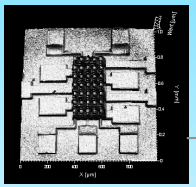
E-Business Ethics Part 2

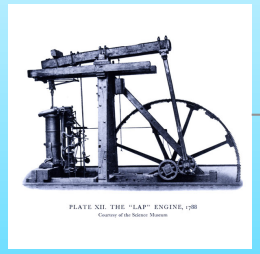
E-Technology
E-Conomy
Ethics

Prof. Dr. Tilo Hildebrandt

Longterm Economic Trends

Kondratieff-Cycles
(1892 – 1932)





2020 Energy Technology

Lower Production Cost

1980

Information Technology

Lower Transaction Cost

1940

1913

Mobility, Petrochemical

Lower Transaction Cost

Mass Production, Chemical I.

Lower Production Cost

1840

Steel, Railway

Lower Transaction Cost

1780

Start of Industrialization

Lower Production Cost

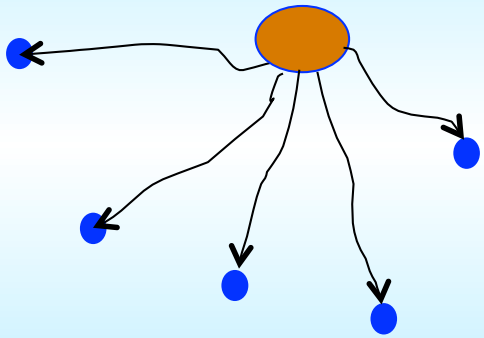
Marginal Rate of Costs

- Economies of Scale
- Learning Effect
- Network Effect

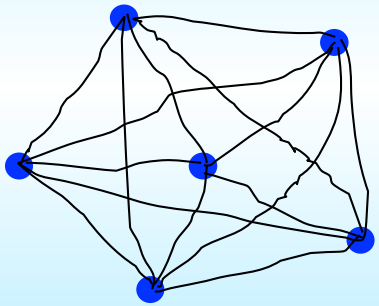
Actors on the Internet

Exponential Growth of Value

Sender: 5 CP



Network: 15 CP



generally

CP = A-1 **CP = $(A^2 - A)/2$**

CP:= Communication Possibilities – A:= Actors

Virtual World

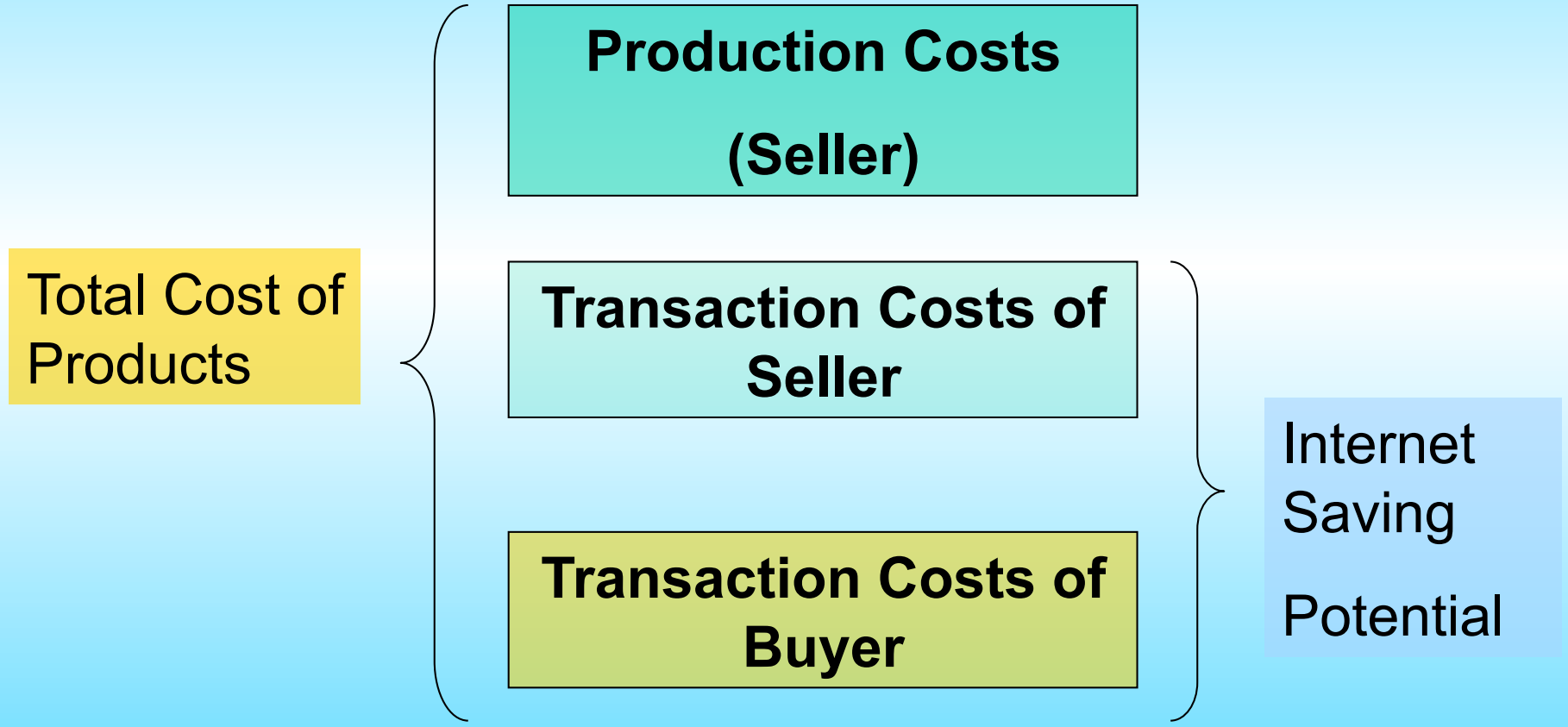
Virtual Community

Virtual Identity

Virtual Goods

Virtual Money

Postindustrial Economy (Ronald Coase)

