

## ARCHITECTURE AND VALUE

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Architecture has several kinds of values to talk of. In the presentation we wanted to focus on technical point of view. We wanted to show how to search for the *connection between human beings, buildings and nature*. Let us see the main points of this paper below:

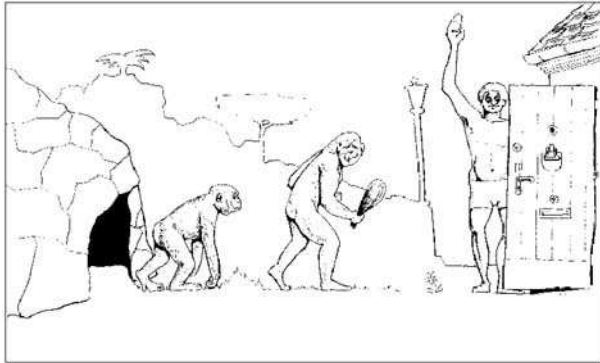
The *vernacular architecture* can show us the real close connection. The simple men could feel everything in their skin. They had few possibilities to protect themselves so they tried to do the best they could. If we acquire their knowledge and understand their way of thinking, we can get their benefits in this field.

The vernacular architecture was the lowest level of architecture. In the high level architecture *Antonio Gaudí* can show us how to use the common materials for a clean target: make unity in the function, the form and the nature.

While Gaudí was a real architect, *Otto Frei* was a real engineer. Frei wanted to use for his structures as less material as it was possible. For this reason he made a research on the nature itself: the flora and the fauna.

In these three examples we can see how the nature can help us to make our buildings more comfortable, beautiful and grandiose. They show us the values we can use to have a better living place.

## 1. The vernacular architecture



A “simple” man is unprotected. Without any kinds of protection people can live in very few parts of the Earth. They make clothes against the weather effects but clothes are not enough if the weather is extreme. The idea to turn it better was born. Of course we cannot change the weather of a planet, better to try to think in a

small piece of the environment. So people build huts, houses, castles depending on the age and status in the community. In these micro environment they feel comfortable, if it works well against the outside influences.

The first question is: What kind of influences act on the people?

Firstly they had environmental effects:

the nature (temperature, wind, snow, etc.),

human requirements (what they needed – we need – for comfortable life) and

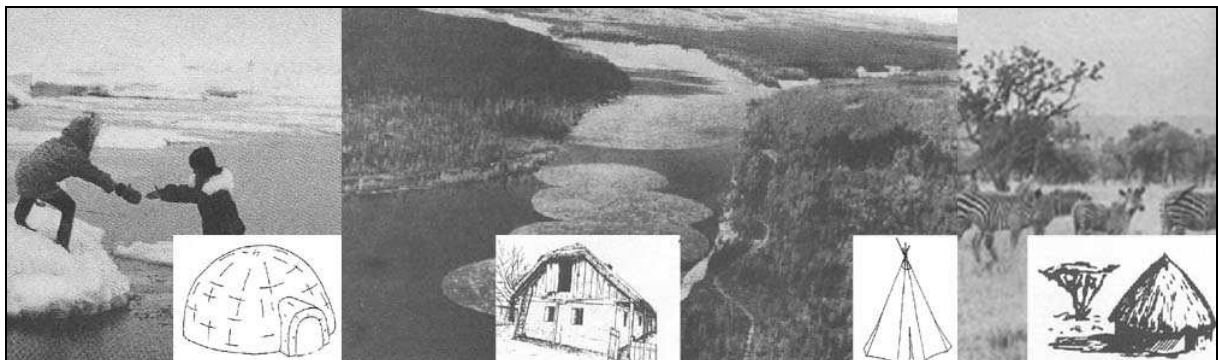
visual (how it looks like).

Secondly they had social effects:

