Cadastral Development - Introduction

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Aalborg University, Denmark

A Theoretical Base for Cadastral Development
KTH, Stockholm,

Overview

1. The context: The lecturer, you, and the world
2. The professional context: The issue of real property rights
3. Approaching the problem: Motivating course content
4. Why did the West gain dominance? and propose secure land tenure?
5. Knowledge centres world wide:
   International organisations, universities, literature

1. Erik Stubkjær's background

Geodetic Surveyor 1964, PhD 1969, Surveying practise,
Min. of Finance 1972 - 77, Professor 1977- ,
Dr. Technology h.c. Helsinki University of Technology, 2005

Conferences, etc:
1990s ELIS-series, ScanGIS, ..Buffalo, NY 2003: Searle, De Soto

Projects:
- Denmark - Natl. Info. System on Buildings and Premises (BBR)
  1973-76
- Slovenia - Study Programmes of Geodetic Engineers 1995,
  1996-99
- COST G9 - Modelling Real Property Transactions, 2001-2005

Religions of the world - Tolerance or clash?

Introduction to Religions of the world:
Ontario Consultants on Religious Tolerance
www.religioustolerance.org

Map source: Office of the Geographer, US Department of State

Huntington (1993): Seven or eight major civilizations:

- Western (European, North American)
- Confucian
- Japanese
- Islamic (Arab, Turkic, Persian, Malay)
- Hindu
- Slavic-Orthodox
- Latin American
- possibly African
Levels of social analysis according to O. Williamson (2000)

<table>
<thead>
<tr>
<th>Levels of social analysis L1..L4</th>
<th>Frequency (Years)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1: Informal institutions: Traditions, norms; religion</td>
<td>$10^2$ to $10^3$</td>
<td>Proclamation and change of belief systems; reformations.</td>
</tr>
<tr>
<td>L2: The institutional environment: Who is authorized to change rules</td>
<td>10 to 100</td>
<td>Constitutional changes. Redesign of government, e.g. decentralization. Implementing or changing of property rights, e.g. restitutions.</td>
</tr>
<tr>
<td>L3: Governance: Play of the game - changing rules</td>
<td>1 to 10</td>
<td>Change of rules for processes and information flows. New organisations. Institutional transactions</td>
</tr>
<tr>
<td>L4: Resource allocation and employment</td>
<td>Continuous</td>
<td>Transactions in assets: e.g. purchase of house; Change of property unit: e.g. subdivision</td>
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**Ontological commitment: The role of the individual person**

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<tr>
<td>L2</td>
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<td>Get the institutional environment right. 1st order economizing</td>
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<tr>
<td>L3</td>
<td>1 to 10</td>
<td>Get the governance structures right. 2nd order economizing</td>
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<td>L4</td>
<td>Continuous</td>
<td>Get the marginal conditions right. 3rd order economizing</td>
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L1: social theory  
L2: economics of property rights/positive political theory  
L3: transaction cost economics  
L4: neoclassical economics/agency theory

**Figure 1. Economics of Institutions**


**Williamson: The New Institutional Economics**

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**Figure 1. Economics of Institutions**

- **L1+2: Ideas, the institutional setting**
  - Social Values and Norms condition
- **L3: Collective transaction in institutions**
  - Organisational *interactions* on change of rules, organisations, information systems: Definition of roles, competency, procedures
- **L4: Individual transactions in assets and services**
  - which restrict and enable Transfer of property rights (e.g. sale), subdivision, etc.
- **Material objects**
  - Persons  Terrain objects  Databases
2. The professional context: a. FIG’s Statement on Cadastre

FIG: Statement on Cadastre, 1995

"A Cadastre is normally a parcel based, and up-to-date land information system containing a record of interests in land (e.g. rights, restrictions and responsibilities).

It usually includes a geometric description of land parcels linked to other records describing the nature of the interests, the ownership or control of those interests, and often the value of the parcel and its improvements.