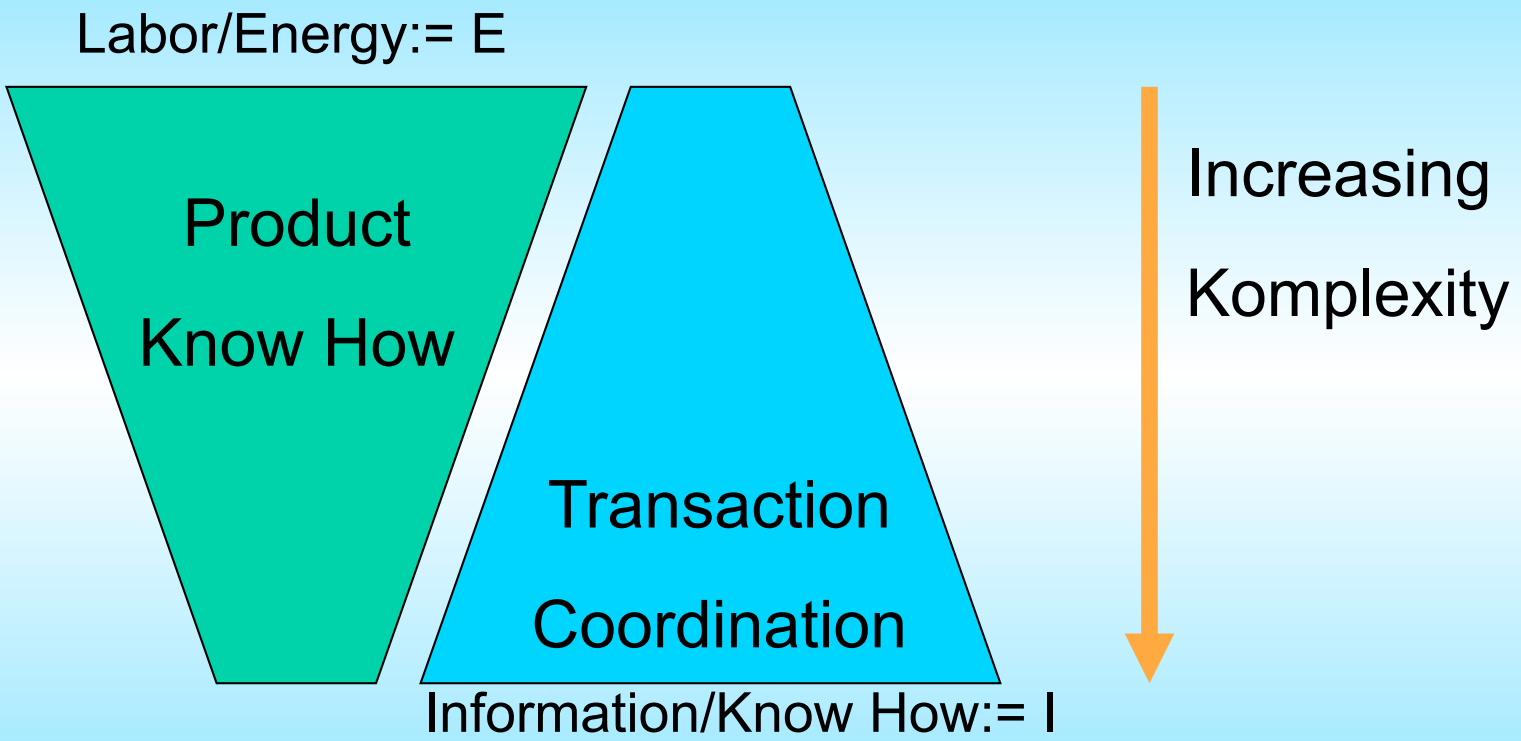


Production Costs

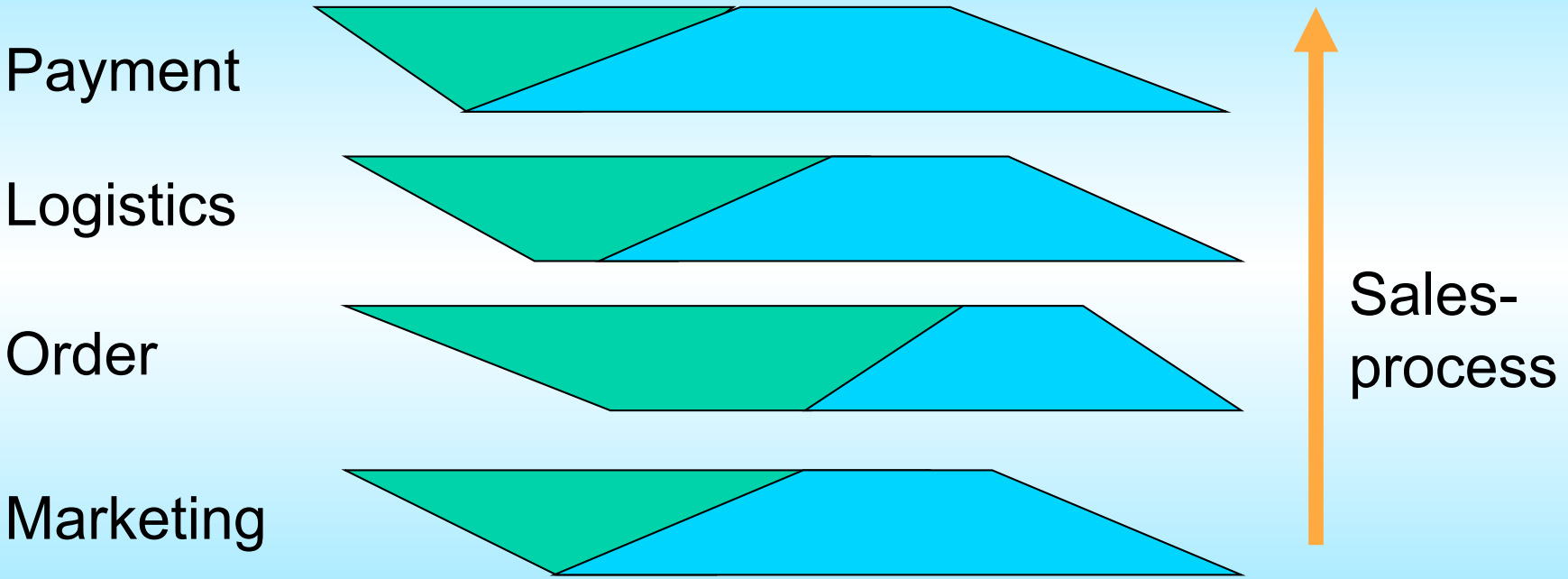
Transaction Costs

1. Search- and Retrieval Costs
