Urban design

types of urban design, areas of concentration, and approaches to study design

Egbert Stolk, Department of Urbanism, Delft University of Technology, E.H.Stolk@tudelft.nl

AR2U090 Research & Design Methodology for Urbanism
# A systems view of Professional Boundaries

## Architecture

**Definition**

The design of individual buildings, which are conceived primarily in terms of design parameters of artificially controlled environments.

## Urban Design

**Definition**

An open system that uses individual architectural elements and ambient space as its basic vocabulary, and that is focused on social interaction and communication in the public realm.

## Urban Planning

**Definition**

The agent of the state in controlling the production of land for the purpose of capital accumulation and social reproduction; in allocating sites for the collective consumption of social goods such as hospitals, schools and religious buildings; and in providing space for the production, circulation and eventual consumption of commodities.

### Element

<table>
<thead>
<tr>
<th></th>
<th>Architecture</th>
<th>Urban Design</th>
<th>Urban Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. structure</td>
<td>Static + human activity</td>
<td>Morphology of space and form (history and human activity)</td>
<td>Government bureaucracy</td>
</tr>
<tr>
<td>ii. Environment</td>
<td>Three-dimensional (closed system)</td>
<td>Four-dimensional (open system)</td>
<td>The political economy of the state</td>
</tr>
<tr>
<td>iii. Resources</td>
<td>Materials + energy + design theory</td>
<td>Architecture + ambient space + social theory</td>
<td>Systems of legitimation and communication</td>
</tr>
<tr>
<td>iv. Objective</td>
<td>Socials closure / physical protection</td>
<td>Social communication and interaction</td>
<td>To implement the prevailing ideology of power</td>
</tr>
<tr>
<td>v. Behaviour</td>
<td>Design parameters, artificially controlled environments</td>
<td>Dynamics of urban land markets</td>
<td>Dynamics of advanced capitalist societies</td>
</tr>
</tbody>
</table>

Overview

Different types of urban design activities [process]

Different areas of concentration in urban design [product]

Different approaches to study design [design~research]
Koskinen, I. K. 2011. Design research through practice from the lab, field, and showroom. Waltham, MA: Morgan Kaufmann.
Different types of urban design activities

Example: my personal experience

“All of a piece” urban design 1/2

- The urban design team designs a master-plan, including guidelines for sub-projects;
- The urban design team supervises and reviews each sub-proposal;
- Different sub-proposals are, in general, not implemented simultaneously.
- The work of Palmbout is illustrative in this case; their ‘layers’ address different themes, related to different dynamics/morphological properties/stakeholders.

Framework defining urban structure and public space, printplate defining building plinths, envelopes defining silhouette. Lelylaan / A 10 Amsterdam, 2000.

“All of a piece” urban design 2/2

- The master-plan is part of the Decision Environment for other designers;
- Often, the designer of the master-plan designs some sub-projects as well.

An example from Urban Synergy (will give a talk on MAR 27)

- The urban designers *interviewed* inhabitants living in a specific neighbourhood;
- They were asked to map important places and give their *value assessment* of those places;
- Based on this information the designers formulated a ‘design competition’ for inhabitants;
- Besides, the designer conducted a ‘*traditional*’ urban *analysis* offering them insight in the potentials of the neighbourhood;
- From the competition entries *the best ideas* were selected, and three projects were defined;
- The urban designers then designed one of the projects, which is currently under construction.

http://www.urbansynergy.nl
Community motivator/catalyst 2/2

- First, the urban designers create a decision environment, involving the inhabitants;
- Secondly, they make a ‘total design’ for the selected projects.

Policy maker / Guideline designer 1/2

Design review policy document (welstandsnota in Dutch) together with a report on the cultural heritage of the municipality of Lansingerland.

- Report on cultural heritage providing background information
together with Beek & Kooiman Cultuurhistorie

- Design review policy document setting guidelines and principles - value assessment
together with José van Campen
The design review policy document is an important part of the (formalised) decision environment for reviewing architectural/urban design proposals.
Link to theory, methodology, and techniques

- Although theories are mostly implicit in practice, they play an important role, because theories are a way to understand ‘reality’.
- The way you understand the urban environment influences the way you interact with it (in our case, by planning/designing).

