

**A MSc study programme:
- An analytical approach to Cadastral Development**

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Overview

1. Motivations for a new study programme
2. Purpose of study
3. Content of study
4. Selected details
5. Conclusion/ Questions

Motivations for a new study programme

- Dissemination of approach and output of G9 research, and other as well: Dissertations, ..
- Prepare graduates for the legal/ institutional aspects of the mapping and cadastral agencies, cf. EuroGeographics
- Provide better theoretical basis for education in 'geospatial infrastructures'
- Contribute towards education in Cadastral Development of world wide scope

Purpose of study

Graduate shall be knowledgeable about how to

- Describe details of domain D as it is now
- Explain, why D developed as it is now
- Prepare plan for developing D_{now} towards some better state D_{better}
- Investigate, how such plan(s) were implemented, and with what outcome

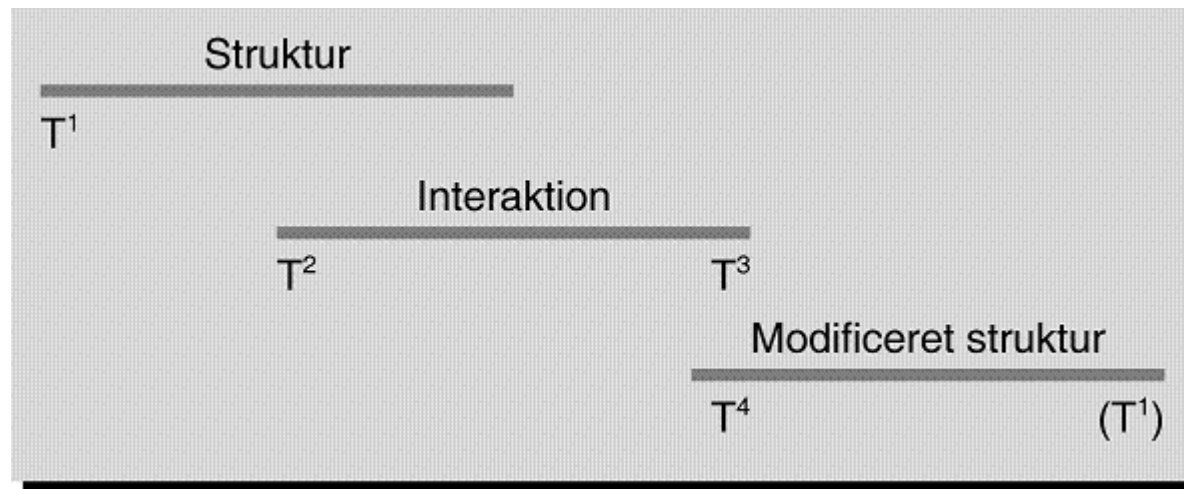
Content of study

Possible organizing principle: Socio-technical Systems (Ottens, 2005)

- Technical elements (e.g. airplane)
- Agents and agent elements (e.g pilot, passenger; knowledge)
- Social elements (~ "What is beyond ISO standards")
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- Relations: TT, TA, AA, AS, SS, ST
- Dynamic model: Structure_{T1} -> Process -> Structure_{T2}

Appreciated by faculty of TUs ? by students of TUs?

