

Information, Organization, and Management

Unit 4: Information Asymmetry and Opportunism

Prof. Dr. Martin Hepp
<http://www.heppnetz.de>
mhepp@computer.org

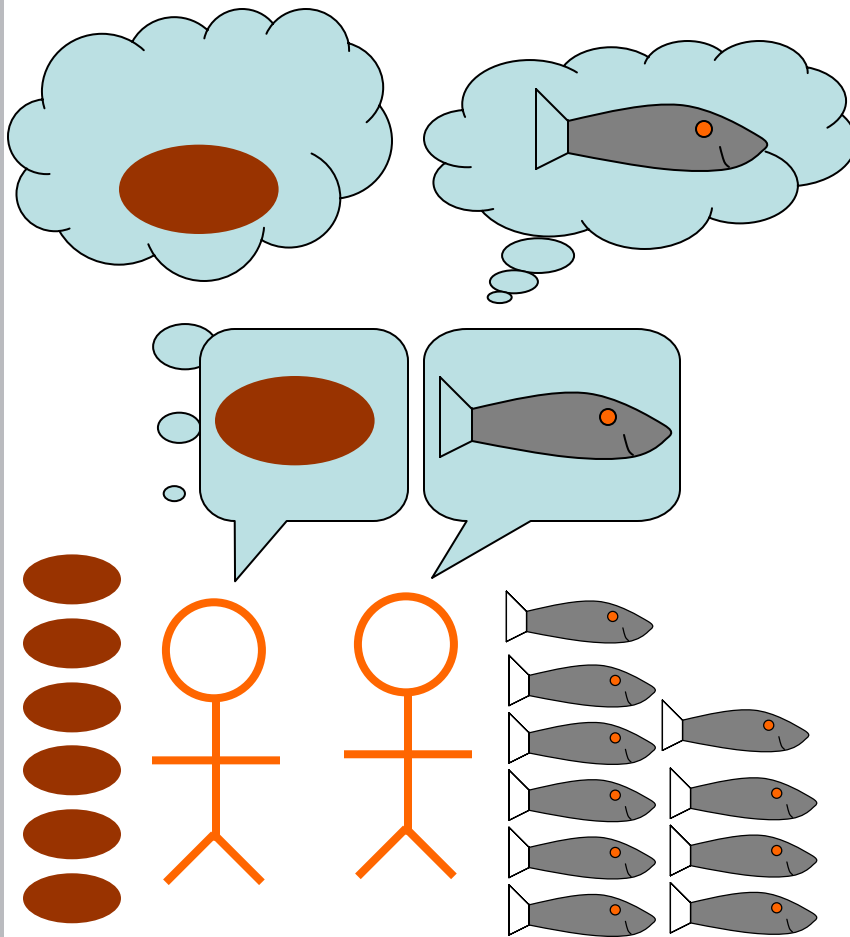
<http://www.heppnetz.de/teaching/img/>

Textbook: Wigand/Picot/Reichwald: *Information, Organization and Management*, John Wiley & Sons, 1997

Overview

- Information Asymmetry and Exchange
- Opportunism
- Principal Agent Theory
- Principal Agent Problems in E-Business
- Organizations and Institutions

Information Asymmetry and Exchange



- Actors have different resources and skills
 - Ability to process information is limited
 - Also, search and evaluation of information consumes resources
- => Asymmetric distribution of information**
- Example: Capabilities and intentions of potential partners

Opportunism

- Strategic behavior of increasing one's own utility eventually at the expenses of others and under disobedience of social norms.

