Design Research in the Netherlands
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Outline of keynote presentation
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METHODS, METAPHORS, and TOOLS
research in support of design
the thematic approach

Designing emerges in a society when tacit understandings among makers and users are no longer sufficient. We then begin to discuss what to do and to describe in words, drawings, or models the form we seek agreement about. Thus moving away from the self evident solutions we can come to unfamiliar forms of startling novelty utilizing new knowledge, new technology, new materials and new ways of seeing.
But, like flying fish emerging from the dark waters to glitter for a moment in the sunlight, the designed forms, visible in the stark light of explicit discussion must, eventually, disappear in the vast realm of the self evident: the domain of silent understandings which is unquestioned and secure; the domain from where design rose in the first place.

Quote from ‘The Appearance of the Form’

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1 PRELIMINARIES

1.1. the task of architectural designing

1.1.1. in history: the special building and its roots

The leaves and the flowers, the emancipation of the architect: Alberti, Palladio

1.1.2. present reality: the everyday environment now a design product?

CIAM, Tony Garnier, everyday environment as a problem.

1.1.4. architects now design what architects moved away from in Rennaissance times.

New task, old ideology, old methodology,

1.1.5. a fundamental contradiction not yet recognized in our design thinking

the leaves and the flowers. No more leaves, only flowers.

1.2 the limits of design

1.2.1. all artifacts in the world were created

1.2.2. most artifacts in the world were not, or only partially, designed

For instance, Vernacular architecture and other complex processes.
See also: The Appearance of the Form.in bibliography.

1.2.3. the complex form in relation to its designing.

The car, the airplane, the computer, the house type.....

1.2.4. a theory of design can only be a part of
the larger theory of human creativity and
human creativity is only a part of biological creativity.

1.3. The role of design in the realm of human creativity

1.3.1. design's role in the larger field of creativity, is the making of a proposal for a form to be made: to separate doing from intention.

1.3.2. design is communication, resting on agreement in a social setting

1.3.3. design is a professional activity, creativity is universal.

1.3.4. creativity is predominantly interactive and collective, designing of everyday environment must also have its interactive and collective dimensions.

2 TOOLS

2.1. Method and the making of tools

the sar experience; new ideology, new ways of working needed, new tools
First a tool for a new situation, Later the theory: control, hierarchy, etc.

2.2. objects as tools:

2.2.1. zones, grids, dimensional systems.(positioning and measuring)

2.3. concepts as tools:

2.3.1. '*moves*' (units of transformation)

++*levels, territories* (domains of control)

2.3.2. *dominance* (vertical control relations)

++t*hematic (shared) forms*: *type, pattern, style, system* (horizontal relations)

Knowledge rooted in a social body, actors and forms inseparable.

2.3.3. *capacity* of a form: function following form.

2.4. operations with tools:

2.4.1. capacity assessment (formal analysis of capacity)

2.4.2. data processing (Eberle, 'formsheet',

2.4.3. form behavior (computers understanding agreements)

3 METHODOLOGY

(the study of ways of doing something)

3.1. method in individual creation

3.1.1. method as recipe

do not tell designer what to do

3.1.2. method as provider of tools

the designer as hunter gatherer

3.1.3. method as conversation with the form

control of form v. interaction with form

3.2. modes of collective creation

3.2.1. informal collective creation of form

study of vernacular processes

3.2.2. development of complex forms

study of development histories

3.2.3. stimulation of collective creation (cultivation)

provision of frameworks for, and thematics in, collective form making

3.3. method in interaction among designers

3.3.1. by habit and convention

implicit and intuitive aspects in formal processes

3.3.2. distribution of control among designers

teamwork in the office and between offices

3.3.3. sharing of forms, thematic form, selection and distribution of parts

coming to agreement about thematics in design teams

3.3.4. formal interactive procedures and operations

operational tools for reaching agreement and sustaining cooperation

3.4. method in interaction with built environment

3.4.1. transforming form

a typology of ‘moves’, sequences of ‘moves’

3.4.2. properties of thematic form

the systemic base for working with types,patterns, styles, and systems

3.4.3. intelligent behavior of form (computers)

application of dominance relations with the help of computer software

3.5. method as enabled by tools

3.5.1. method made possible by tools

assessment of the way a (proposed) tool may stimulate new ways of working

3.5.2. change of method calling for tools (demand for tools)

identifying difficulties in ways of working and the search for tools in response

4 METAPHORS, CONCEPTIONS and MISCONCEPTIONS

4.1. old metaphors; (closed models)

4.1.1. design as artistry:the creativity model

belongs to the study of creativity in general, ignores interaction with others

4.1.2. design as problem solving: the science model

leads to reduction of complex reality to make it researchable

4.1.3. design as self expression: the blank slate, elimination of constraints.

removes the designer from relation with the real world.

4.2. ew metaphors (aspects of the interactive model)

4.2.1. design as proposal ; channeling control

translation of clients demands and other contextual forces into a possible form

4.2.2. design as instruction: what and how to build

translation of proposed form into brief for builders

4.2.3. design as thematic variation (‘horizontal’ relations)

translation of agreed thematics in the proposed form

4.2.4. design as framing (‘vertical’ relations, looking downward)

accommodating lower level needs for inhabitation in the proposed form

4.2.5. design as inhabitation (‘vertical’ relations, looking upward)

honoring extant physical context in the proposed form.

Suggested literature.

N.J.H. "The Appearance of the Form, four essays on the position designing takes between people and things" Essay one: Sharing, Essay two: designing, Essay three: Seeing, Essaay four: Controlling. Awater press, 1985, out of print, but digital version available with the author and at the library of the dept. of arch. Eindhoven
Of interest to the above for the examination of the emergence of artifacts without and with the involvement of formal design, and the relation of the designer to environmental form.

N.J.H. "The Structure of the Ordinary, Form and Control in the Built Environment" MIT Press, 1998, paperback. Part 1, 'Form, the Physical Order'. Part 2, 'Place, the Territorial Order'. Part 3, Understanding, the Cultural Order'.
Of interest to the above for the way it describes the built environment in general as the reflection of patterns of control of form and territory and, conversely, the control patterns as shaped by physical hierarchical structure and territorial structure. Describes also how built environment reflects (thematic) agreement among parties.

N.J.H; "Palladio's Children. Seven Essays on Everyday Environment and the Architect". Taylor and Francis, 2005.
On the dilemma between architectural ideology and everyday environment.

N.J.H. and J.Willem R. Langelaan. "Emergent Coherent Behavior of Complex Configurations through Automated Maintenance of Dominance relations". In: Proceedings ISARC 2003, 20th. International Symposium on Automation and Robotics in Construction. Eindhoven the Netherlands.Ger Maas, Frans van Gassel, Ed. Downloadable from my website.
Paper on 'Form Behavior'. On the use of the concept of 'Dominance' to make the computer understand form relations and the designer's preferences for such relations. Downloadable from my website

N,J.H.: Formsheet, Design Data Manager, unpublished report. 1998 Downloadable from my website

See also my website www.habraken.com, particularly the download section and:
"Titles listed by subject": "On Methods", and "On the Architects Role".