

# Technology, Globalization and Social Development

GE 301 Science,  
Technology and  
Society  
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# History

- 100 years ago it was the same as today (international trade and migration)
- strengthen international ties in the aftermath of World War II laid the groundwork for today's globalization.
- Multinational corporations set up several bases around the world.

# The two mechanisms

- The rise of 'capitalism'
- Information and communication technologies



# The socio-economic system

- Old
  - deriving engine:
    - competition in the pursuit of profit
    - Individual satisfaction
- New
  - Tooled by ICT
    - New productivity sources
    - Organizational forms
    - GLOBAL economy

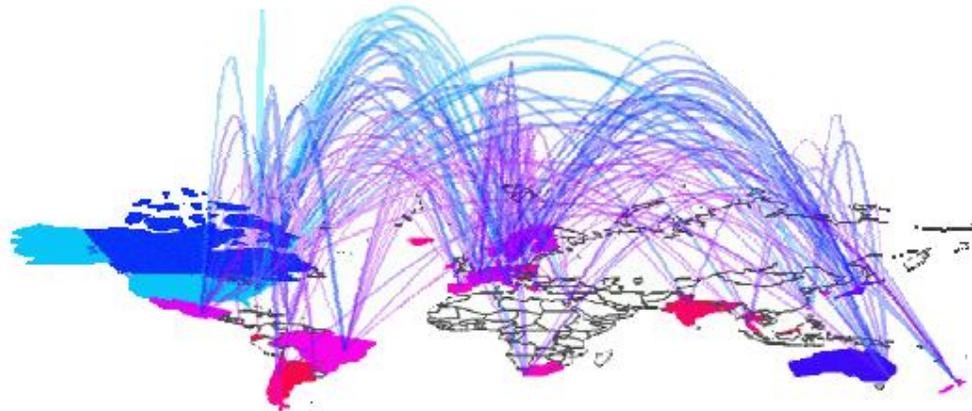
# Globalization?

- Integration of economies through trade and financial flows
- Movement of people (labor)
- Movement of knowledge (technology)
- 'Global Economy' core activities work in real time on a planetary scale



# A Strategic tool

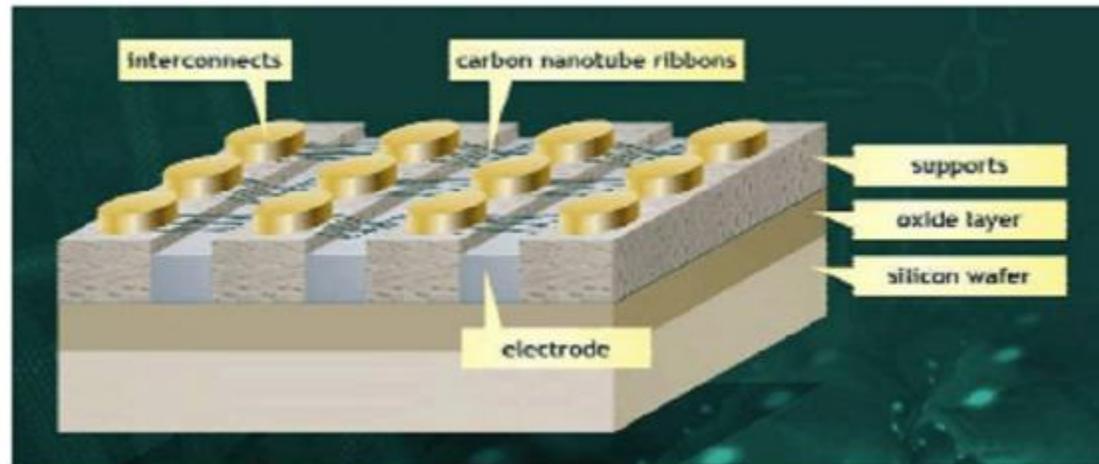
- 1990 the entire planet is organized around telecommunicated networks
- Power of information and knowledge
- Innovation



