



Tools for Communication of Spatial Ideas in Architecture

A Phenomenological Experimentation

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Overview

- Introduction
- The Process of Making Together: Participatory Design in Architecture
- Design Communication through Educational Tools
- Human Perception: Phenomenology and Spatial Theory in Architecture
- Methodology: Phenomenological Experimentation
- Scope & Limitations
- Conclusion
- References

Introduction

- *Problem Statement:* Communication gap between Architects and Patrons.
- *Current Scenario:*
 - Divide in creative contribution; Patrons are deemed less spatially intelligent
 - Pushed out of the loop during various design stages
 - Counterproductive; build spaces *for* the patrons
- *Possible Solution:* Larger collaborative turn in architecture practice
 - Through tangible, participatory and educational design tools.
- *Root Causes:*
 - Fast-paced, profit-driven shift of the profession
 - Increased dependency of the architectural profession on computer-aided design(CAD)
 - Human perceptions of the built environment and how well they are communicated into designs

The Process of Making Together: Participatory Design in Architecture

Current Scenario:

- Architects in conventional practices often struggle being the sole designer.
- Power to make most design decisions still reside with architects in ongoing projects.
- Only handful of architects and designers continue to design spaces that focus on human experiences.
 - Common trait: Insist on hands-on experimentation

Hypotheses:

- Process of making exists in the tangible and conversational realms.
- Participatory design practices ensure healthy and productive design thinking discourses.
- Possible to account for intangible aspects of formal and experiential qualities of an occupant's day-to-day spatial needs using design tools.

Inferences:

- For spatial designs to embody experiences in tech-driven industry = Shift in architectural design process through educational design tools.
- Develop tools empowering ease of communication of spatial ideas till realization.
- Smooth communication is key to any successful architectural and design project.

Design Communication through Educational Tools

Current Scenario:

- Advanced 3D modelling tools assume expert visual cognition of spatial shapes and forms.
- Spatial intelligence need not be the same for every inhabitant.

Vision:

- Design intervention is required through educational technology in architectural design.
 - Development of a design tool that aims to break communication barriers in design.
- Pedagogical implications on all architectural design phases.

Proposal - Design Communication Tool

- Common ground for “spatial communication” between architects(“experts”) and inhabitants(“non-experts”).

Objectives:

1. Bridge gap between analog and digital media.
2. Dissolve boundaries in expertise through simplified communication of spatial concepts.
3. Generate observations on the phenomenology of human perception.
4. Critically analyze social, cultural and political forces that influence architecture.
5. Suggest design principles as possible remedies for the professional system.

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Human Perception: Phenomenology and Spatial Theory in Architecture

Theoretical Framework: Phenomenology in Architecture and Design

Key Authors:

- Merleau-Ponty,
- Tim Ingold,
- Juhani Pallasmaa,
- Steven Holl,
- Donald Norman, among others.

Three main aspects:

1. Architecture design practice
2. Human perceptions & spatial cognition, and,
3. Embodied spatial design.

Pressing Question:

How are experiential parameters of living within a space observed, communicated and integrated into architectural design process in order to design more immersive built environments, by architects as well as patrons?

Methodology: Phenomenological Experimentation

- Topic of investigation/experimentation: Spatial Cognition
- Possible venues of investigation/experimentation:
 - a.* Integrated Design Process (IDP) - implemented in most green-building projects across Canada.
 - b.* Architecture/design studios
- Main Objective:
 - a.* Design an educational tool
 - i.* Harmoniously combine digital and analog realms of design communication
 - ii.* Actively engage dwellers of spaces to influence day-to-day moods and activities by varying configurations.
- Methodology: Development Research
 - i.* Product design & development of educational tool
 - ii.* Literature reviews & prototype iterations.
 - iii.* Consultations and experimentations with experts and patrons
 - iv.* Documentation and formative evaluation
 - v.* Empirical analyses and reflections on practice-based applications

