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# VERNACULAR ARCHITECTURE AND FURNITURE OF VÂLCEA AND SIBIU COUNTY, **ROMANIA IN A EUROPEAN CONTEXT**

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### Abstract:

The objective of this paper is to address in a critical and synthetic manner Romanian vernacular architecture and traditional furniture in a European context. The studied areas of Europe were selected in order to obtain relevant data and conclusions regarding vernacular concepts which in the near future could be reintegrated and accepted in the contemporary design process of our country. The objectives of the research are clear, measurable and grouped in the following phases: Phase 1 - general considerations on vernacular architecture in European countries; Phase 2 - the analysis of specific manifestations of vernacular architecture and furniture in the selected regions of Europe: Soria Province- Spain, town of Florina - Greece, Vrin – Switzerland, Baranya and Hollókő – Hungary, Rekawinkel – Austria, Vâlcea and Sibiu – Romania. Also the structural, spatial and functional evolution of vernacular housing was analysed along with the utilised construction materials; orientation, proportion of the facade; natural ventilation, shading systems,

The descriptions and tables will include features and characteristics of vernacular architecture and furniture for each European region analysed based on the following common criteria: geographic, climatic, topographic, socio-economic, historic - data collection; the identification of the existing vernacular built context and general construction data collection; the identification of architectural typologies (spatial, functional, structural) and the selection of representative examples; in-depth study of the selected examples; formulation of a conclusion.

Key words: european context; vernacular; local identity; wood utilisation.

# INTRODUCTION

Italian rationalist architects of Gruppo Sette (Sabatino 2009) stated in 1926 that "tradition does not disappear, but changes appearance." This paper starts from this idea that revolutionized and changed the approach of professionals towards the concept of tradition and vernacular. The aim of the research is to present in a synthetic and visual manner forms of architectural-functional-structural-symbolic evolution of vernacular housing and furniture on a European level in order to obtain strategies of reinterpretation and reintegration of vernacular concepts on a national level. These strategies place vernacular architecture in a new light, making it possible to apprehend traditional architecture as a process of sustainable design with a range of actions on diverse and multiple levels: the physical (natural- topography, landscape, vegetation, structural, spatial, material-materials, textures) and the spiritual (traditions, customs).

The role of tradition in the modernization and globalization era has led to a series of debates in the presence of specialists, architects, designers in recent decades. Tradition is the mass of cultural, religious, ethnographic values and modernity may be associated with cultural transformation, mobility, social class stratification, a consumer-oriented society (Mitrache 2008). At present, tradition and modernity are no longer seen as two opposite concepts, but ones that coexist, overlapping and influencing each other.

Tradition is the first resource for reintegration, rehabilitation and maintenance of local identity, on regional or national level. Kenneth Frampton claimed in the 80s in his book on critical regionalism that local tradition can be a tool for the creation of identity.

Critical Regionalism is an approach in the architectural field that aims to define space and identity by replacing concepts of uniformity and monotony of the International Style, but in the same time rejects individualism and ornamentation of postmodern architecture. The style of critical regionalism corresponds with a type of architecture that is rooted in the tradition of modern architecture, and is linked to the geographical and cultural context. Critical Regionalism may extend its meaning beyond the field of vernacular architecture. It is a progressive approach to the design process that attempts to mediate between global and local manifestations of architecture (Frampton 1983).

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However it lasted several decades for authorities and professionals to recognize and perceive tradition as a central resource to restore local cultural identity, realizing that it has a major impact on the built landscape. This environment, in Rapoport's view, is composed of *fixed elements* (infrastructure, buildings, and walls), semi-fixed elements (indoor and outdoor furniture, trees, gardens, fences, signs, lighting etc.) and mobile elements (people and their activities) (Rapoport 1969).

This analysis can be formulated in the form of matrices, which will include the following: the characteristic elements of the landscape, vegetation, architecture, landmarks, furniture, tools, and customs.

## **OBJECTIVE**

"Cultural landscape is defined as a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Rapoport 1969).