2. Negotiation- and Decision Costs
3. Controlling- and Enforcement Costs

Substitution



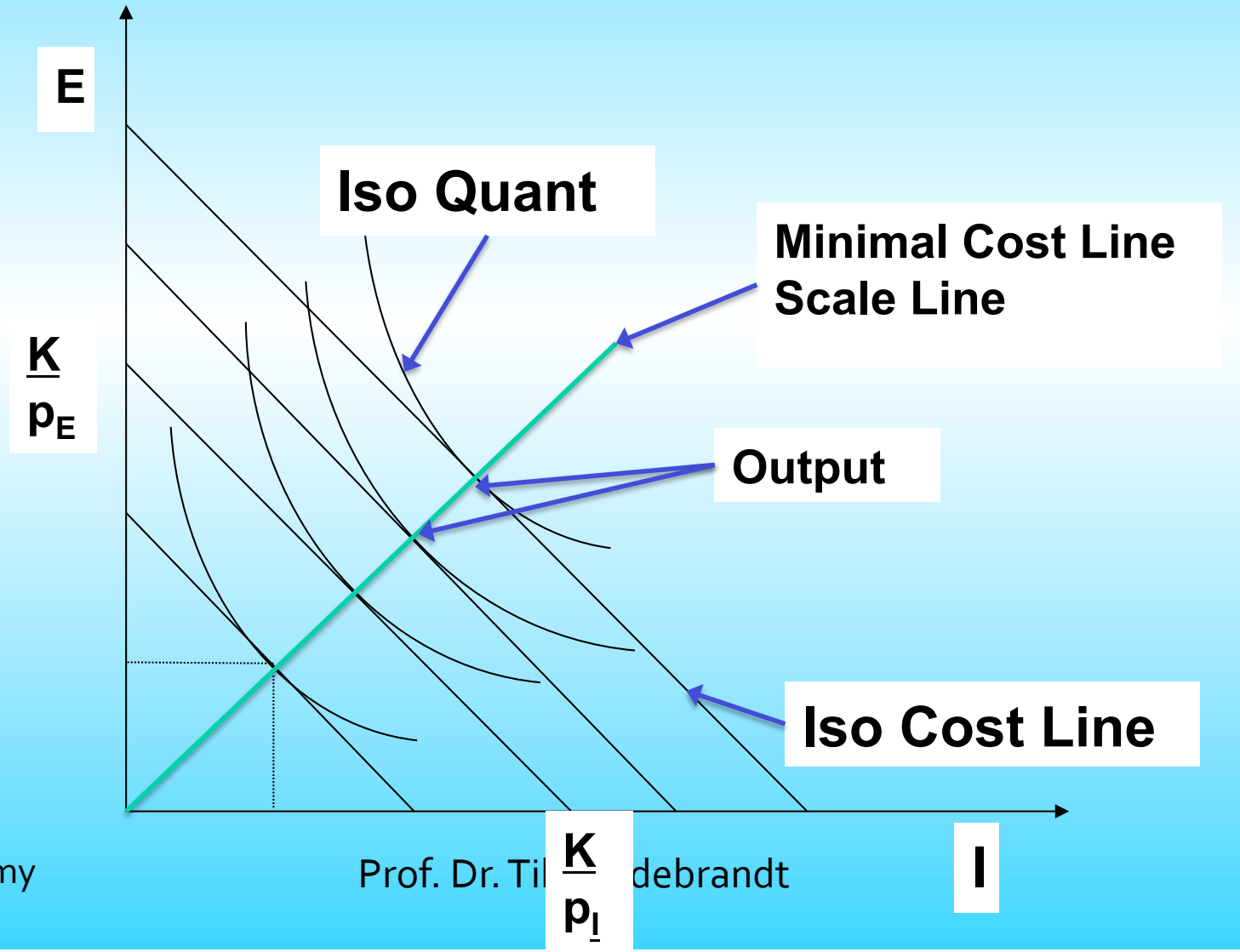
Substitution (Sales Process)



