Animal Spirits and Economathematics/Physics

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Classical economics: The Invisible Hand

- Adam Smith coined "The Invisible Hand" in the 18th Century, and initiated liberal economics by asking for the elimination of import duties
- The Invisible Hand guides a market economy to an optimal state
- It works by greed and fear, but all actors are assumed to be rational
- Greed means the drive to create more profit
- Fear means the competitive pressure in an unregulated, open market: if there is opportunity for arbitrage, someone will grab it
- This combination of states is "The Efficient Market Hypothesis"

The Great Depression in the 1930's

- The U. S. Stock Market collapsed in 1929
- Banks lost money and could not lend out any more, and started calling in debts
- Companies could not borrow and had to stop investing, and sometimes went bankrupt when debts were due
- Workers were laid off and could not buy any more
- Worldwide demand for goods and services started to decline
- Companies could not make money any more even from their normal business and had to lay off even more workers
- Political extremism increased dramatically and brought e.g. Adolf Hitler to power

John Maynard Keynes and Animal Spirits

- Keynes attributed the boom and bust cycles of economy to human irrationality that he called Animal Spirits
- Animal Spirits have become an economic term that attempts to capture the fact that humans are prone to exuberance, in both good times and bad
- Keynes' recepy was that governments should not leave the markets at their own devices
- Governments should increase interests and taxes in good times and spend this surplus in bad times on employment-creating big construction projects
- Hyman Minsky was another prominent "economic interventionist"

Neo-liberals

- The neo-liberal economic school centered at the University of Chigago and was lead by Milton Friedman
- Neo-liberalism inspired Ronald Reagan and Margaret Thatcher and their followers
- Neo-liberals adopted again the assumption that markets are best left alone and small governement means more efficient economic activity
- Neo-liberalism remained the prevailing doctrine in the U. S. until September 2008
- In that month, George W. Bush' neo-liberal governement was forced to bring on the biggest intervention by government in the economy that any governement in any country has ever executed...

The Lappeenranta Program -1

- Since this recent Great Recession economic theory has been discredited by the failure of most economists to predict it
- Many authors claim that economics should not be a Science, but a Humanity, based on psychology
- Our time series group begs to disagree
- Our research programme endeavors to model seemingly psychological phenomena by analogues of physical forces
- Our central assumption is that the Efficient Market Hypothesis is false, because it assumes that all participants in markets possess all the information all the time and make instant, totally rational calculations on that basis
- The fallacy of such a hypothesis is most clearly borne out by the limited amount of information that most market actors are empirically seen to use.

- Unlike the global, complete and instantaneous information spreading of the Efficient Market Hypothesis this results in local, partial and gradual information dissemination in economic system
- Physically this compares to the difference between parabolic systems and hyperbolic dynamical systems
- Parabolic systems produce normally distributed residuals, hyperbolic systems result in fat-tailed ones