The objective of this paper is to address in a critical and synthetic manner Romanian vernacular architecture and traditional furniture in a European context. The studied areas of Europe were selected in order to obtain relevant data and conclusions regarding vernacular concepts which in the final step of the research could be reintegrated and accepted in the contemporary design process of our country. The objectives of the research are clear, measurable and grouped in the following phases: Phase 1 - general considerations on vernacular architecture in European countries; Phase 2 - the analysis of specific manifestations of vernacular architecture and furniture in the selected regions of Europe (Soria Province - Spain, town of Florina - Greece, Vrin - Switzerland, Baranya and Hollókő - Hungary, Rekawinkel - Austria, Vâlcea and Sibiu - Romania) a - structural, spatial and functional evolution of vernacular housing; **b** – presentation of the utilised construction materials; **c** – orientation, proportion of the facade; **d** – natural ventilation, shading systems, climate.

#### **METHOD**

The instruments used in the research were varied: a critical analysis of the existing literature, research in situ, travel, study drawings and photographs at the Village Museum "Dimitrie Gusti", Bucharest and ASTRA National Museum Complex Sibiu; field trip in Vâlcea County (June 2012); visiting villages in northeast of Hungary (July 2012); on site investigation in the village of Rekawinkel Austria (June 2013); field trip to Răşinari village in Sibiu County (October 2013).

# Phase 1 - General considerations on vernacular architecture in European countries

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 a priority the preservation of vernacular architecture. In countries like Spain, 400 million euros had been allocated for the development and conservation programs of rural cultural landscape in the period between 1991-2000.

# **RESULTS AND DISCUSSION**

The following descriptions and tables will include features and characteristics of vernacular architecture and furniture for each European region analysed based on the following common criteria: geographic, climatic, topographic, socio-economic, historic - data collection; the identification of the existing vernacular built context and general construction data collection; the identification of architectural typologies (spatial, functional, structural) and the selection of representative examples; in-depth study of the selected examples; formulation of a conclusion.

# Phase 2 - The analysis of specific manifestations of vernacular architecture and furniture in the selected regions of Europe

# Case study - Central Spain: Province of Soria

The studied area includes 22 municipalities situated in the province of Soria, located in the center of Spain, north-east and 170km away from Madrid, on both sides of the river Duero, in a depression at 800-900m altitude. The climate is continental, with average temperatures between 8-12°C, but with large temperature differences during daytime (temperature differences between 20-25°C annually 35-40°C). Rainfall is moderate (400-600mm/year). This area has been inhabited since prehistoric times, a number of archaeological sites being discovered dating from the Paleolithic and Neolithic. There were two Roman cities in the area: Tiermes and Uxama. Between the 11<sup>th</sup> -15<sup>th</sup> centuries, the area was characterized by prosperous economic level, but lack of infrastructure has led to the gradual degradation of the built environment of the

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region which at the same time kept it intact and protected from contemporary changes. The area currently is quite populated and the primary occupation of the people is in the agricultural field (Jose 2010).

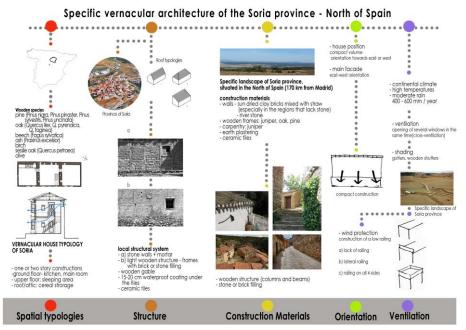


Fig. 1.
Summarizing table regarding vernacular architecture of Soria province, Spain.

The existing wooden species of the region are: juniper (*Juniperus thurifera L.*), pine (*Pinus nigra, Pinus pinaster, Pinus sylvestris, Pinus uncinata*), oak (*Quercus Ilex, Quercus pyrenaica, Quercus Faginea*), beech (*Fagus sylvatica*), ash (*Fraxinus excelsior*), birch (Betula celtiberica), olive (*Olea europea*).