Labor/Energy := E

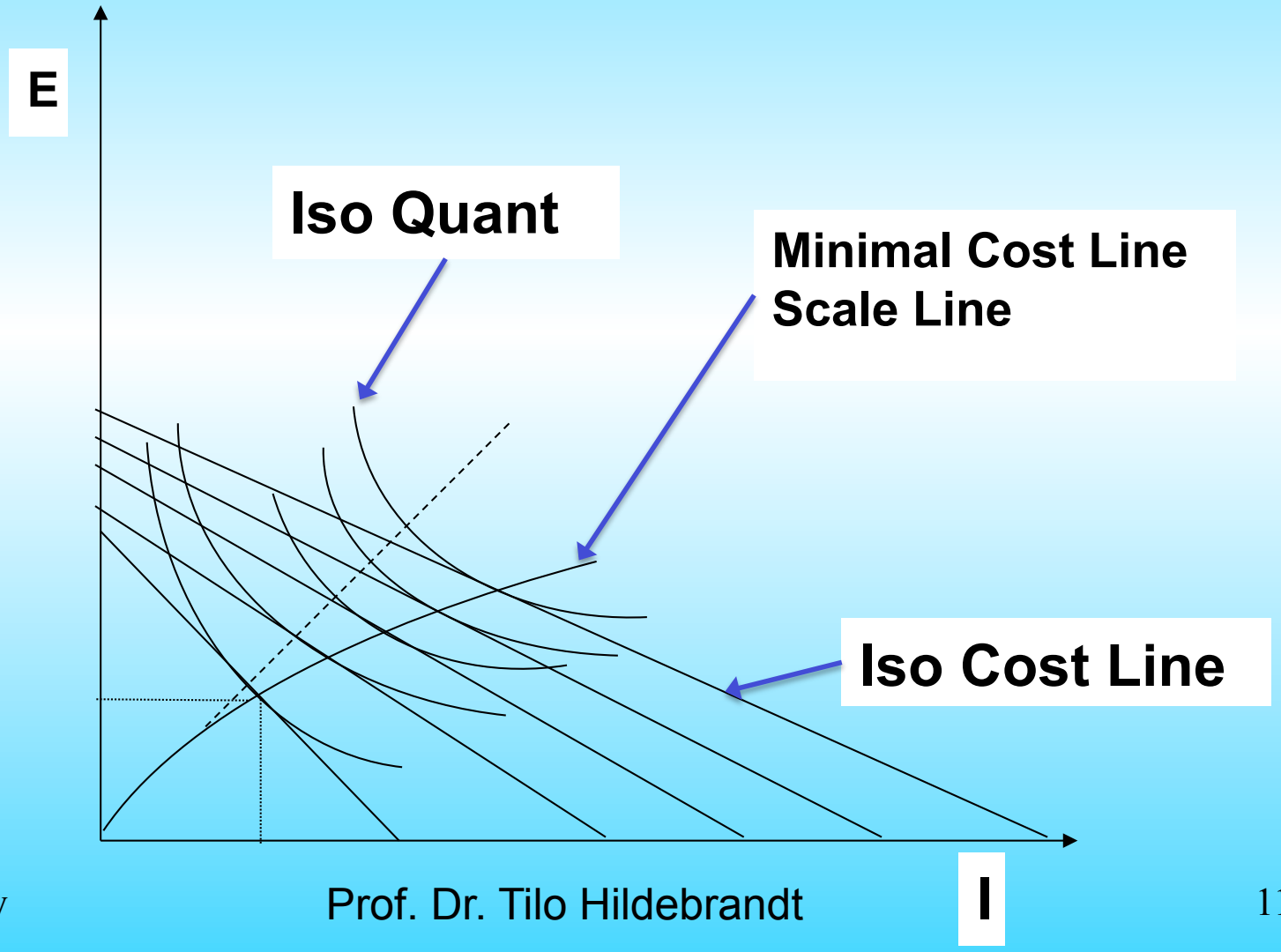
Information/Know How := I
(Transaction)

Minimal Cost Line
Scale Line



Substitution

Scale Line



Economic Principle: Minimizing
(E-Commerce Version)