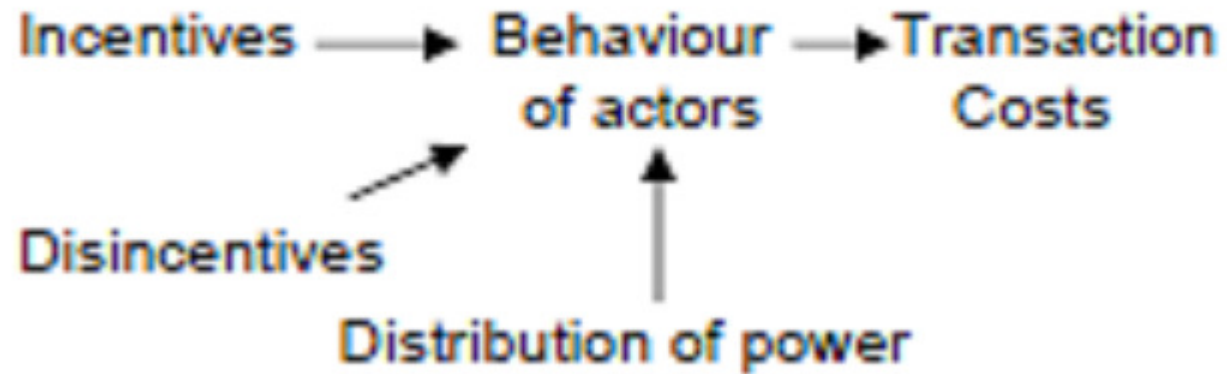
Content of study: Dynamic model



Archer 1995: 76, in Stubkjær, 2004

Content of study: Dynamic model

3) Area of Interaction



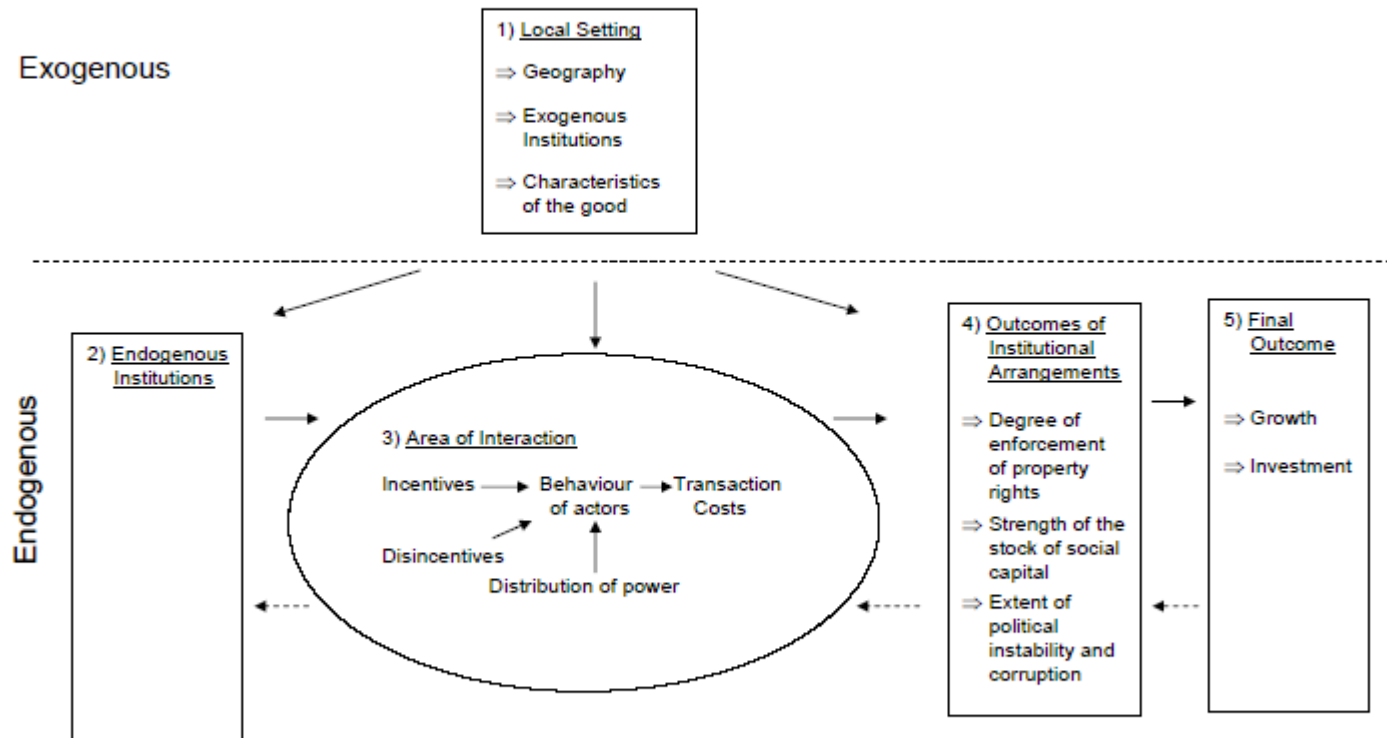
See complete next and at end of handout!