Specific local vernacular structural system is composed of stone bearing walls, built with mortar or a lightweight wood frame with brick or stone filling. The house orientation is generally after the cardinal points, in the case of terraced roof a special layer of coating is applied for wind protection (depending on its direction) and also a series of low height rails (approx. 20-30cm high).

Vernacular architecture of this area was strongly influenced by climatic conditions and the available natural resources of the region. Its forms of manifestation are simple but varied, the characteristic traditional building material being the sun-dried brick made of clay mixed with rye straw, in Spanish these being called adobe. This material has been used mainly in the composition of walls regarding housing situated in the proximity of the Duero river valley, where stone resources were minimal. In distant regions from the river, the main material used for walls construction consisted of calcareous stone rubble. In the case of wooden frame structure the species that were most frequently used are the following: juniper, oak, pine these being designed to ease the structural weight of the wall.

Regarding the facade, the brick or stone blocks used in wall construction remain visible, or become subject to different land-based plasters, lime plasters. The coating material is frequently the ceramic tile which is placed on a layer of 5-20cm of mortar with a protective role against water.

The vernacular house usually consists of one or two levels with a multifunctional room and kitchen located on the ground floor and bedrooms upstairs. The attic is used as storage area for food (Jose 2010).

Wooden furniture at first had simple joints (16<sup>th</sup> - 17<sup>th</sup> centuries) and then, along with the diversification of wood manufacturing tools, joints became more complex (XVIII-XIX century). These objects were manufactured in the first phase, by simple, fixed assembly methods, the most common joints being the notch, lapped and butt joints. The next phase meant using specialized tools and led to the emergence of more complex joints like the tenon joints, finger joints, dovetail joints, or joints which employed wooden pegs.

# Case study - Greece: town of Florina

The studied area is located in north-western Greece in a mountain valley crossed from west to east by a river. This river has influenced the orientation of the urban morphology, by adopting a linear development, the main street network being oriented parallel to the riverbed.

The climate of the region is cold continental with long, cold winters and warm dry summers. The average annual temperature is about 2.2°C.

Local vernacular architecture includes a variety of types of architectural space that consists of three major areas: main room (oda); porch (hayat); hallway/access (sofa). The room is rectangular, enclosed on four sides, sheltering the family's daily activities (cooking, dining, sleeping and receiving quests). The main room is basically a multifunctional space. The porch is a semi-open transition space, with a rectangular or square shape enabling spatial connection between different areas of the house. The emergence of this specific porch (hayat) can be determined by climate, having a protective role in winter and protecting walls from direct sunlight in summer. In addition to its role as a circulation space, the porch has a role of housing in summer all social and family activities. This role of a family gathering space and a meeting space is also characteristic for the hallway/access (sofa) which has a rectangular enclosed space (Oikonomou 2011). The wooden species present in the study area are the following: pine, fir, olive shrubs (marquis), oak, beech and poplar. Building typologies can be differentiated on the basis of the location of the hall/porch: outdoor porch (a variant of porch/hayat); inner porch (in most cases); central porch. The current size of the rooms and lobby are: if the room has dimensions between 3.79x3.79m the resulting width of the hall is 2.27 to 3.03m; if the room is 4.54x4.54m, the lobby has widths ranging from 3.03 to 3.79m. The layout of the plan is simple and has a linear composition regarding the living spaces. The traditional house shape is influenced by the economic and social status of the owner, the number of windows reflecting its financial well-being (Oikonomou 2011).

The local structural system utilises materials like stone, wood. On the ground floor the walls have a thickness of 60-65cm and a height of approx. 24cm. Over this parapet wooden structure is set which consists of horizontal beams (8x13cm), and vertical braces. The structural system of the first floor consists of a cavity wall (*tsatmas*) with a thickness of 20-25cm forming frames that are filled with burned clay bricks or stone slabs in exceptional cases. These building materials originate from local sources, using species such as oak, beech, poplar for structural elements, and for those without structural role (carpentry, floors, ceilings, furniture) resinous species (pine, fir) are commonly used. In the case of stone, limestone is used primarily (Oikonomou 2011).

