

**TECTONICS**

**IN**

**ARCHITECTURE**

## BACKGROUND

Gottfried Semper - 1851

Karl Bötticher - 1874

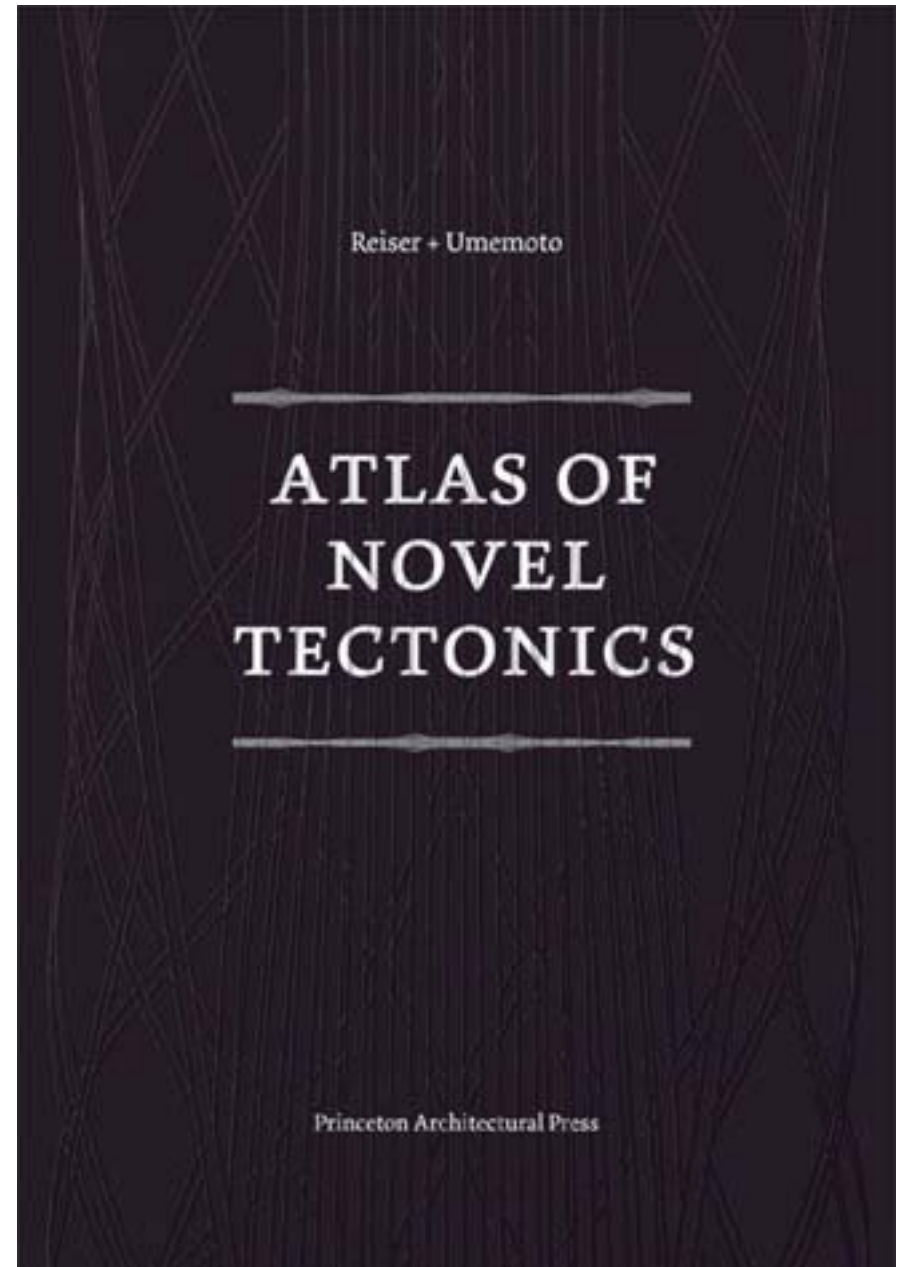
Eduard Sekler - 1965

Kenneth Frampton - 1995

## MAIN FOCUS

Reiser and Umemoto - 2006

“Atlas of novel tectonics”



## **ORIGIN**

Used in architectural theory for several centuries

Originates from Greek culture with two meanings

- the shaping and joining of form-elements to a unity
- the theory of the inner structure of a work of art.

## **4 THEORISTS**

a concrete and a more abstract part

- Construction, method and material
- Structure, concept, representation, ornament, and intensification

**Frampton** - as the poetics of construction;

**Sekler** - as the artistic tool of the architect;

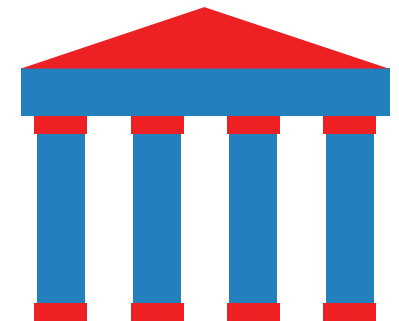
**Semper** - as the representational character of the material, given by the craftsman, which gives the building its metaphoric character.

# TECTONICS AND ORNAMENT - BÖTTICHER

The symbolism of the ornament should never be allowed to obscure the fundamental structure of a building in order to reach true tectonics.

The ornament should rather underline and reveal the essence of the construction.