Every type of urban design has a different emphasis on different methods and techniques:
  - Palmboom: emphasis on drawing as an explorative tool;
  - UrbanSynergy: emphasis on ways to involve inhabitants;
  - Lansingerland: emphasis on value assessment and policy making.
“Wat is de beste manier om een crimineel netwerk kapot te maken? Tot voor kort ging de politie vooral op eigen ervaring en intuïtie af bij het bepalen van een strategie om drugsbendes aan te pakken. Wetenschapper Peter Sloot schoof alle aannames opzij en maakte in samenwerking met de politie complexe modellen van de werking van criminele netwerken.”
Different areas of concentration in urban design

- Urban design
  - Complexity-Cognition Studies
  - Environment-Behavior Studies
  - Space-Morphology Studies
  - Typology-Morphology Studies
  - Urban History Studies
  - Nature-Ecology Studies
  - Picturesque Studies
  - Place Studies

adapted from Vernez Moudon (1992)
Typology-Morphology studies

“...they are not so much interested in the form of the buildings or their architectural style as they are in the relationship between buildings and the open spaces surrounding them”

Vernez Moudon (1992)

Space-Morphology studies

“...the focus of this research group is to uncover the fundamental characteristics of urban geometries... quantifying both elements and their relationships”

“Hillier is researching the underlying generative elements of space and looking for a so-called spatial grammar as it relates to social systems”

Vernez Moudon (1992)
Environment - Behavior Studies

“The study of relations between people and their surroundings…”

“In the 1960s, the design and planning professions turned to sociology and environmental psychology as sources of valuable information…”

Vernez Moudon (1992)

### Link to theory, methodology, techniques

<table>
<thead>
<tr>
<th>EXAMPLE!</th>
<th>Theory</th>
<th>Methodology</th>
<th>Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typology-Morphology Studies</td>
<td>Typology/Morphology theories (Conzen)</td>
<td>Analyzing typology and morphology and its interrelations</td>
<td>Specific mapping &amp; drawing techniques</td>
</tr>
<tr>
<td>Space-Morphology Studies</td>
<td>Configurational theory of architecture (Hillier)</td>
<td>Analyzing configurations</td>
<td>Computer applications, like Depthmap</td>
</tr>
<tr>
<td>Environment-Behavior Studies</td>
<td>Privacy theory (Altman)</td>
<td>Observing human behavior</td>
<td>Mapping &amp; visualizing presence and interaction</td>
</tr>
</tbody>
</table>
Different approaches to study design

- Design history, aesthetics, and philosophy
- Constructive design research
- Practice-based research
- Design management
- The social sciences in design
- Psychology and design, design studies
- Product semantics and semiotics
- Engineering and computer science
- The natural sciences in design

adapted from Koskinen (2011)
Practice-based Research (PbR)

Practice-based Research is an original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice.

This approach:
Is an integration of professional experiential knowledge-gathering and academic research.

Some sources:
Psychology and design, design studies

“As a style of thinking, design thinking is generally considered the ability to combine empathy for the context of a problem, creativity in the generation of insights and solutions, and rationality to analyze and fit solutions to the context.” (source: Wikipedia)

This approach:
Tries to gain an understanding of (individual and collective) design activities focussing both on the designed artifact as well as the design process.

Some sources:
Design Management

From the website of RE&H:
“Architectural Design Management involves the strategic design, organization, and control of architectural and constructional design processes, with the objective of creating value through design: i.e. facilitating the creation of buildings with added value (and added architectural value) for all those directly or indirectly concerned with them.”

Urban design as ‘2nd order design’ implies urban designers are/should be design managers as well - so it might be worthwhile studying this approach.

Link to theory, methodology, techniques

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</thead>
<tbody>
<tr>
<td>Practice-based Research</td>
<td>PbR (Bourdieu, Biggs and Buchler)</td>
<td>Action research, design research (research by design?)</td>
<td>Research by design?, experimental designing, reflective designing</td>
</tr>
<tr>
<td>Psychology and design</td>
<td>Mental models (Johnson-Laird)</td>
<td>Analyzing the interaction between individual and collective mental models</td>
<td>Protocol studies using Latent Semantic Analysis (LSA)</td>
</tr>
<tr>
<td>Design Management</td>
<td>Decision making (Hogarth)</td>
<td>Instrumental case study focussing on decision making and design values</td>
<td>Semi-structured focused interviews with relevant stakeholders</td>
</tr>
</tbody>
</table>
Summary

In general, it might be useful to find out:
1. what types of urban design you need/want;
2. what is your (preferred) area of concentration;
3. which approach to study design might offer useful insights.

And keep in mind there might be (strong) relations between those three...

.. and theories, methods and techniques will follow naturally from these decisions.
Assignment to be handed in next week

Based on your “research and design project”…

1 A4 with:

• the type of urban design you need/want;
• your preferred area(s) of concentration for your MSc-thesis based on the categories of Moudon (1992), including a motivation;
  • indication of the methods you need in order to execute design-research in this/these area(s) of concentration.
• approach to study the relation between research and design

Sources:
Koskinen, I. K. 2011. Design research through practice from the lab, field, and showroom. Waltham, MA: Morgan Kaufmann.