

# NEO-VERNACULAR CONCEPTS FOR VALUE- ADDING IN CONTEMPORARY EUROPEAN ARCHITECTURE AND DESIGN

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**Abstract:** *This analysis is based on the investigation of European neo-vernacular built environment and the specific structures used in traditional vernacular architecture and furniture that inspire it on a conceptual level. The on-site investigation resulted in the identification of vernacular characteristics: the presence of specific wooden structures, connections, wood utilisation patterns, scale, and proportion, all general features of the vernacular architecture and interior design. The case studies illustrate and provide relevant conclusions in this regard, but they also provide additional practical experience to the theoretical analysis through on-site investigation.*

**Key words:** *European neo-vernacular architecture and design, interior space, on-site investigation, value adding.*

## 1. Introduction

In spite of its fragmented and discontinuous development, the tradition of wooden buildings has always managed to adapt to the modern context due to its important role in the (mostly rural) collective conception concerning life and living [5], [8]. Regarding the repertoire of construction systems and materials, it can be stated that these reflect general principles on the effective use of local resources [11] and offer diverse expressions

not only on a structural level, but also on a functional and aesthetic one [7].

The increasing interest among architects in what we call vernacular architecture and the growing public awareness of a rich vernacular heritage suggest that it is time we examine the nature of the vernacular and its historical development [4]. In terms of general use, the meaning of vernacular can be connected to concepts such as homemade, traditional or countrified, but in the context of architecture and built environment, it

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indicates a small scale rural dwelling, that of a farmer or a craftsman.

At present, tradition and modernity are no longer seen as two opposite concepts, but ones that coexist, overlapping and influencing each other.

This definition is largely the product of architects and architectural historians, but other disciplines have also been involved in studying the vernacular. Geographers, social historians, and archeologists that contributed to a holistic definition that we cannot afford to ignore [2] have provided great input.

## 2. Objective and Method

The selected areas from Europe can provide a series of relevant data regarding the stylistic, architectural, and structural evolution of neo-vernacular architecture and furniture overlapping with local tradition, geographical context, and climate, thus shaping the contemporary neo-vernacular house as we know it today.

The aim of the project is to create architecture and furniture with value and meaning which increases in time and with the use of local communities. This type of interior design achieves meaning as a part of the variety of cultures of the local European communities and as a symbolic reflection of the context. The first step of the experimental investigations was to determine specific local characteristics of vernacular architecture and furniture in Romania and in other European countries such as Austria and Hungary. After identifying all the relevant vernacular expressive elements, we turn to the example of contemporary neo-vernacular design as a focal point for the identification of concepts that guide architects and designers in present times.

The aim was to obtain results that would set the basis for the understanding process of an improvement or concept transfer methodology regarding traditional cultural and architectural values in the contemporary context.

## 3. European Neo-Vernacular

Regarding vernacular architecture in Europe, the first designs were realised without the use of any “artificial” tools, a large sector. An example is wattlework where pieces of wood are simply gathered and not at all processed. This type of construction could not offer enough stability, so the next measure consisted in weaving the pieces into regular geometric forms, the wattle being used as an infill material for the walls, rural buildings combining wattle walls with skeleton-framed, more solid walls.

If we consider the Romanian territory, vernacular constructions were simple regarding the structural forms, with some of the wooden pillars buried under the earth, the visible part covered with planks, wattle, and clayey soil. These structural systems diversified in time, leading to the construction typology with horizontal logs resting on stone foundations [9]. From a structural viewpoint, these constructions were made of round pillars embedded in the soil, ensuring the stability of the construction [10].

In the last 50 years in Europe, there have been a number of changes concerning rural areas. The mechanization of specific agricultural activities, rural migration to the city led to the loss of local traditions and customs and the degradation of traditional built environment. In this context, rural development policies of the European Union considered the preservation of

vernacular architecture a priority. In several European countries, special funds were allocated for the development and conservation programs of rural cultural landscape in the period 1991-2000.