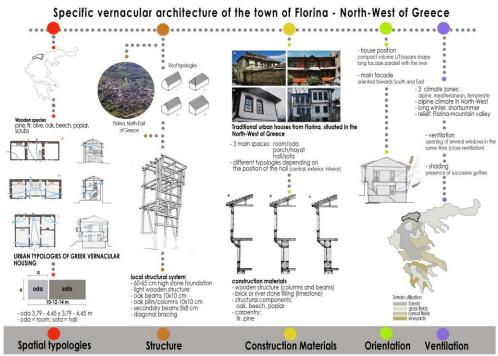


Fig. 2.
Summarizing table regarding vernacular architecture of Florina, Greece.

The house is oriented with the long facade towards south, the longitudinal axis of the construction being parallel to the river. Shading methods are obtained by the generous size of approx. 60cm of the gutter and ventilation is possible by simultaneously opening multiple windows at the upper level. In winter, only the spaces situated at the ground floor are used (thick walls and few window openings), and during the summer, all activities take place upstairs (wood frame walls and generous openings).

Wooden furniture at first had simple joints, and along with the diversification of tools, connections became more complex and furnishings were given a series of incisions in various geometric, vegetal or floral patterns.

# Case study - Switzerland: village of Vrin

The research area is located in the south-east of Switzerland, in a mountainous region with a characteristic alpine climate (cold and long winters, short summers). Vrin is a small mountain village with a population of 240 situated in the Lumnezia valley in the Graubunden canton surrounded by the Alps. The existing wooden species are pine (*Pinus nigra*), spruce (*Picea abies*), fir (*Abies alba*), shrubs. Oak, beech and maple (*Acer pseudoplatanus*) persist in low areas up to an altitude of approx. 1500m.

The small population of the village is formed mostly of farmers and shepherds, struggling with contemporary tourism while managing to keep the unique culture of the village. The community faced economic difficulties and motivated by these changes in the context of community and rural built environment in 1979 a Pro Vrin Foundation was formed, in order to preserve the specific culture and lifestyle of the area. The aim was to actively seek alternatives and methods, both in architecture and planning, against the tide of globalization. This approach began by preserving the existing heritage, but also developing new ways to build in this isolated mountain community, respecting the existing harmony of the natural environment. One of the proposed construction methods implemented by Swiss architect Gion Caminada together with the Vrin community was the construction of specific structures employing horizontal wooden beams ("strickbau"). Strickbau is extremely common in most alpine regions and is made of "wooden beams" knitted "together at the corners for stability ".

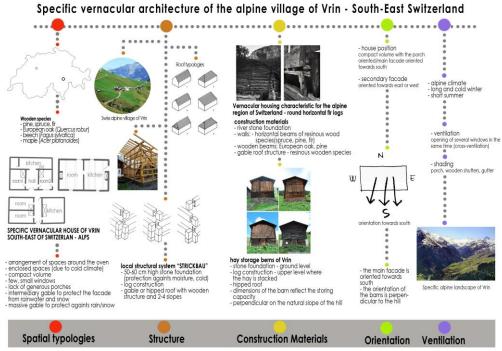


Fig. 3.
Summarizing table regarding vernacular architecture of Vrin – Switzerland.

The wooden structures are very similar to those present in Vals (neighboring village), but with some major differences. It is interesting that while Waltz and Vrin are separated only by a mountain range, the valleys speak different languages and buildings with the same function which should provide aesthetic and spatial similarity, however are different. In Vrin, it is typical for hay storage barns, to respect with an almost scientific precision their dedication to a certain size and shape. This is largely due to the natural size of timber that could be cut and transported to the construction site and then assembled to form the structure of the barn. The distance between these barns is determined by the hay storage capacity of each structure, therefore the distance is regular in terms of space, and the buildings have approximately equal sizes. The storage for the hay is at the top, with the entrance door high above the average height of snow in winter. All barns are situated perpendicular on the slope of the hill, also to allow access from the back in the small space at the bottom of the construction for the animals (Caminada 2009).

Vernacular wooden furniture specific for the studied area has a robust character with simple geometric shapes and presents simple joints. Subsequently furnishings were given a series of painted or incised ormaments with various geometrical, vegetal or floral patterns.