Principal Agent Theory

- Division of labor -> asymmetric distribution of information -> space for opportunistic behavior
- Examples of Principal/Agent relations

Principal Agent Theory: Problems

- Hidden characteristics
- Hidden Action
- Hidden Information
- Hidden Intention

Hidden characteristics

- Principal has incomplete or incorrect knowledge of relevant characteristics of the agent
=> Adverse selection

Principal Agent Theory: Hidden Action

- Principal has incomplete knowledge of the agent's actions

Principal Agent Theory: Hidden Information

- Principal is unable to judge the agent's action appropriately or to assess whether the results was due to the agent's action or solely incidental

Principal Agent Theory: Hidden Intention

- Principal has incomplete knowledge of the agent's true intentions
- Examples
 - Duration of employment
 - Access to knowledge or skills
 - Hold-up problems

Principal Agent Theory: Adverse Selection

- The selection of contract partners is flawed: Inferior choices are made due to information asymmetries
- Examples:
 - More risks among insured individuals than in the population
 - CDW: Collision Damage Waiver coverage

Principal Agent Theory: Moral Hazard

- Principal is unable to retaliate for breach of agreement after contract signature
- Exploitation of principal's incomplete knowledge by the agent

Principal Agent Theory: Solutions

- Signaling
- Screening
- Self-Selection

Signaling

- Agent takes extra effort to remove information asymmetries
- Examples:
 - Diploma
 - Certificate for used cars

Screening


- Principal takes extra effort to reduce information asymmetries
- Examples
 - Assessment center
 - Background checks

Self-Selection


- Principal offers multiple variants of a contract
- Agent reveals own assessment of characteristics and intentions by choosing the most favorable one.
- Examples:
 - Co-insurance / Deductibles

Principal-Agent Problems: Links to Previous Topics

Professur für Allgemeine BWL, insbesondere E-Business
Chair of General Management and E-Business
Prof. Dr. Martin Hepp