To be able to understand the evolution of the creative process involving contemporary neo-vernacular projects, the first step should consider the profound and pragmatic analysis of the specific manifestation forms of European

vernacular. All three countries have their local manifestations and specific elements that set a starting point in the conceptual and inspirational phase of any neo-vernacular project.

All these specific elements are represented in Figure 1, which aims to highlight in a visual manner the most relevant features of vernacular architecture as a key inspirational factor for contemporary architects and designers.

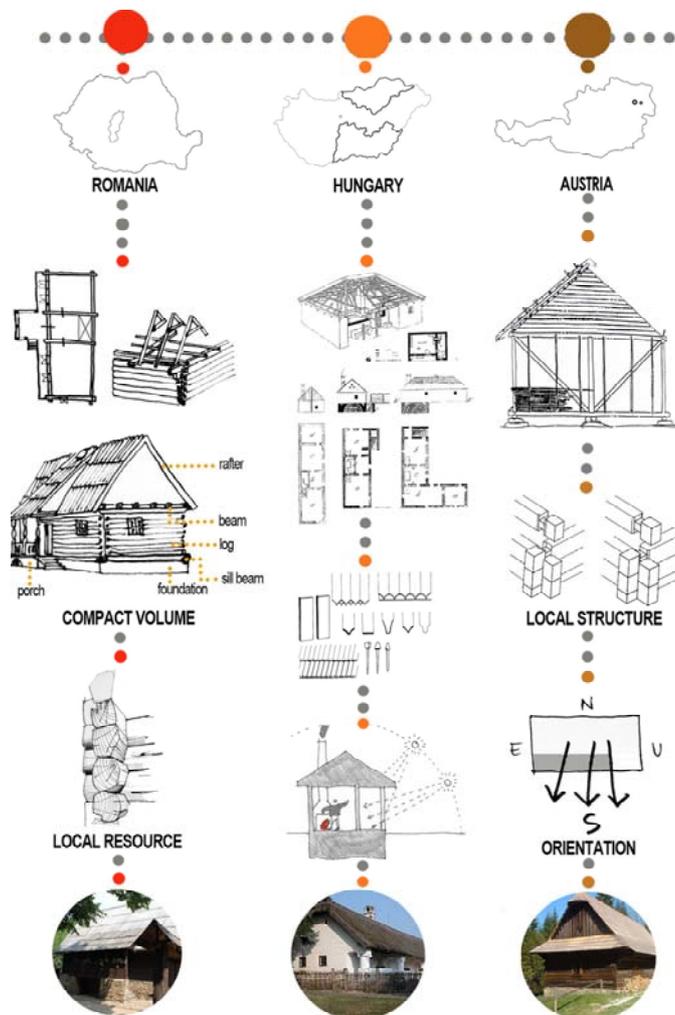


Fig. 1. Vernacular expressive elements

Several common characteristics can be observed when analyzing the three selected countries (Figure 1). Mainly, we can discuss a compact shape of the house, utilizing local materials (mainly wood for walls/roof and stone for the foundation), the structure being defined by horizontal logs, a porch facing south and efficient use of interior space [3]. All these vernacular concepts inspired the architects of the three case studies presented in the upcoming paragraphs.

The first case study is situated in Austria in the village of Rekawinkel, which is located in northeastern Austria, 29 km from Vienna, in a hilly area with a diverse and rich forest fund. Traditional wooden architecture in Austria had diverse manifestations in the east of the country, not only in the mountain region, but also in the hills, especially in the regions of Lower Austria (northeast of Styria), Vienna, and in particular, in Burgenland. The existence of vernacular wooden architecture in this country should not be seen as an isolated phenomenon, but rather in conjunction with other examples of vernacular architecture in the region of the Danube basin and the Pannonia Plain regions [12].