$$O = aE^{\alpha} I^{\beta}$$ **With *a,α,β>0***

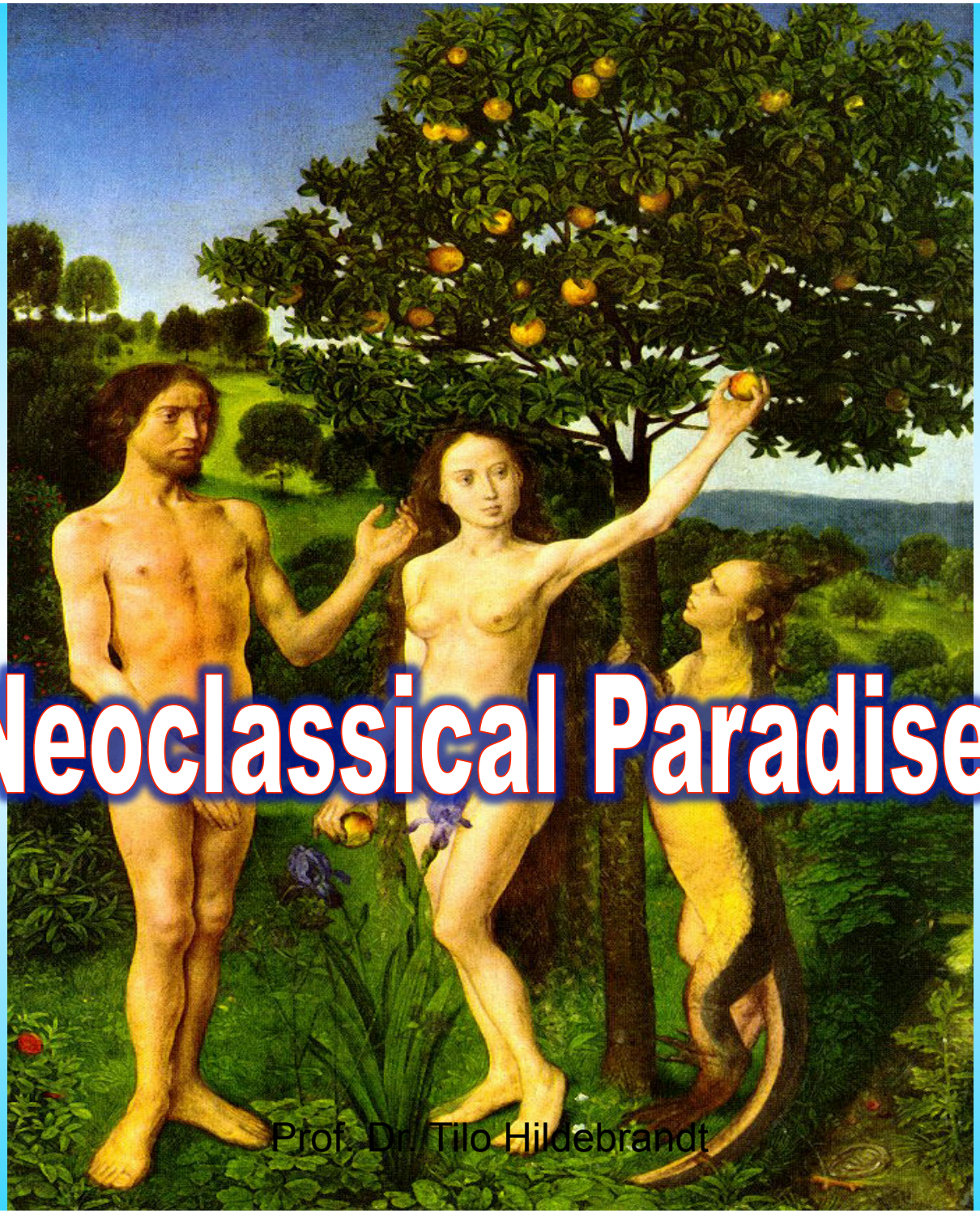
$$K = p_E E + p_I I$$

$$\min\left\{K = p_E E + p_I I \middle| O - aE^{\alpha} I^{\beta} \equiv 0\right\}$$

Neoclassical Production Theory

Omniscient Actors in simple Decision Situations

- **No Adaptation Period**
- **No Quality Differenciation**
- **Total Information**
- **Decision only Price Based**
- **Closed System**
- **Equilibrium**



Neoclassical Paradise

Economic Reality

Nescient Actors in Complex Decision Situations

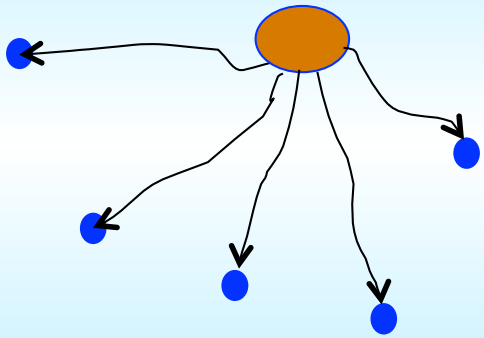
Economic Power

Why ?