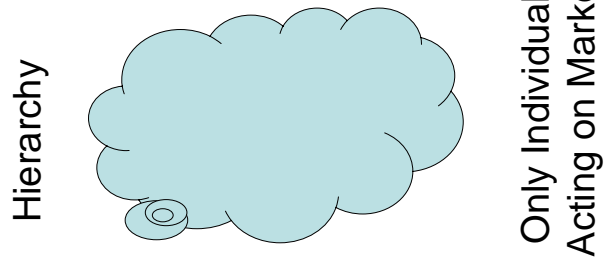
Universität  München

Asset Specificity

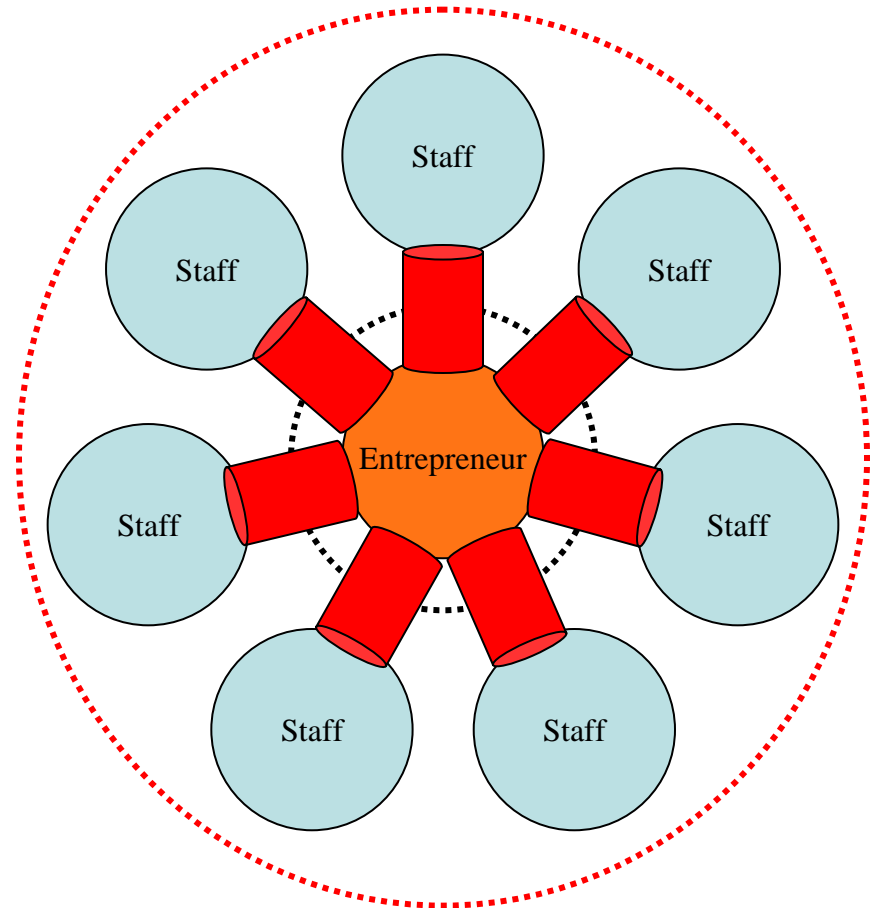


IMG - Unit 4 21

Market and Hierarchy: A Continuum in between

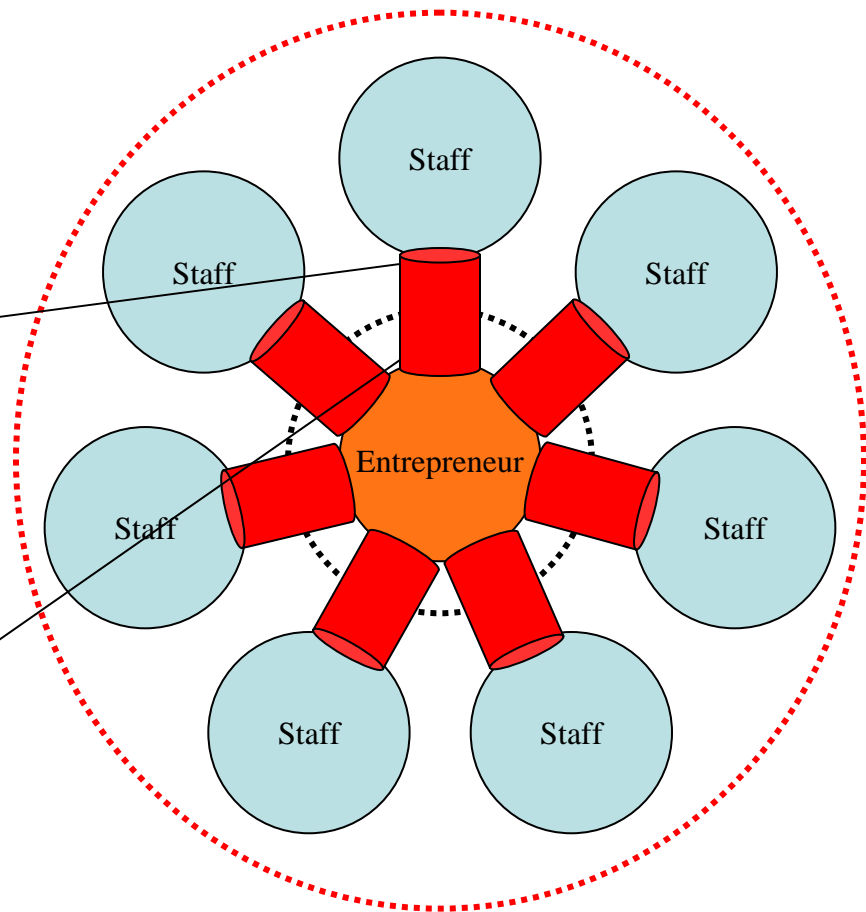


cf. Wigand/Picot/Reichwald (1997)