Earth has been traditionally used as an auxiliary material of construction to cover the walls formed of round beams by applying an exterior layer of plaster (protection against bad weather, rain), covering the joints between logs, paving the ground floor, filling joist to obtain good floor insulation, or to construct bread ovens. This use of frames or wooden beams with earth plastering is characteristic for the region of the Austrian Danube and has a similar

manifestation, with specific construction techniques observed in the Pannonia Plain. However, the extensive use of clay mixed with ground straw, locally known as *Stampflembau*, should be noted in particular.

This particular method of plastering inspired architect and sculptor Thomas Gronegger in overlapping two strong chromatic elements: wood (with its warmth and rich fiber texture) and plaster (with its matt, neuter, and smooth surface). This concept is visible on the scale of the four facades: two of them being entirely clad in plaster and two in wooden planks with two different sections offering a tactile vertical rhythm for the main façade facing the natural landscape of the neighboring forest (Figure 2).

The general shape of the house is simple and resembles the shape of vernacular barns; also, the scale reflects this source of inspiration. This clean geometry and spatial organization is in strong connection with the ones found in any vernacular house of this region.

In the case of the second analyzed project from Hungary, the situation is somewhat different. If in the first case (Austria), the contemporary intervention had to be integrated in a rural environment, in this case, we have the urban setting of Budapest. The presented house is a clear reinterpretation of the typical Hungarian household with longitudinally arranged outdoor (porch - *tornác*) and indoor spaces.

The architect's source of inspiration was the spatial-functional typology of the kitchen-porch-room or room-kitchen-room display house. Thus, the longitudinal

axis became a dominant in the interior composition, each space having a separate entrance from the porch. This linear display of the spaces also creates a continuous effect of the gable roof ending in a generous porch area with visible wooden beams supporting it (Figure 3). The main facade is oriented towards the court and under a continuous gable roof; it can include the living areas and the storage spaces. Similarly to the case of vernacular houses, wood is used not only in the roof structure but also in the case of the wall structure (frames consisting of horizontal beams and columns and horizontal logs of softwood mounted on a stone foundation).

Traditional materials were given new light in this contemporary context, the house being both -modern and vernacular – at the same time [1].

In the case of the third analyzed project, we focus on Romania and its central-east region of Bacău. The intervention represents a single-family house – subject of an international architecture contest for solar houses. The winning project was implemented in 2012 and has set a healthy neo-vernacular trend for architects and designers in Romania ever since (Figure 4).

The general volume of the house is opaque, with small openings (because low temperatures are present six months of the year). The porch is the only element of the main façade, which can change its status: becoming open in the summer (for outdoor activities) and closed in the winter (mainly for storage and protection from cold weather and snow).

The interior space of the house is organized according to four compositional principles or centers (resembling the vernacular ones): heating and cooking area, sleeping area, sitting area (long benches), storage areas (in chests, cabinets). All these spaces are organized according to the longitudinal compositional axis of the house, as follows: the porch facing the street, the entrance hall and two rooms (guest and living room) placed at the core, and finally, facing the courtyard, at the back of the house, the kitchen and storage space.

The shape of the gable roof was also reinterpreted and put into a new geometric vision, becoming also a source of solar energy through the photovoltaic panels placed on the south slope. Thus, combining energy efficiency in a contemporary key with local materials such as wood (structure of the walls and roof) and earth/clay (flooring), this example can become a high-tech neo-vernacular architectural object.

The above-described analytic research will continue in the upcoming summarizing tables showing the visual component of neo-vernacular concepts and interventions.

These can also be considered useful visual and creative design tools for contemporary upcoming projects that have a respectful approach towards local identity, materials, sustainability, climate, geographical constants, and last but not least, traditional rural values.