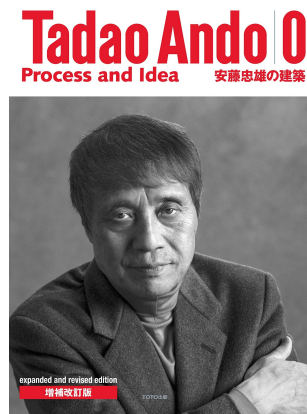
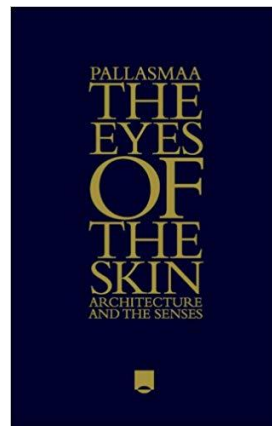
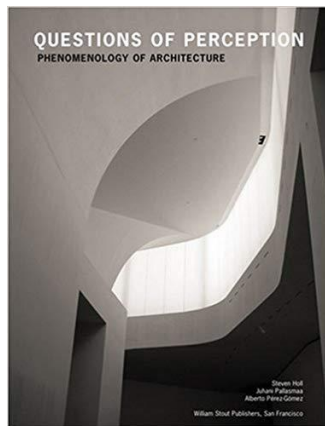
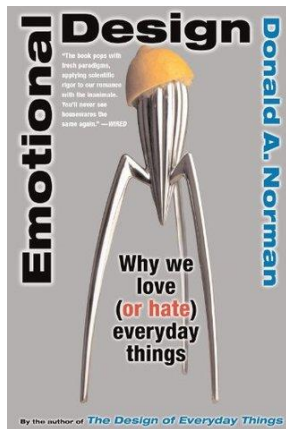
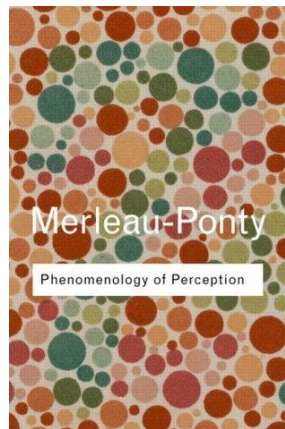
Scope & Limitations

- Scope:
 - a. Literature investigations on educational and phenomenological aspects of architecture using university resources.
 - b. Prototyping and testing of tool in Canadian university and industrial settings.
 - c. Future possibility to prototype and test the the tool in smart schools with implications on child development and cognitive growth.
- Limitations:
 - a.* Lack of time and resources for in-depth market demand analysis of the proposed design tool
 - b.* Software and hardware research inputs are essential for the proposed product's development
 - c.* More sustainable methods of prototyping and manufacturing the proposed design tool.

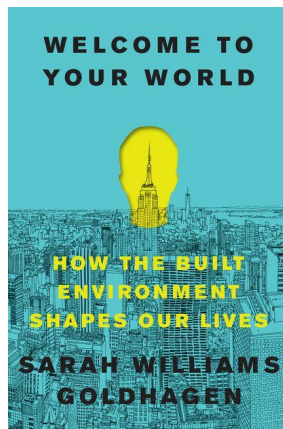
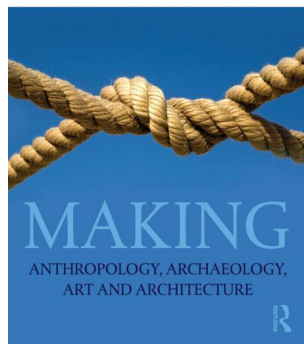
Conclusion

- Research Position: Standpoint of an architecture student
- Contributions:
 - a. Propose potential design tool to shift the architectural design process that is inclusive of patron's point of view.
 - b. Possible propositions of spatial elements malleable by designers with the design tool to serve experiential needs of dwellers.
- Expected Outcomes:
 - a. Shift the nature of interactions between architects and patrons
 - b. Improve the quality of spaces being built.
 - c. Improve communication of ideas in Integrated Design Process (IDP).
- Smooth communication = Success of large-scale sustainable developments = Transform the image of the cities we live in.
- Creating tools for communication of ideas in architectural practice = Designing built environments that are best for human well-being.

Currently Reading...



TIM INGOLD



Yet to read...