Coase: The Nature of the Firm

- **Explanation:** Using the price mechanism (market) consumes resources



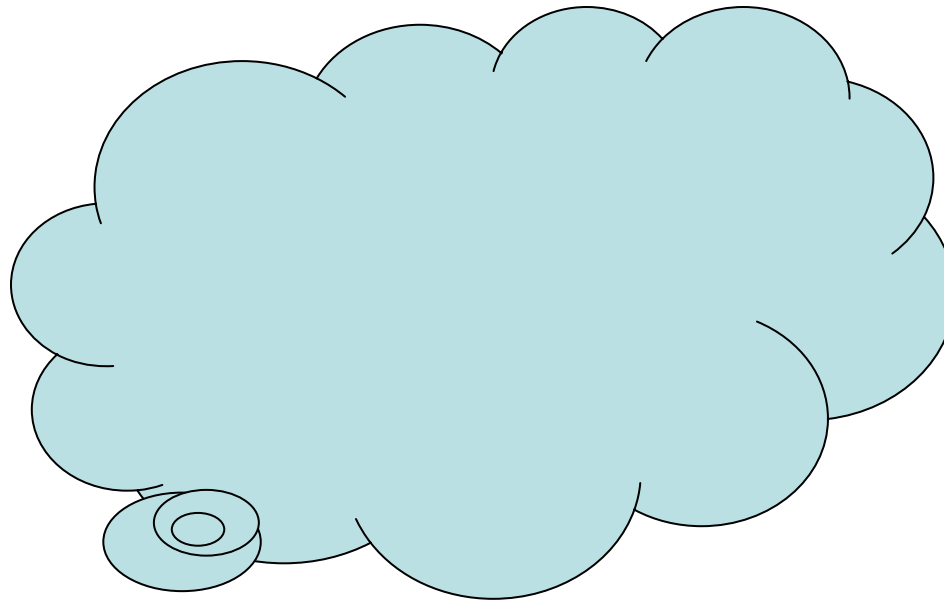
Asset Specificity



IMG - Unit 4

Market and Hierarchy: A Continuum in between

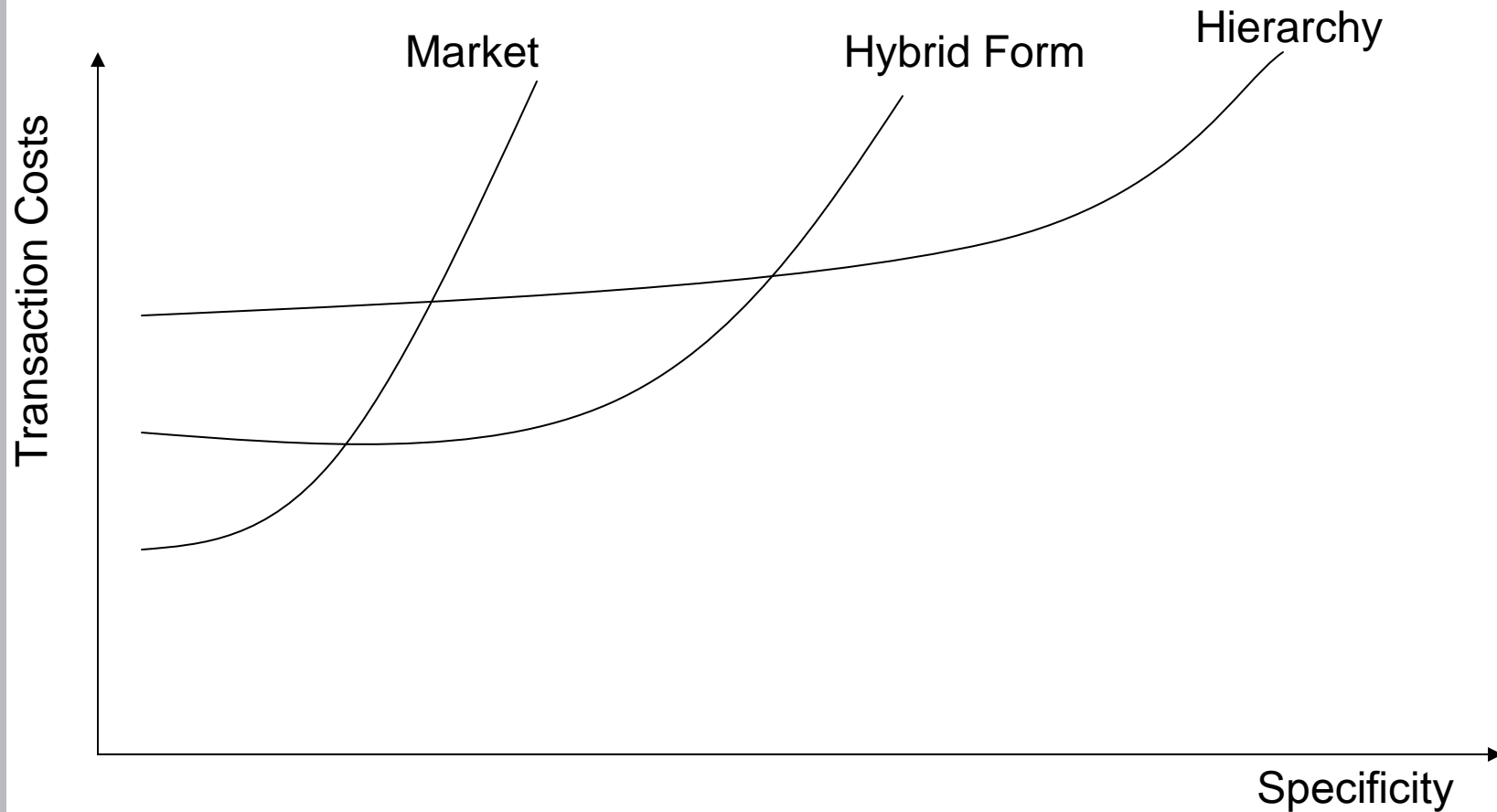
Hierarchy



Only Individuals
Acting on Markets

cf. Wigand/Picot/Reichwald (1997)

Impact on Coordination?



cf. Wigand/Picot/Reichwald (1997)

Arbitrage

- Exploiting differences in prices for goods on different markets
- Based on „informational lead“
- Important role
 - by exploiting the opportunity, arbitrator destroys the opportunity
 - makes markets more efficient and integrates fragmented markets
- Bridging discrepancies in time, location, and quantity

Game Theory: Prisoner's Dilemma

		Thief 1	
		Confesses	Does not confess
Thief 2	Confesses	8, 8	1, 10
	Does not confess	10, 1	2, 2

IMG - Unit 4

Lack of Institutional Arrangement -> suboptimal choices

Organization Theory

- Institutions: „Socially sanctionable expectations, related to actions and behavior of one or more individuals“
- Stabilize expectations and facilitate the coordination of production
- Self-maintaining vs. such requiring supervision

Contract Theory

- **Classical contract:**
 - commodities
 - short-term
 - change of partners easy, no dependencies
- **neo-classical**
 - as above, but spans some time
 - spec already an approximation
 - explicit mediation rules
- **relational**
 - contract is only an approximation

Information as Signal and Symbol

- Information behavior has signaling effects