### CASE STUDY - Contemporary local architecture - Austria, Rekawinkel

**FUNCTION:** private house (2008)  
**ARCHITECT:** Thomas Gronegger

- alpine climate (west)  
temperate-continental (east)  
- high temperature variations  
- changing weather

- detached, single-family home  
- it is located on a plot of generous dimensions, on a slope, with vegetation  
- in the immediate vicinity of the building there is a forest, the opening of the main rooms being directed towards it

**GROUND FLOOR**

**SECTION**

**EXTERIOR**

interior exterior

1 2 3

1. existing wall  
2. insulation  
3. wooden strip and counter-strip structure with ventilated air layer

- detailed view of the eaves  
- the insulation of the walls led to an increase in their thickness, so it was necessary to extend the rafters

- detail of the north facade

- image with the main facade in the access area; subsequent addition of an intermediate eave to protect the main access of the house

- the interior spaces contain a wide variety of wooden furniture objects such as: traditional chairs, low chairs with three legs, wooden sealing but also contemporary objects

Context - Architecture

Exterior - Perspective

Interior details

Fig. 2. Neo-vernacular case study from Austria

### CASE STUDY - Local contemporary architecture - Hungary, Budapest

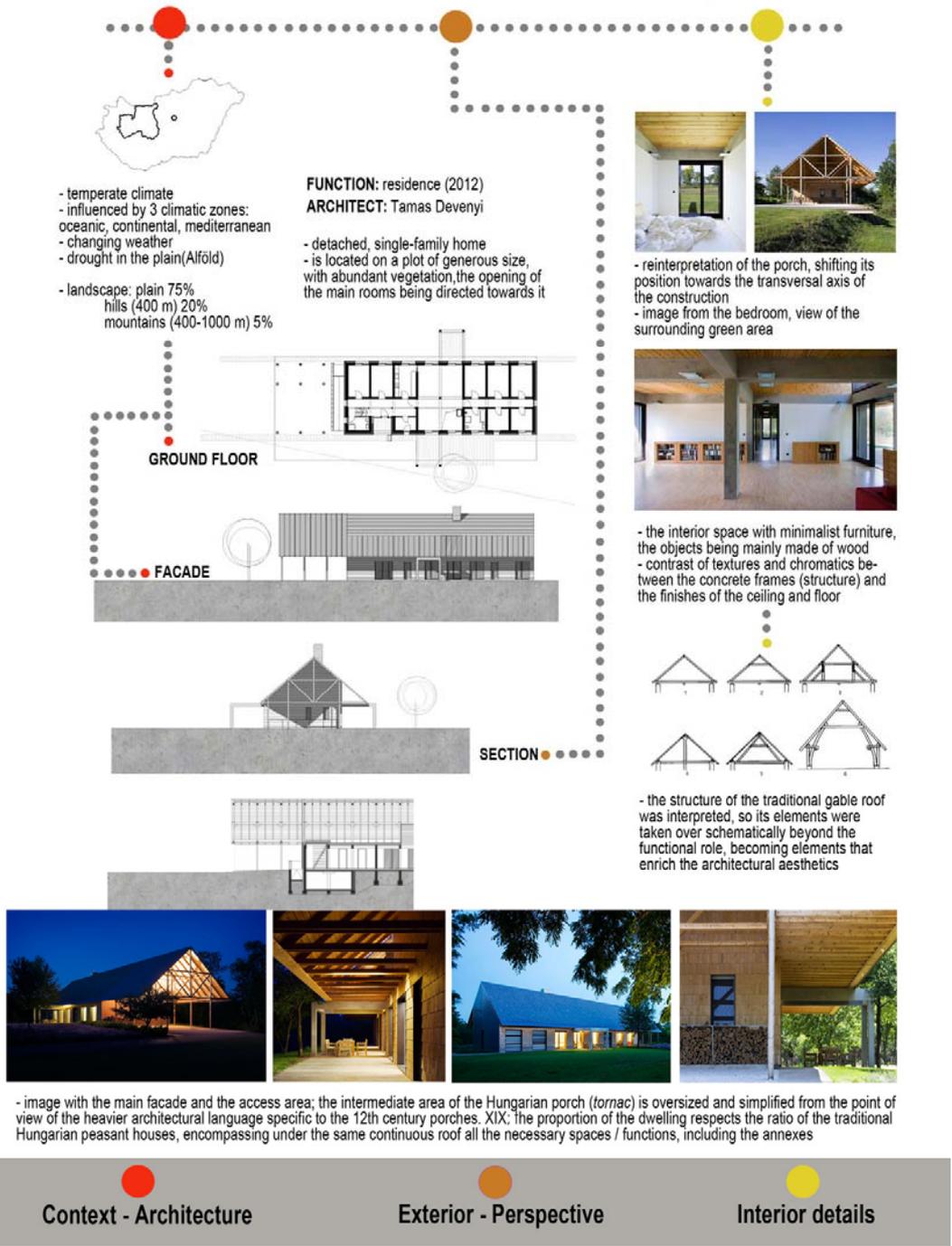
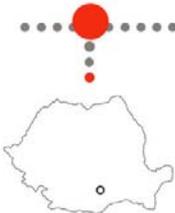