the culture (the level of the culture),

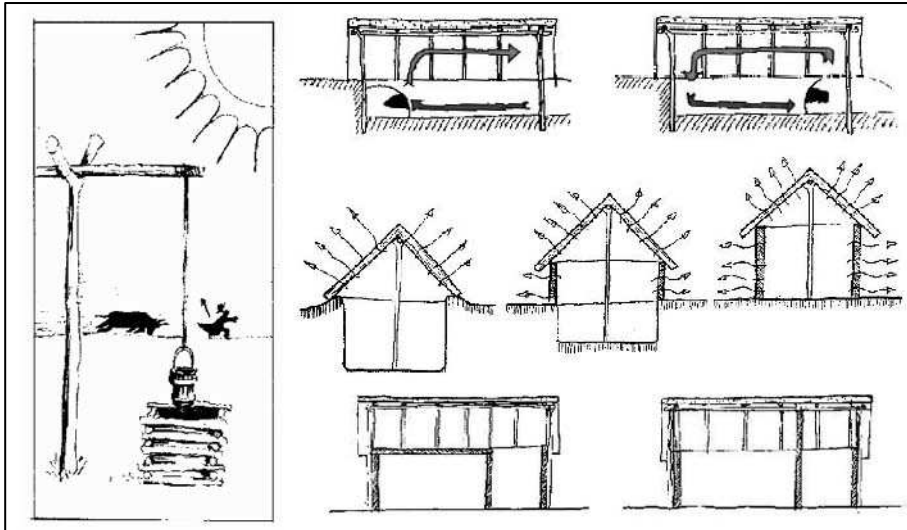
the society (what was the requirement, the standard) and

the economy (how much they had for built a building).



As in this study we focus on the environmental effects let us see them in more details. Influences of the nature can be very different all over the world. The north pole is very different compared to the area of the equator yet in both places people live. In the equator they just need shelter for protection against the strong sun and the rain, in the savannah or in the desert shadow is sufficient in most parts of the year. In the mediterranean area the summer is hot, but the





During the middle age from the very uncomfortable earth house people developed the prototype of a real house. In this period the house came out of the ground, the heating system turned better, the roof became

better, they started to make ceiling, etc.

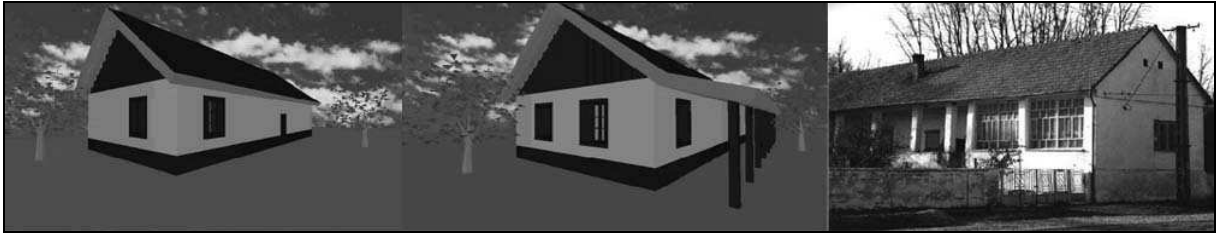


After the middle age the difference became bigger and bigger between the different areas. The historical area of Hungary seems not to be very big, but the differences of the territories are significant. They had different social effects and

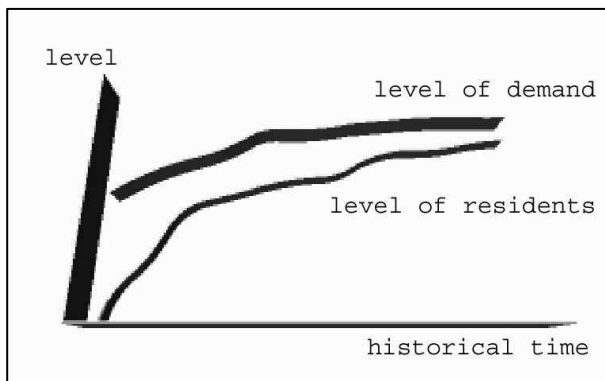
environmental conditions there were different materials available, etc.

In the last two centuries we arrived to the final versions. This time period they cleaned every details. They improved the doors and the windows and the heating system.

One interesting thing is the porch. The porch protects again the sun during the summer but allow it going inside in the winter, in the same time it shelters from the rain too. When the glass became cheaper, they started to prepare something like greenhouse to enlarge the useful area of the house.



In the 20<sup>th</sup> century the chain of this development was breaking. When more and more people started to live in cities, the villages started to change too. We can say, village people forget everything they knew before. The building comfort (and the other comforts) became better, but extremely high level of energy became necessary. (Not to talk about the waste of aesthetical point of view.)



In the last 20-30 years the architects started to care about the problem of the energy. Beside the simple insulations there are special methods to save more and more energy (passive and active solar architecture, bio solar architecture, environmental architecture, etc.) If we try to learn more about this lost chain of the vernacular architecture we can get values to

improve our buildings in the present with the modern knowledge and technology.