# Innovation

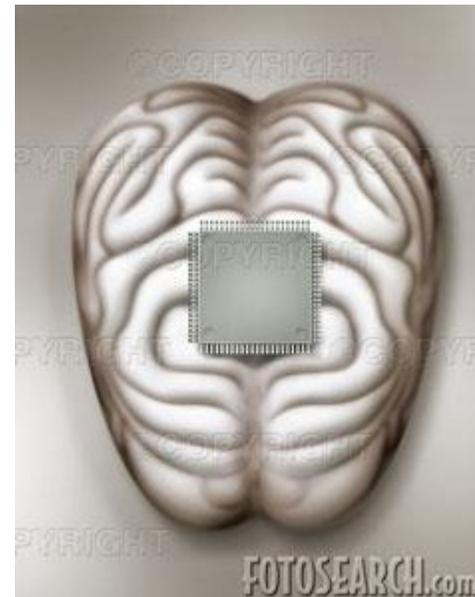
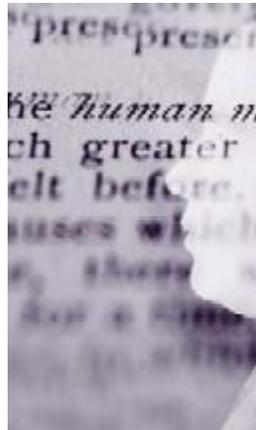
*the process of making improvements by introducing something new*

- Human resources
- System



# Knowledge society

- Information society
- Knowledge society



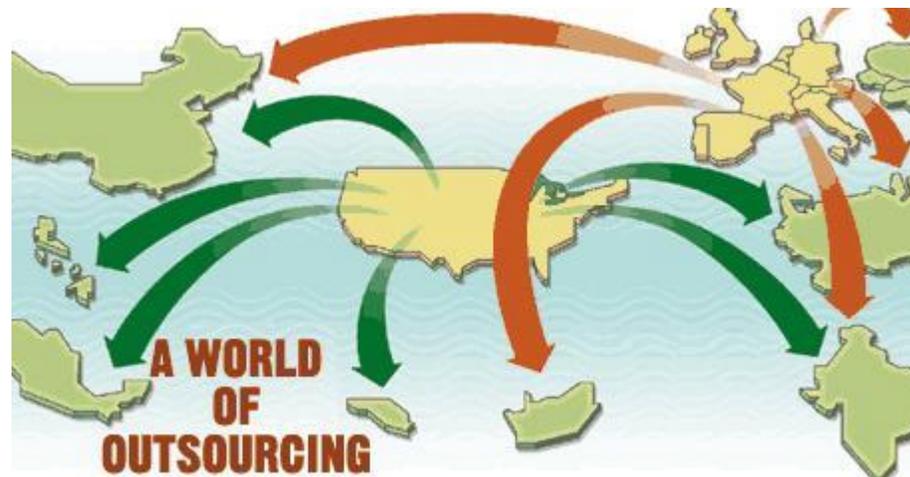
# Competition

- Short-term competitiveness
- Long-term competitiveness
- Intellectual property rights
- Decrease of transparency and reduction of progress



# Outsourcing

- The search for innovative human resource
- The search for lower labor costs



# Creative destruction

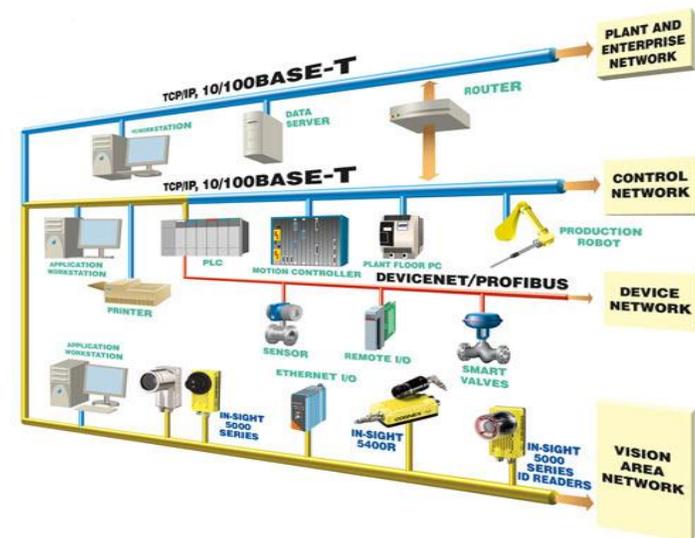
(J Schumpeter)

- 1942 Capitalism, Socialism and Democracy
- The urge of innovation destroys existing enterprises yielding new ones
- What about entrepreneurs?



# Networking

- Industrial age → large factory dedicated to mass production
- Information age → networking
- Network functions by circulating
  - Money
  - Information
  - Technology
  - Goods
  - Services
  - People



M Castells, Information technology, Globalization and social development, OXFORD, 1999

# Networking

- To be in the network
  - You can share and in time increase your chances
- To be out of network (switched off)
  - Your chances vanish

**Everything that counts is organized around  
WWW or interacting networks**

# Globalization of Technology

- International exploitation of national technological capabilities;
- International **technology** alliances;
- **Globalization** of innovation across countries



<http://www.atpsnet.org/content/files/documents/Sunil%20Manu.doc>.