Fig. 3. Neo-vernacular case study from Hungary

### CASE STUDY - Local contemporary architecture - Bacău, Romania



- temperate-continental climate  
- high temperature variations  
- changing weather

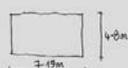
**FUNCTION:** private house (2010-2012)  
**ARCHITECT:** Pierre Bortnowski, Biborka Bartha

- prototype for a solar house (participating project at the *Solar Decathlon of Europe 2012*) purchased by a family living near Bacău

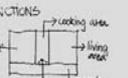
**PLANNIMETRIC CHARACTERISTICS**

- ROMANIAN TRADITIONAL HOUSE

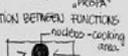
• PROPORTIONS



• FUNCTIONS



• RELATION BETWEEN FUNCTIONS



• SUN EXPOSURE

North



• RELATION WITH EARTH



INTERIOR PORCH EXTERIOR

BASE = EARTH

ROOF (PORCH) = DETACHED FROM THE LAND

• INTERIOR SPACE VS. EXTERIOR SPACE

INTERIOR FILTER EXTERIOR

**THE RELATION BETWEEN INTERIOR AND EXTERIOR SPACE**

„VATRA” (SHEEPLEAK)

AS → SYMBOLIC ROLE OF GATHERING THE FAMILY

→ VENTILATION (NATURAL)

→ EXTENSIBLE DINING

„PRISPA” (BENCH)

AS → ADDITIONAL SPACE



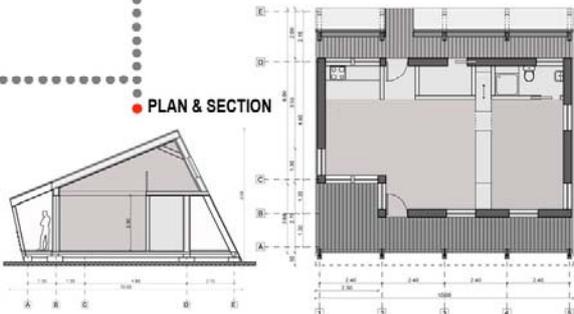
→ VENTILATION (NATURAL)

→ SHADING IN SUMMER PROTECTION IN WINTER

→ AESTHETICAL AND FUNCTIONAL VALENCE

→ TYPOLOGIES

**PLAN & SECTION**



**alternative 2**



**EXTERIOR**



**alternative 1**



ROOF (protection)  
HOUSE (nucleus)

ROOF  
attic - heat insulator  
asymmetry of roof slopes  
aerodynamism

PRISPA

- solar dwelling that from a spatial, functional, architectural point of view interprets typology of the traditional dwelling with a porch on 3 sides (alt.1), respectively one side (alt. 2)  
- this project was developed for participation at the international Solar Competition Decathlon Europe organized in Madrid in 2012