It may be established for fiscal purposes (e.g. valuation and equitable taxation), legal purposes (conveyancing), to assist in the management of land and land use (e.g. for planning and other administrative purposes), and enables sustainable development and environmental protection."
A cadastre is

- the official recording (*genus*)
- of landed assets (cf. natural resources) within a jurisdiction (*differentia*)
- for the purpose of sustainable use (previously: the common good)

'Asset' implies that

- the physical object (piece of land, building, etc.) is identified
- an actor (owner, authority, etc.) is in charge of the object, and
- that it has a value which is recognized by society
Zevenbergen (2003) on recording of property rights

Figure 4.8; Dynamic model of the system of land registration ('mushroom' encompasses the static model)

Ottens/Stubkjær (2005): Real property rights depend on society

- person
- right
- land
- owner
- society
- owned
c. The economic (World Bank) motivation for secure titling

![Diagram showing the economic motivation for secure titling]

**Comments on World Bank practises (2003):**

Klaus Deininger, the author of *Land Policies for Growth and Poverty Reduction*, Oxford University Press and the World Bank 2003, said at the introduction of the report:

Formally recognizing the land rights of poor people is a clear win-win policy. Perhaps surprisingly, we also found that land rentals make a tremendous contribution poor people's well-being. Land rentals make it easier for poor or landless people with the necessary skills to use land productively, and to gain land access or to expand their holdings. This benefits everybody.

**Comments on World Bank practises (2003):**

Robin Palmer, Land Policy Adviser, Oxfam, Great Britain

This report represents a major and welcome shift in World Bank thinking on land policy by offering an increased openness and flexibility in thinking, a readiness to admit to past mistakes, and an avoidance of dogmatism. The critical test will be to ensure that the report's relatively more enlightened approach and principles will be turned into better Bank practice at the country level. This will require genuine commitment from senior management in the Bank and continued pressure from civil society advocates who defend the land rights of the poor.
3. Course Overview - and motivating course content

MSc study programme in Land Management
at Real Estate Planning and Land Law,
Royal Institute of Technology, Stockholm
February 26th to March 2nd 2007

| Monday       | Scope of Course.  
              | Religion and the layers of social  
              | analysis          |
|--------------|----------------------------------|
| Tuesday      | Cadastre as an Information System.  
              | Spatial Units and Reference Frames |
| Wednesday    | Cadastre and Rights in Property  
              | Units.             
              | Theory of Organisations          |
| Thursday     | Stakeholders. Policy Issue Networks |
| Friday       | Cadastral Development            
              | Cadastral Studies              |

Tuesday: Naming geospatial objects of property rights

Concepts:
- Place names
- Scales of measurement
- Spatial reference frames
- Communication theory
- Territorialism

Social Values and Resources
- condition
- Organisational interactions on Development of cadastral systems comprising of

Actors
- Communication processes
- TerrainObjects
- Databases

The normative structures: Organisation and law

Concepts:
- Formal, informal structures
- Rational decision
- Technology
- Property rights; tenure
- Infrastructure
- Law enforcement

Cadastral System comprise of
- Roles, Rules, hierarchies, Rights and competencies
- Obligations
- Transactions
- Terrain
- Objects
- Information systems
### Thursday: The layer of power struggles

**Concepts:**
- Actor; Stakeholder
- Resources; Preferences
- Policy Issue Network
- Agenda Development

![Diagram of Social Values and Resources](image)

### Course Overview: A reflection of development research

**Friday**

**Concepts:**
- Institutions: Market, Property rights
- Transaction costs

![Diagram of Social Values and Resources](image)

### Motivating course content:

**Working Party on Land Administration (2000) addresses same issues**

Scope of WPLA Study on Key aspects of Land Registration and Cadastral Legislation (2002)


<table>
<thead>
<tr>
<th>Legislation</th>
<th>Constitution</th>
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<tr>
<td></td>
<td>Property Rights, and classes of Property Rights</td>
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<td></td>
<td>State guarantees - Data access</td>
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<th>Organisation</th>
<th>Allocation of responsibilities</th>
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<tr>
<td></td>
<td>Professions and other authorised in the land</td>
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<tr>
<td></td>
<td>market</td>
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<td></td>
<td>Network among land information organisations</td>
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<tr>
<th>Procedures</th>
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<td></td>
<td>Survey, mapping and boundaries</td>
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<td>Documents and forms</td>
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WPLA Scope: Legislation and economic aspects

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<td>A</td>
<td>Constitution and legislation</td>
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<tr>
<td>C</td>
<td>Statutory powers; the legal status of registered land</td>
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<tr>
<td>E</td>
<td>Registrable rights and interests</td>
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<tr>
<td>F</td>
<td>Guarantee -indemnity -rectification</td>
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<tr>
<td>G</td>
<td>Publicity and freedom of information</td>
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<td>I</td>
<td>Fees and financing</td>
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</table>

WPLA Scope: Organisation

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<tbody>
<tr>
<td>B</td>
<td>Institutional responsibility, supervision and monitoring</td>
</tr>
<tr>
<td>K</td>
<td>Professions and agents authorised to participate in the land market</td>
</tr>
<tr>
<td>L</td>
<td>Relationship with other land information institutions</td>
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WPLA Scope: Procedures

<table>
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5. Looking for causes: Why did the West gain dominance

Huntington (1993): Seven or eight major civilizations:

- Western (European, North American)
- Confucian
- Japanese
- Islamic (Arab, Turkic, Persian, Malay)
- Hindu
- Slavic-Orthodox
- Latin American
- possibly African
**Conclusion of Huntington's analysis**

..require the West to maintain the economic and military power ...