Separate the covering from the fundamental structure



## THE NATURE OF MATERIALS - SEMPER

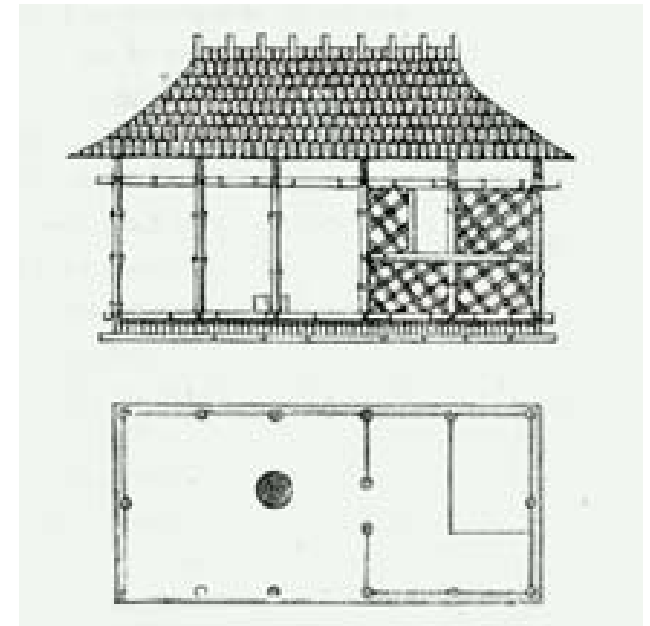
To emphasise the bond between form, material and manufacturing Semper associates the four elements of his theory with four industries:

framework as carpentry  
earthwork as masonry  
screen wall as textiles  
hearth as ceramics

Architecture as matter that has its fundamental factors in the materials and the tools.

Climate, place as well as religious, social, and political circumstances are also crucial to the shape of an architectural artefact.

Each architectural element has a specific character due to the structural function of the element.



concrete as a mouldable mass

## TECTONICS AS INTENSIFICATION - SEKLER

**Structure** as the overall principle of a building's bearing of loads

**Construction** as the concrete realization of the principle.

Tectonics as the visual result of the play between construction and structure, that will affect us, when seeing and experiencing a piece of architecture.

Tectonics as the tool, which makes it possible for the architect to act as an artist, and give the observer an intensified experience of the building, as an interaction between forces and forms.



Lisabon, Calatrava – use of tectonics to act as an artist, and intensify the experience of the building

## THE JOINT - FRAMPTON

**Clear structure** which shows the overall constructional logic of a building

**Well-articulated details** which reflect the transfer of loads through the joints.

Tectonic as a way to express, or reveal, the true essence of making the building.

The joint becomes the centre of attention, as it articulates the meeting of materials and types of structural elements.

The joint articulates the meeting of materials, types of structural elements, and how the forces is transferred.



# NOVEL TECTONICS - REISER & UMEMETO

## Background for writing an novel tectonics

*“In a society within everything has been reduced to mediadriven representation, the only thing left to believe in is physical pain...Pain is the only thing that is real and the only medium through which to exercise free will. The return to material effects in architecture parallels this thirst for the real”*

*“Material practice is the shift from asking “what does this mean” to “what does this do””*

*“We advocate neither a material realism, nor a return to phenomenology, nor a Pop representational use of materials that hysterical celebrates... the simulacrum. Rather we are looking paradoxically at greater levels of artifice like puts and calls for matter”*

No truth but only multiplicity/ambiguity



# NOVEL TECTONICS - REISER & UMEMETO

## A new history

*“unlike planning, the success or failure of architecture rests finally on its specificity...”*

*“Architecture is the substrate for the accidents of history rather than its embodiment.”*

*“Architecture makes a new history; history doesn’t make a new architecture”*

The persistence of architecture have given us pleasure because of the other developments that goes on within it, and this in turn makes a new history.

No reason to look at history or the essence of things opposed to the earlier theorists. What’s of their interest is to construct a new history.

# NOVEL TECTONICS - REISER & UMEMETO

## Matter and Energy

*“A universe defined by a fixed field and unchanging essences has been superceded by a matter field that is defined locally only in and through its own interactions”*

Matter/materials as having no honest or true implementation

Up to the designer to select what properties of the material to use for expression

Still trying to liberate the knowledge embedded within the material

# NOVEL TECTONICS - REISER & UMEMETO

## Concrete and abstract merging

*“Architecture thus is no longer the brooding and silent witness to the flux of tempo, but is as much matter and structure as it is atmosphere and effects.*

*We’ve gone from seeing the temporal work in contrast to permanent architecture to seeing the temporal entering into the very fabric of the architecture itself, rendering it ambient”*

The abstract part as something inherent in the design, whereas Reiser and Umemeto see it as something that can perform to changing needs

*“The big shift, in which our work participates is the removal of the fixed background, or ordinates and coordinates, in favor of a notion of space and matter as being one.”*

*“...We are not denying the existence of universal space, we are suggesting that the universal is not coordinates without qualities but rather a material field of ubiquitous difference.”*

*“We seek to dispel the essentialist assumptions about universality...”*

*“We would postulate an “and and and” argument – neither pure classical models, nore pure structural honesty, nor pure compositional formalism, implying a more open-ended process”*

*“...modes that allow for emergence rather than merely extension”*

## Questions to be investigated

*“Taking the specific problematic as a starting point, how does one produce multiplicities in formal arrangements?”*

*How does one produce multiplicity in structure?*

*How does one produce multiplicity in function?”*