Actors on the Internet

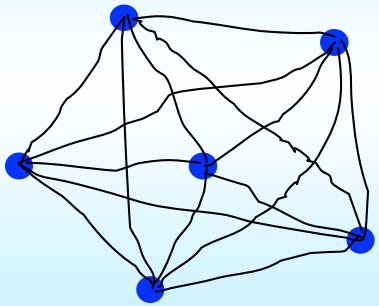
Exponential Growth of Value

Sender: 5 CP



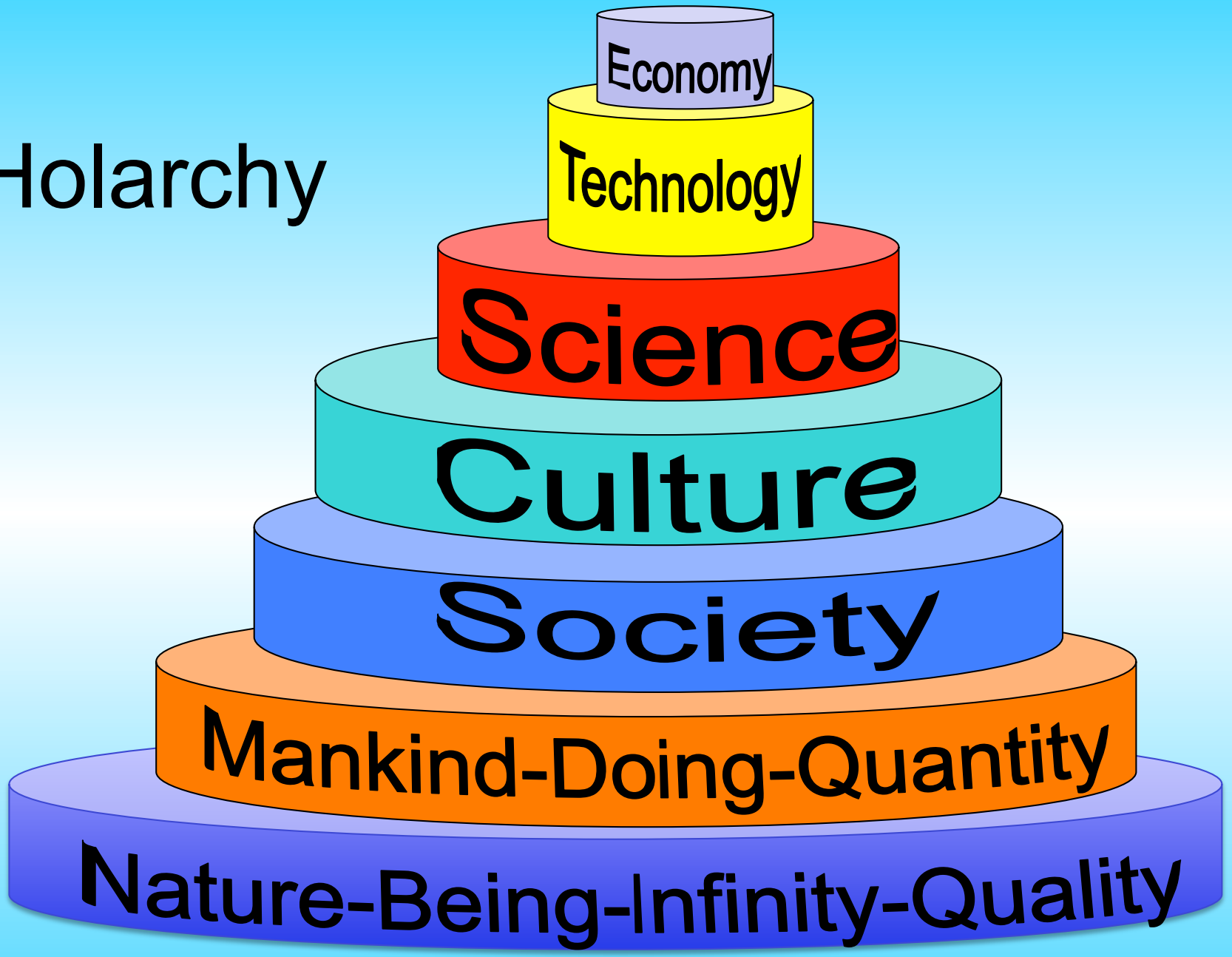
Might

Network: 15 CP

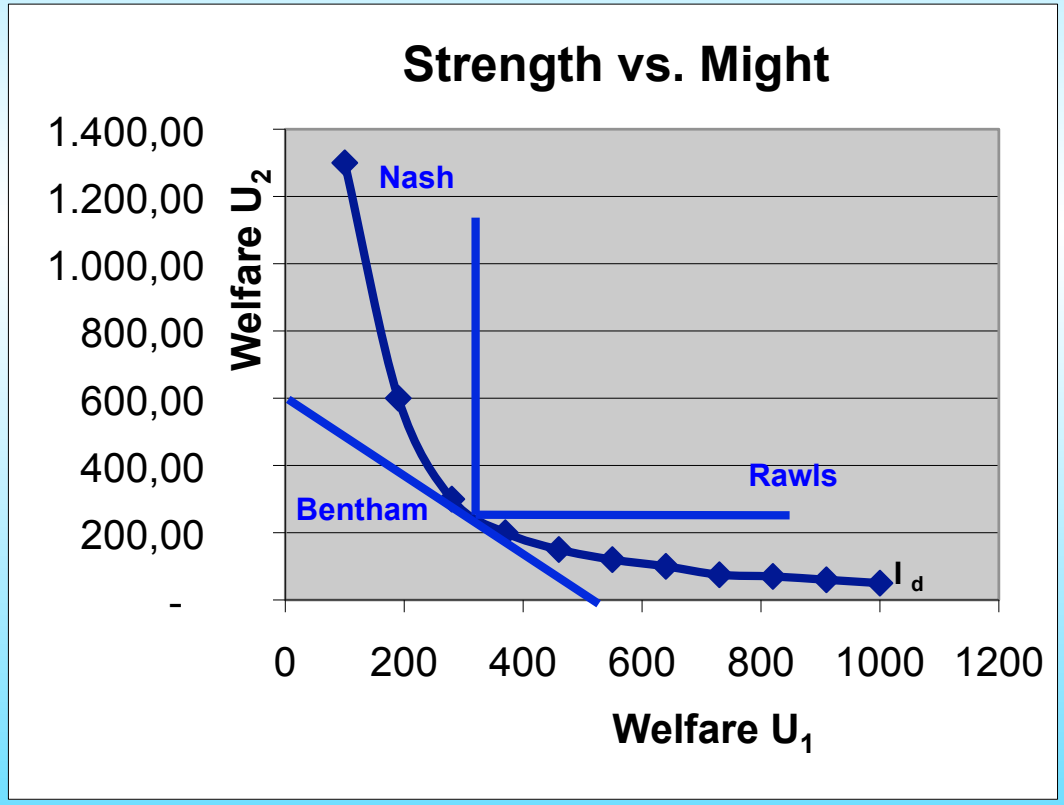