# Case study - Austria: village of Rekawinkel

This village is located in northeastern Austria, 29km 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 in the hills, especially in the regions of Lower Austria (north-east of Styria), Vienna, and in particular, in Burgenland.

The existence of vernacular wooden architecture of 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. This similarity can be found in the specific context of rural areas built adjacent to the region of Moravia (Czech Republic), southern Slovakia, Hungary and north-east Slovenia (Zwerger 2000). Forestation rate in this country is very high on a European level and consists of coniferous forests in the mountains, with fir, larch (*Larix decidua*), pine, mixed forests (spruce, beech), as well as deciduous forests (oak, beech).

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 a 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 met in the Pannonia Plain. However, the extensive use of clay mixed with ground straw, locally known as *Stampflehmbau* should be noted in particular.

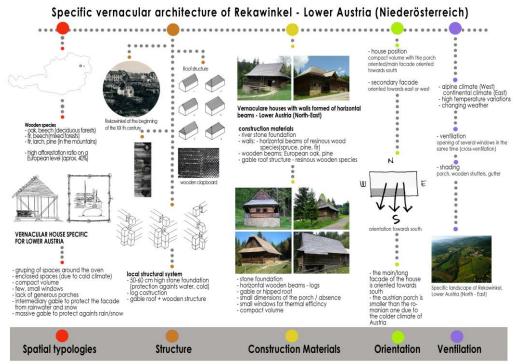


Fig. 4.
Summarizing table regarding vernacular architecture of Lower Austria.

The wooden structure of these vernacular buildings usually sits on a river or stone foundation. Due to the colder climate (up against Hungary, Romania), homes are more robust and enclosed without a porch or with one that is dimensionally reduced, having prominent eaves covering the entry and protecting the walls from rain and snow. The method of protection concerning the facades is performed by adding an intermediary gable.

Vernacular wooden furniture specific study area, presents similarities to that of the Swiss region analysed earlier, and is characterized by simple shapes and joints, gradually the connections and painted floral or geometrical patterns becoming more complex.

# Case study - Hungary: North-East and South-East Regions

The areas chosen for the study are situated in the region of eastern Hungary, respectively in the mountainous region of the north-eastern part of the country and the south-eastern plains. The choice was motivated on the basis of structural and architectural diversity present in the two regions regarding the evolution of forms of expression in terms of vernacular architecture.

The wooden species that are available in the studied area are the following: mountain elm (*Ulmus minor*), pine, maple (in the mountainous area of north-east), hornbeam (*Carpinus orientalis*), sessile oak (*Quercus petraea*), oak (spread mostly in the western part of the country), and aspen (*Populus tremula* - in riverbeds).

The Hungarian household has the following typologies regarding the spatial-functional organisation: the existence of a predominantly longitudinal arrangement of the household along axis of the plot. The main facade of the house faces south and typically contains a full length porch (*tornác*). The annexes are continuing this linear composition with the summer kitchen and the barn. Another household arrangement typology that is frequently met is in an "L" display, this variant is common in the south-east region of the country, where between the 17<sup>th</sup> – 18<sup>th</sup> centuries the growing number of family members had an impact on the functional and architectural evolution of the dwelling (Báthky 1941).

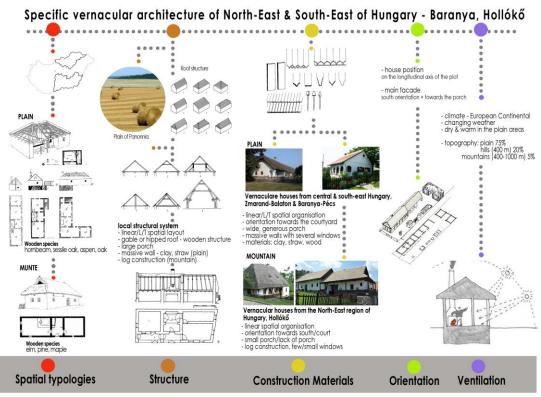


Fig. 5.
Summarizing table regarding vernacular architecture of North-East and South-East of Hungary.