# Technology and Globalization

## Substitution and Dematerialization

- Examples of Substitution and dematerialization
  - Copper
  - Oil
  - Sugar

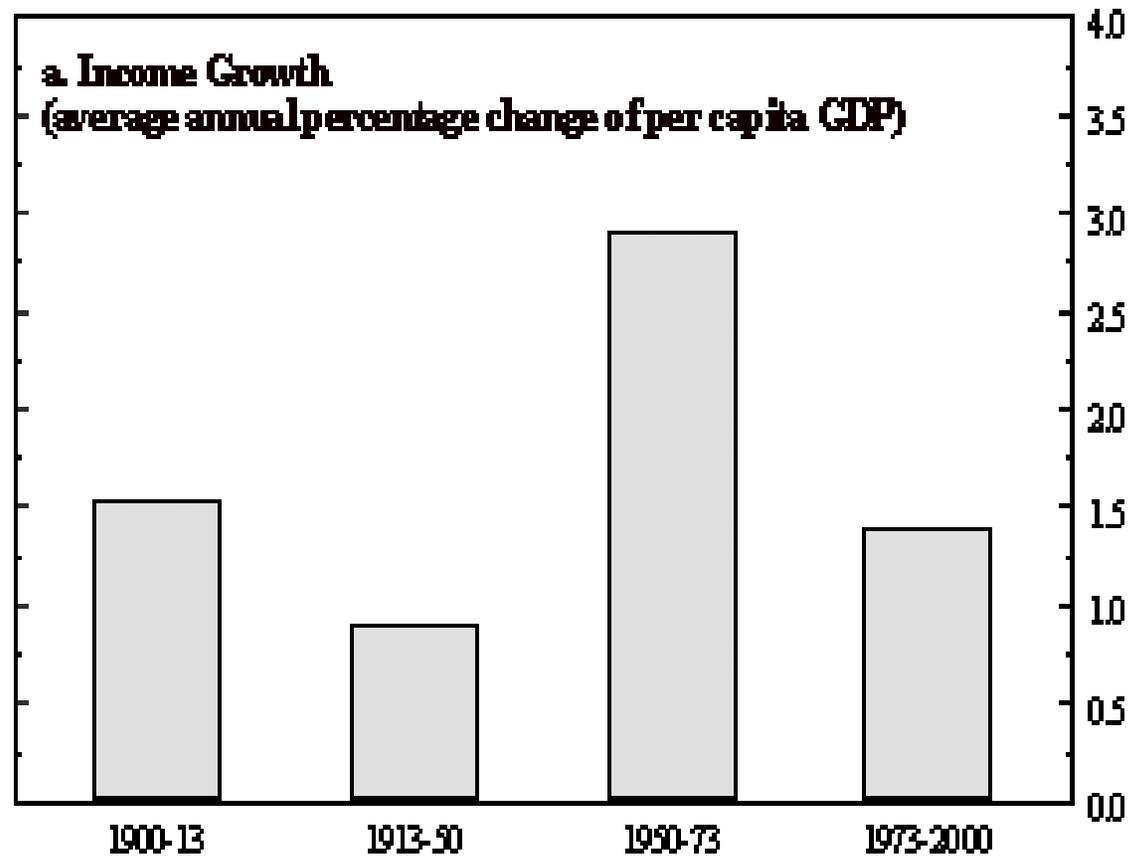


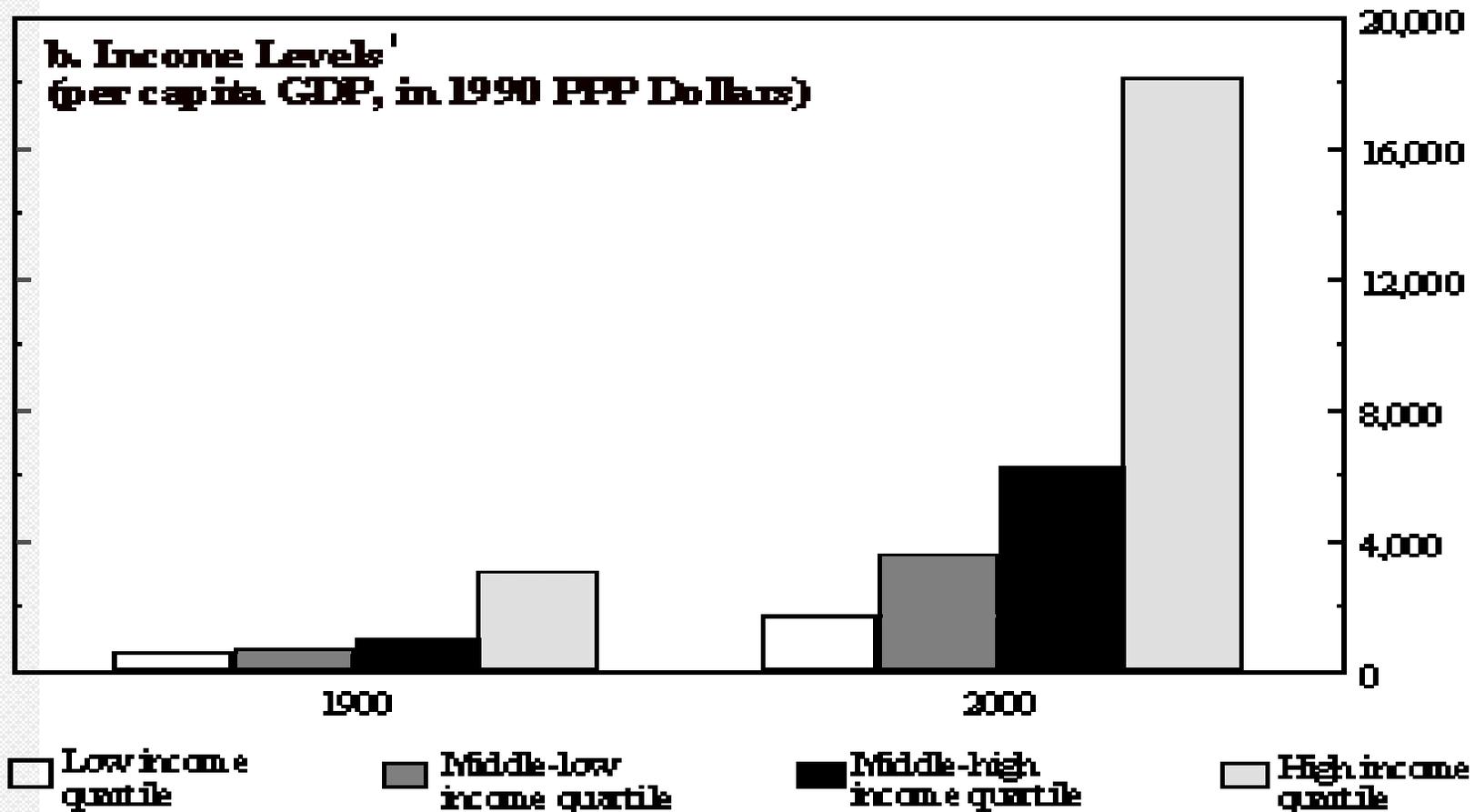
# Technology and Globalization

- Declining raw material industries
- Effects on countries in the periphery
- Import-substitution industrialization
- Tourism



**Chart 1. Twentieth Century World Income Trends**





Sources: Angus Maddison, *Revolutions in the World Economy*; and IMF staff estimates, reproduced in IMF, *World Economic Outlook* May 2000.

<sup>1</sup>Countries' populations have been assigned to income quartiles according to GDP per capita in each country; each quartile contains 25 percent of world population.

# Social Development and Globalization

- Social Development - Social survival
- Consumption and production
- Relationships of consumption
  - Inequality
  - Polarization
  - Poverty
  - Misery



# Social Development and Globalization

- Relationships of production (How people provide for their livelihood - how do they earn money)
  - Individualization of labor
  - Over-exploitation
  - Social exclusion
  - income generation in the criminal economy

# Informational Capitalism and Social crises

- Flexibility and global reach
- Education quality
- Elimination of traditional agriculture - rural exodus
- Informal economic growth, welfare state come under attack
- **The forth world**

<http://menntun.khi.is/sigurjon/IT%20Global%20CASTELLS.pdf>

# Globalization Index

## Measuring Globalization

- Globalization index  
Degree of integration
  - Economic integration
  - Personal contact
  - Technological connectivity
  - Political engagement
- A.T. Kearney consulting firm releases globalization index of 62 countries
- Singapore first, Ireland, Switzerland, US, Holland
- Turkey 57 th