Strength

Holarchy


Economy
Technology
Science
Culture
Society
Mankind-Doing-Quantity
Nature-Being-Infinity-Quality

Welfare Economics

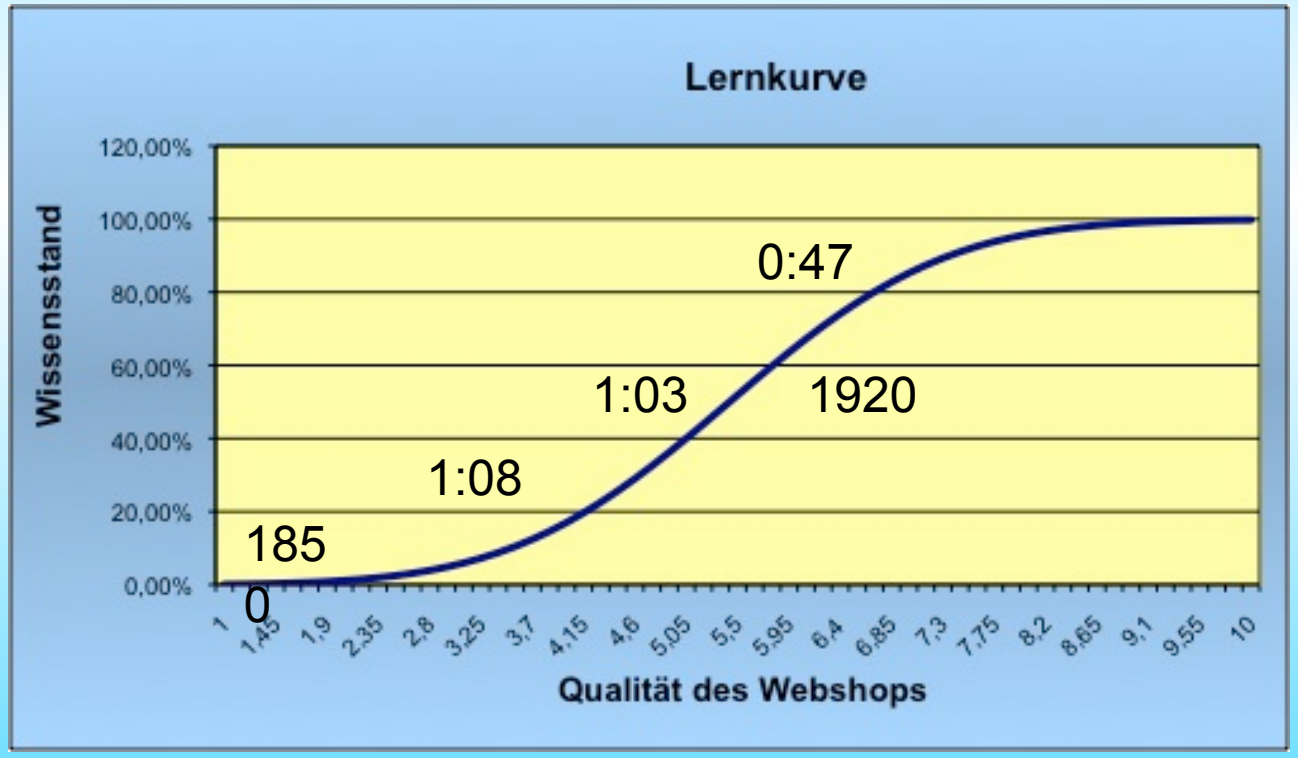


$$W_B = \sum_{i=1}^{n} U_i \quad \text{Bentham}$$

$$W_R = \min\{U_1,\ldots,U_n\} \quad \text{Rawls}$$

$$W_N = \prod_{i=1}^{n} U_i \quad \text{Nash}$$

Learning Curve



”You’d better start swimming or you’ll sink like a stone,

cause the times they are a’ changing.”