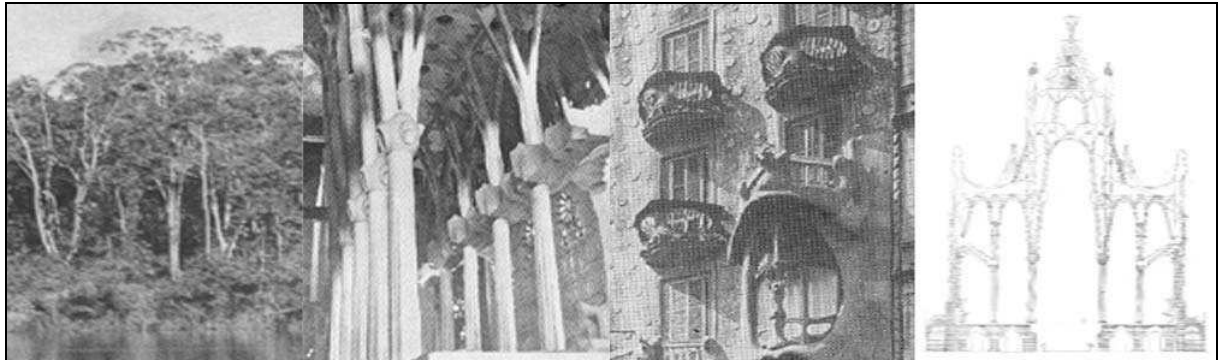
### 3. Antonio Gaudí and the modern style



In the 19<sup>th</sup> century the architecture of the world started to be empty. Forms without meaning no connections between the plan, the elevation and the function. The structures were not clean (i.e. structures did not follow a principal method). Some of the architects and the philosophics felt, this would drive the architecture far from the people. Antonio Gaudí was one of them.

His main idea was to find the value of the architecture through the connection between the buildings and the nature. He thought, the nature is the most perfect model for designing. We are a part of the nature therefore our houses should be similar to the nature as well.

He tried to copy the structure of the nature. His columns look like trees, the vaults like inside of skulls. He wanted to make clean statical structures. For this he made studies of the nature and developed models.



Not only the structure but the outside view of his buildings was taken from natural examples. The surface of the walls is like skin or scale. The rooms look like inside of body (skull or skeleton). The ornaments are like flowers and bushes. The outside of the buildings resembles a part of the landscape.

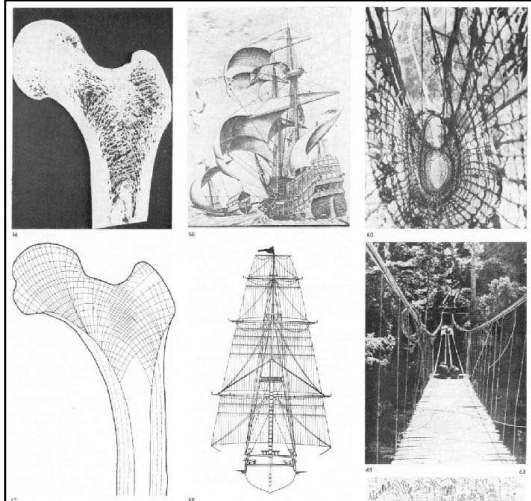
He lived in Spain, in Barcelona, which is the capital of the Catalans. He was a real Catalan and his architecture became the part of the Catalan culture. He made a mystic and miracle architecture. Nobody did anything like that before and it was too particular to copy for the later ages. His heritage is how to find the connection between the nature and the buildings, the function and forms and how to find the national values.

#### 4. Otto Frei and the tensioned structured



Gaudí was mostly an architect and Frei is mostly an engineer even though he has beautiful structures. His main values are to make big structures with minimum quantity of material, to be light, flexible and dynamic. He said, we need buildings which are good today and good enough tomorrow, but not to be an obstacle for the

future development.



For this he made studies of the nature and the most natural human designed structures, like the bones, tries, sails and of course the buildings of Gaudí.

He found, if he uses more tensioned elements then compressed, he can save material (The compressed elements should be more thick then the tensioned).

The second part of 20<sup>th</sup> century was the perfect time for this technical based architecture. He became the first specialist of the tensioned structures as the cable structures and tent structures.

His buildings are really light and attractive. They show how the natural principles and the modern techniques can create together a new value.



## Conclusions

Why did we talk about all of this?

The ancient people had very close connection with the nature, they were “living in the nature”. This study intended to show the edging away then getting close of the people to the nature in the history of architecture.

Recently people are getting to understand how important the reservation of the nature is for the future generation. This commitment can be highly strengthened by building houses looking similar to the nature (Gaudí and Frei).