- Information used mainly to refute expected criticism
- In particular, if consequences are to be carried by the decision-maker but not information costs
- Typical example: Business consulting

cf. Wigand/Picot/Reichwald (1997)

Context Variables (O'Reilly)

- The likelihood that information is considered increases with
 - more power of the informing party
 - relevance for task completion (subjective/objective)
 - strong relationship with control and evaluation systems (e.g. peer-reviewed journal)
 - contribution to positively sanctioned actions
 - compliance with decision-maker's goals
 - little conflict with cooperation partners
 - degree of accessibility (online, good writing,...)
 - conciseness
 - degree of personal contact
 - degree of trust in the source

cf. Wigand/Picot/Reichwald (1997)

Problems in Interorganizational Information Transfer

- Prisoner's dilemma
- Basic value of information
- Additional value of information
- Multiple periods allow for cooperation
- Tit-for-Tat strategy

cf. Wigand/Picot/Reichwald (1997)

Hayek: „The Use of Knowledge in Society“ (1945)

- Price as a mechanism to convey information
- Empowers actors to make good decisions with relatively little information
- Example: Rise in price for oil

cf. Wigand/Picot/Reichwald (1997)

Review Question 1

- Explain the basic assumption of the principal/agent theory. Name four typical failures and give an example of a principal/agent problem.

Thank you!

The slides of today's class will be available
at <http://www.heppnetz.de/teaching/img/>
shortly.