..require the West to develop a more profound understanding of the basic religious and philosophical assumptions underlying other civilizations

and the ways in which people in those civilizations see their interests.

It will require an effort to identify elements of commonality between Western and other civilizations.

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**Secular development of the West, according to Max Weber**

![Diagram of secular development of the West]

**Hernando De Soto: Why does capitalism triumph in the West .. ?**

- "The reason .. is because most of the assets in Western nations have been integrated into one formal representational system" (p. 44)
- "It is an implicit legal infrastructure hidden deep within their property systems — of which ownership is but the tip of the iceberg" (p. 7)
- "The Western nations have so successfully integrated their poor into their economies that they have lost even the memory of how it was done, how the creation of capital began .." (p. 9)
- ".. That history must be recovered." (p. 8)


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**De Soto's findings and suggestions**

- Ordinary people have collected enormous assets, e.g. in terms of dwellings
- These assets are 'dead capital', because they are not formalized and mortgaged
- Analyses of the history of Western nations contribute towards a solution
- Technicians and lawyers are not in a position to make changes
An analysis of a Western nation: The case of Denmark

Stubkjær (2007) chapter in book:

The Danish evidence ... only partly supports de Soto’s concern for the formalized property system as a development factor, perhaps due to the clean bureaucracy that was at work from the start.

The institution of property rights was indeed further formalized throughout the period, but the formalization came along the road.

Formalization did make a difference as it introduced an impartial party, the (not-for-profit) mortgage associations, between mortgagor and mortgagee, cf. section 5.

5. Knowledge centres worldwide

- World Bank Group
- FAO - Sustainable development - Land tenure
  http://www.fao.org/sd/IN1_en.htm
- UN Habitat - Secure tenure
  http://www.unhabitat.org/campaigns/tenure/introduction.asp
- German 'Gesellschaft für Technische Zusammenarbeit' GTZ
- Swedish SIDA, http://www.sida.se/, and other national cooperation agencies

World Banks’s Research Department


- Land tenure
- Land use - Government policy
- Land reform
- Farm ownership - Rural poor
- Right of property
- Developing countries

Deutsche Gesellschaft für Technische Zusammenarbeit


.. establishment of structures and living conditions based on

- democracy
- the rule of law (Rechtsstaat)
- a market economy
GTZ: World view

- Pluralistic societal structures
- Strict separation of powers
- Legal security [ESt: Predictability and enforcement]

Universities and Research on Cadastre and Land Management

- Land Tenure Center Wisconsin http://www.wisc.edu/ltc
- International Institute for Geoinformation Science and Earth Observation, ITC
- Institute of Geodesy, GIS and Land Management, TU Munich
- Project: Modelling Real Property Transactions, COST G9, 2001-2005
- European Education in Geodetic Engineering, Cartography and Surveying, EEGECS

Professional and industry organisations related to Cadastre

- International Federation of Surveyors (FIG)- Commission 7
- Documentation Centre: Office International du Cadastre et du Régime Foncier, OICRF http://www.oicrf.org
- Real Estate Organisations
- ISO TC 211 (CEN TC 287)
- OpenGIS Consortium

Reference literature

- Land Administration, Peter Dale and J. McLaughlin, OUP, 1999
- EU documents on Land Policy - Political commitment and technical guidelines http://europa.eu.int/comm/development/body/theme/land/index_en.htm
- Land Tenure in Developing Cooperation, GTZ 1998 Wiesbaden, ISBN 3-88085-521-8
- FIG Commission 7 Cadastre and Land Management http://www.fig.net/figtree/commission7/index.htm
- OICRF online library http://www.oicrf.org
Terminology resources

- GTZ (1998?) Glossary of Technical Terms http://www.gtz.de/de/dokumente/de-glossary-def.pdf [English - German - French terms on same line]

Summary

1. Referred to knowledge centres
2. Introduced a theory based world view
3. Motivated course content and structure
4. Referred to literature

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