- specific characteristics of the traditional dwelling that can be taken over and add value to the final project



**Context - Architecture**



**Exterior - Perspective**



**Interior details**

Fig. 4. Neo-vernacular case study from Romania

#### 4. Discussions

The traditional household has seen many changes over time [6, 9]. The general shape of vernacular housing is defined by a series of socio-cultural factors and is influenced by climate, local resources, and construction techniques of the region. Using local materials such as wood, earth, or stone has had a major impact on the development of specific manifestations of vernacular architecture and furnishings, this course offering varied sources of inspiration concerning new directions of approach in the contemporary design process and creation.

The vernacular house integrates organically into its surroundings, natural or built; it has a dose of respect towards the constants of the landscape (Figure 5).

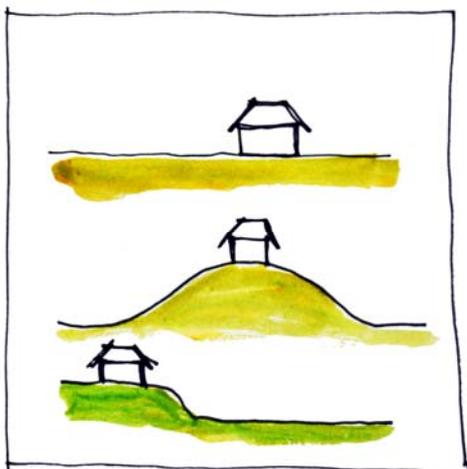


Fig. 5. *Integration into the geographical context*

The orientation of the porch towards the south has functional as well as social layers that has kept inspiring architects until the present. The use of local, natural materials is also an important feature,

wood, stone, and earth being also used in the case of contemporary sustainable green building solutions (Figure 6).

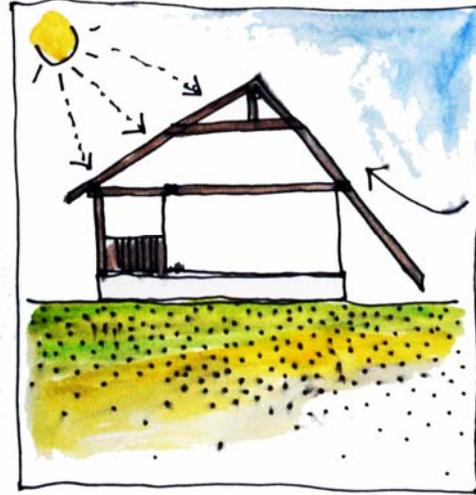


Fig. 6. *Orientation of the porch*

The use of local materials is one of the focuses of neo-vernacular architecture, society being more open towards sustainable, eco, energy-efficient and green solutions (Figure 7).

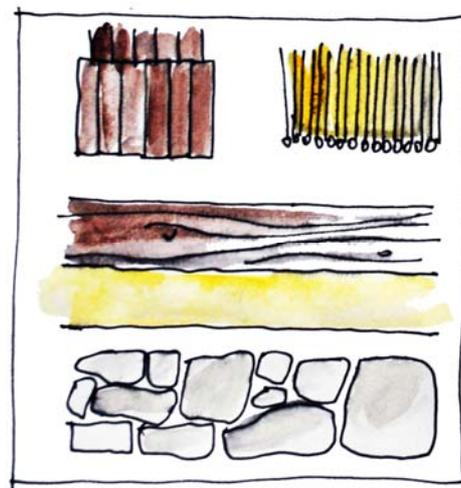


Fig. 7. *Orientation of the porch*

## 5. Conclusion

As seen in the selected case studies, contemporary architecture still knows how to rely on specific values such as local identity, spatial constants, tradition, and culture. In this case, the neo-vernacular house can embody a set of valuable assets that can also provide inspiration and coherent guidelines for the upcoming generations of architects and designers.

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