Jütting, 2003: Institutions and Development. OECD WP 210

Content of study: Dynamic model

DEV/DOC(2003)08

Figure 3: A Framework for Analysing the Impact of Institutions on Development Outcomes



Content of study: Static elements: Technical

- Satellites and reference stations
- Computers and networks
- Coordinate measuring devices
- Databases, archives; documents and maps
- Markers (boundary mark, sign posts, control points)

Content of study: Static elements: Social

Institutions	(See next)
Sign systems	<ul style="list-style-type: none">• Symbols (flag, (Danish) crown)• Natural language (English, Danish,..)• Professional language (Concepts, expressions, ..)• Modeling and programming languages (UML, Javascript, XSL, ..)
Value systems	<ul style="list-style-type: none">• Religions (Western Christian, Orthodox, Muslim,..; Hodgson, 2005)• Narratives (Schärfe, 2005)• Social capital (Trust outside family circles; Fukuyama, 1999)

Content of study: Static elements: Social

Formal	Informal
Procedures	Rituals
Legislation	Customary 'law'
Standards (ISO, etc)	
Articles of association	
Study programmes	Socialization

Content of study: Static elements: Agents

Categories of agents:

- Humans (Owners, professionals, ..
- Organizations (Companies, associations, authorities, knowledge centers, ..
- Groups (Squatters, movements,

Agents operating within the domain

Elements of agents:

- Knowledge; code
- Capabilities
- Preferences
- Internal code of conduct (North, 1990: 33)

Content: Static: Agents: Capabilities

- Identify and relate elements of Geospatial and Cadastral Domain (GCD)
- Suggest and verify possible causes of change of GCD
- Develop programmes for change of GCD
 - Draft new legislation/ articles (legal-org)
 - Prepare business plan (econ)
 - Develop study programme (educ)
- Reflect methodology, validity

Content of study: Static elements: Relations

Agent-Agent:

- Hierarchy (organizational structure), Market, Network
- Communication
- Transactions in goods
- Transactions in institutions (Bromley, 1989)

Agent-Society:

- Role, competence, power
- Rights and obligations; Property rights

Content of study: Levels of analysis

- World, region, society/ state ("Denmark's contact with world markets")
- Region, state, policy issue network / industrial system ("European geospatial market")
- State, organizations, processes ("Costs of property transactions")
- Organization, departments, computers ("Re-engineering of GIS within organization")

Selected detail: Narrative

Necessary and sufficient conditions of a narrative (Schärfe, 2005):

- A sequence of events
- An identity changed
- A reference to something outside the events

Narrative 1: The sailor and the nun

- A sequence of events: Sailor, nun, encounter, outcome
- An identity changed: A nun -> a maculate nun
- A reference to something outside the events: A moral

Narrative 2: The munk and the nun

- A sequence of events: Munk, nun, encounter, outcome
- An identity changed: Two living -> a dead monk; -> a wall up nun
- A moral: Meaning of a monastery today (Appetize, 12, 2005)

Narrative 3: Effects of land titling

- A sequence of events: Farmers with untitled land, with titled land, with mortgaged land, with increased income
- An identity changed: Farmer without investment incentives -> with investment incentive
- A moral: Land titling is good, even though land grabbing by powerful farmers increases, too (Dale & McLaughlin, 1988: 175, quoting G. Feder)

Another way of outlining the content

A. Disciplines, lectured as 'tools':

- Technology
- Geography
- Organization, with project management
- Public administration
- Scientific methodology

B. Disciplines, where reflection is requested:

- Cadastre
- Law
- Institutional economics
- Culture, including historical accent

Summary

- Presented aims and content, not methods or evaluation procedure
 - Intended to clarify, to minimize, to focus on concepts
 - When concept structure (ontology) is available, then teaching method(s)
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Thank you! Questions? (later)

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