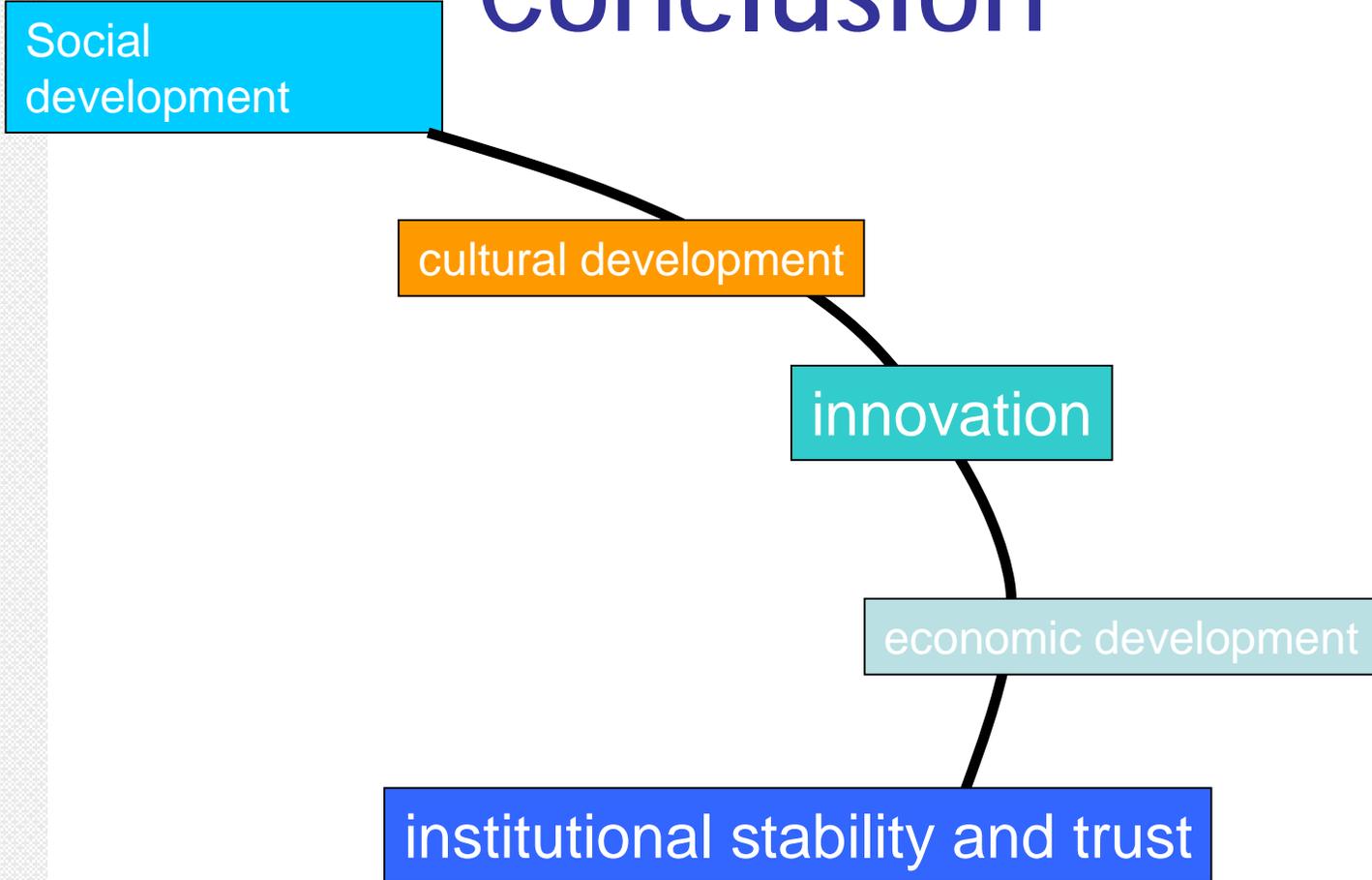
<http://www.foreignpolicy.com/index.php>

# Conclusion

## (redefining social development)

- Activity of mind and material production closely linked
- Educated labor force is the source of productivity
- Needs multidimensional improvement in the quality of life.
- Welfare states, without bureaucracy will be the source of productivity

# Conclusion



<http://menntun.khi.is/sigurjon/IT%20Global%20CASTELLS.pdf>

# Conclusion

## IT WILL REQUIRE

- Massive technological upgrading of countries
- Dramatic investment in the education system
- worldwide network of science and technology

**NEEDS SCIENTIFIC THINKING , THE USE OF HUMAN INTELLECT**

# Last word

“Solidarity in a globalized world means global solidarity. And it also means inter-generational solidarity. Our planet is our only home, and we would not like the grandchildren of our grandchildren to be homeless” **Manuel Castells**