# SIMULTANEITY & LATENCY
# **PERCEPION, INSIGHT, ORIENTATION**

This year we are going to investigate our capacity to ***perceive*** spatial complexity. The design experiments will focus on the attempt to increase the complexity of a configuration without loosing its instant recognisability as an integrated whole. We would like to call this instant recognisability the iconic condition, or iconicity of the configuration. However, we will not rest with simple iconicity. Rather we are striving for ***multiple iconicity.***

Multiple iconicity implies that one configuration has the capacity to produce at least two (or more) iconic conditions, by associating its parts in different ways. These different iconic conditions are either simultaneously present – like the famous ambiguous figures or flip-images discussed in the psychology of perception – or they might be triggert successively by the shifting relative position of the observer, or by ephemeral, dynamic conditions like the change of lighting, or by kinetic manipulations like the reorientation of louvers etc.

The primary measure of complexity we are proposing is therefore the number and diversity of iconic conditions that are manifest or latent within the configuration.

**Multiple Iconicity**

Simultaneous:

- Ambiguous Figures

Latent:

- by the shifting relative position of the observer
- by ephemeral, dynamic conditions like the change of lighting
- by kinetic manipulations like the reorientation of louvers

What we would like to call multiple iconicity is a special case of the perceptive simultaneity effect that Colin Rowe called Phenomenal Transparency. It is phenomenal transparency with a special degree of ***Gestalt-intensity***.

We consider multiple iconicity to be the formal expression of multi-functionality.

**Phenomenal Transparency**

Phenomenal Transparency implies the formal multi-tasking of the parts of a formal arrangement. Even what is a nameable part (or distinct sub-whole) is a function of the overall reading of the arrangement as figure. Ambiguous figures are the perfect example. But we can also observe this phenomenon in three-dimensional space.

**Once more: Towers**

We want to work with this effect of multiple iconicity in relation to a large tower (or cluster of towers). In towers it is the elevation and section rather than the plan that dominates the design. And it is the elevation rather than the plan that speaks directly to perception. In order to sharpen our understanding of the effects we are aiming at we will study the basic insights of Gestalt-psychology:

**Gestalt-psychology: The Primacy of Wholes**

Fast orientation in complex scenes is based on the capacity to perceive configurations as immediate unities, as wholes. This instant (re)cognition of the whole without prior (re)cognition of the parts might be referred to as the psychological primacy of wholes (Gestalten, figures). The recognition of individual parts is not implied, and requires a further, separate focus and cognitive effort.

The Gestalt-psychology talks about Gestalt-grouping principles which regulate how one (rather than another) whole figure is perceived (interpreted) in the face of a certain arrangement of “stuff”. (We say “stuff” because to speak of parts, elements or even fragments already implies a certain whole as reference.)

**Gestalt Grouping Principles:**

Proximity (contiguity)
Similarity
Smooth continuation
Closure
Symmetry

The Gestalt grouping principles deliver the perception of a particular configuration. Usually this entails the so called ***Figure-Ground Segregation*** as basic result. The achievement of figure-ground segregation involves both bottom up processes and top down processes of recognition on the basis of memory, expectations and higher level concepts.

Once we understand that the figure-ground segregation is the result of an active perceptual process we might give particular interest to ***figure-ground ambiguity*** as a special case of ambiguous figuration. Figure-ground ambiguity results in perceptual instability and oscillating figure-ground reversals. (Eisenman talks about figure-figure instead of figure-ground.)
However, this is only one special case of phenomenal transparency (multiple iconicity). In all cases, with respect to all simultaneity effects, we would like to introduce parametrisation!

**Parametric Figuration:**
We propose that the complex configuration, latent with multiple potential readings, can be constructed as a parametric model aiming for a variable handling of the various Gestalt-potentials that are embedded in the configuration. There should be parameters that involve the relative form, relative light conditions, relative colour-modulations, variable transparencies, variable Kontexts etc. as parameters to control the emergent figuration and re-figuration of the arrangement. This parametrisation is initially a design tool. However, it then can also be treated literally as a mechanism to trigger Gestalt-flips in the real building.

**Context Effects**
All perception and pattern recognition is context dependent – both with respect to the spatial context, as well as with respect to the context of time (before and after. In both respects – time contexts and space contexts - we have to distinguish so called low level context effects (like light/dark contrast, or colour context (contrast), relative direction, size etc.) from high level context effects which work on the basis of the figurative context implicating our prior knowledge, concepts, schemata, and expectations as triggert by the figural context.

**Visualization**
As a final note: We expect that the contemporary means of computer visualisation (renderings and animations) are utilized to the fullest, involving multiple (changing) perspectives, colour, light, shadow, transparency, reflection, fade-ins, kinetic capacities etc. etc. All these are powerful means to fully explore and handle the effects we would like to pursue.
End.