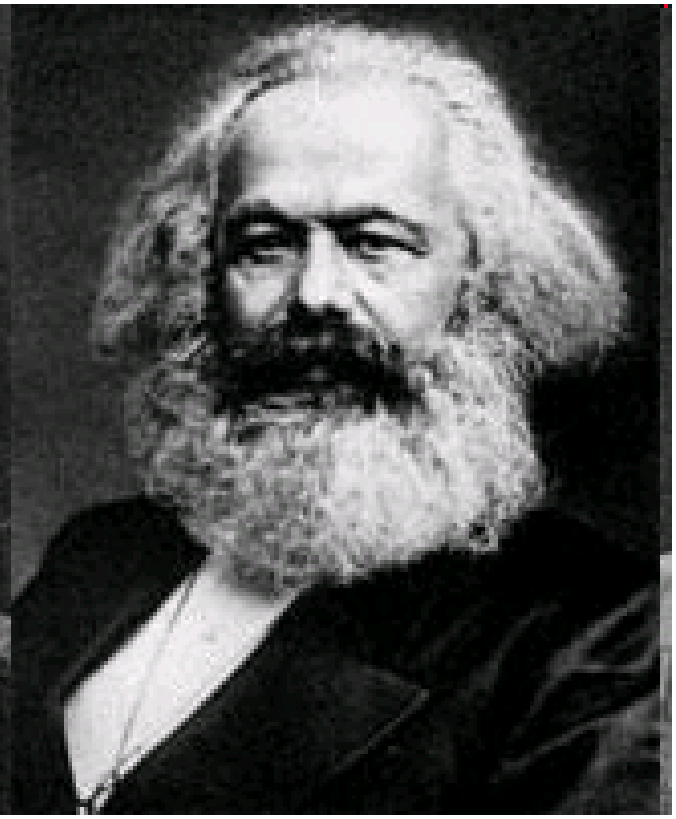
Evolution



Theories

Engels (1820-1895)

Marx (1818-1883)



Theories

"The essential point to grasp is that in dealing with capitalism we are dealing with an evolutionary process. It may seem strange that anyone can fail to see so obvious a fact which moreover was long ago emphasized by Karl Marx." (CSD, p. 82)

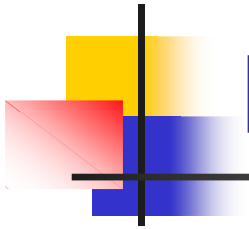
Theories

Richard R.Nelson (1930)

Sidney G. Winter (1935)

Theories

Giovanni Dosi



Neo-classical theory

- Agents
  - Full information
  - Computational capability
  - Profit maximization (one objective)
  - Production function (“well-behaved”)
- Markets
  - Representative agent
  - Equilibrium analysis
  - Market interactions through price signals

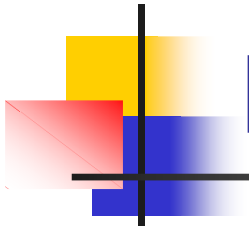
Neo-classical theory

- Methodology
  - Ahistorical (not concerned with or related to history, historical development, or tradition)
  - Context independent
  - "Comparative statics"
- Economic problem
  - Efficient allocation of given resources
  - Perfect competition as the benchmark case

Neo-classical theory

Limits of neoclassical economics

"[T]he problem that is usually being visualized [by economists] is how capitalism administers existing structures, whereas the relevant problem is how it creates and destroys them. As long as this is not recognized, the investigator does a meaningless job." (CSD, p. 82)

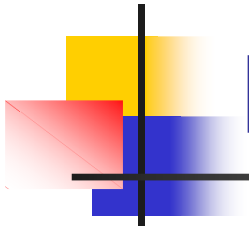


Evolutionary theory

- Agents
  - Bounded rationality
    - Lack of information / local knowledge
    - Lack of computational capability
    - Prefers more profit but cannot maximize it
  - Other objectives
  - No production function
  - Rule-based behavior (routines, rules of thumb, heuristic)
    - Satisficing ("satisfy" + "suffice") behavior

Evolutionary theory

- Markets
  - Heterogeneity of agents – population approach
    - Information (local information)
    - Capabilities / technologies
    - Preferences (risk aversion)
    - Rules of behavior
    - Interactions (local interactions)
  - Non-equilibrium analysis
  - Non-market interactions



Evolutionary theory

- Methodology
  - Historical
  - Institutional
  - Dynamic

Evolutionary theory

- Economic problem
  - Creation of
    - New knowledge (learning)
    - New organizations
    - New institution
  - Dynamic efficiency and effectiveness

Evolutionary economics

- Main concepts
  - Evolution
    - Variety creation
      - Mutation (innovation)
      - Recombination (imitation)
    - Variety reduction
      - Selection (within the firm, within the market)
  - **Creative destruction**
  - Rule-based behavior
  - Learning
    - New rules
    - New technologies
  - Path dependence
  - Self-organization

Evolutionary economics

- Imitation
- Innovation (new combinations)
  - Product
  - Process
  - Organization
  - Opening of a new market
  - Use of the new sources of raw materials
- Imitation