The most common spatial-functional typology in Hungary is the one with a kitchen-porch-room or room-kitchen-room display, the longitudinal axis becoming a dominant in the interior composition each space having a separate entrance from the porch. What is worth mentioning in the case of these homes is that the heating system is outside the sleeping area (the oven is located exclusively in the kitchen, and the rooms only have blind stoves) or the main room (the fireplace being placed in the annex). The kitchen has become functionally independent of the living quarters (Győrffi 1943).

The organisation of the household in the south-east plain areas is characterized by the display of spaces in a linear, longitudinal axis. The main facade is oriented towards the court and under a continuous gable roof it can include the living areas and the storage spaces. Due to the lack of wood resources in this region of the country, wood was used exclusively for the roof structure or for the support of ceilings and the porch. The walls of the houses in this region are massive, with thicknesses that can reach 50 cm (role of insulation). Structurally these are load-bearing walls which do not require a pre-built wooden frame. The most frequent coating in this area is not the shingle, but thatch or straw.

Regarding the households in the mountainous region of the north-east part, the availability of wood resources had an impact on the architectural and structural evolution of the house. 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). The wooden structure of the walls can be of two major types: horizontal log construction or box-frame construction where the walls are composed of columns and wooden beams (Károlyi 1955). This structure can remain visible or can be plastered.

In terms of space, the mountain household resembles that of the plains, the differences being met usually on a dimensional level (in the mountain region the construction is smaller with narrow windows); the lack of the porch and classical or baroque details of the facade can be observed. The most common used coating material of this area is clapboard.

The interior space presents similarities with the one characteristic for our country, with wooden furniture attached to the walls of the rooms. The furniture joints regarding the kitchen and entrance hall area are simple (Filep 1970). The guest room usually includes several objects with complex details or decorations: painted wooden chests with carved or painted floral elements with complex joints (tongue and groove joints, lapped joints, finger joints).

# Case study - Romania: Sibiu and Vâlcea Counties

Sibiu County is situated in the central area of the country being protected by the Carpathian Mountains. The climate is cold, long winters being very frequent in this region.

The wooden species occurring most frequently are beech and fir, followed by maple, oak and poplar. Durmast, elm is fairly common, and linden is present in a lesser extent (Filipovici 1965).

The house is built overlooking the courtyard, facing east or south. It is raised from the ground with approx. 2-3m the access to the porch being possible through wooden steps. This transit space became necessary in order to extend the space for the activities of the inhabitants and to provide more storage facilities. In time, the porch has gained meaning not only on a functional and aesthetic level, but also on a social one (becoming a meeting or gathering place of family) (Păcală 1915).

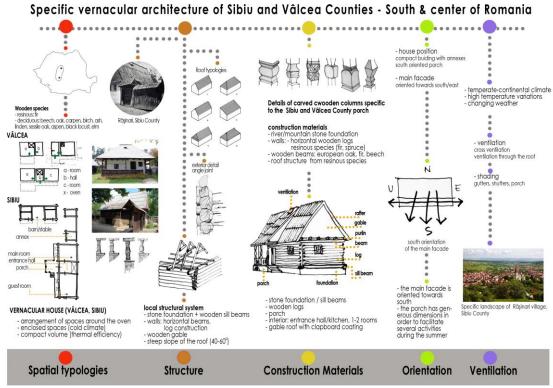


Fig. 6. Summarizing table regarding vernacular architecture of Vâlcea and Sibiu Counties.

Regarding the structure of the building oak is the most frequent choice in the manufacture of the sill beams and posts. Over time, fir replaced oak, due to the decreased geographical spread of the species. This type of round fir log structure is very common in the studied areas and has a number of typologies: round

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horizontal beams - log construction, post-and-truss construction, and mixed structures. The wall structure of vernacular housing is typically made of logs (fir, oak) with dimensions ranging between 120-150mm for the width and 200-300mm for the height (Lăzărescu 2010). These horizontal elements have special joints at the corner intersections, dovetail or lap joints being used. The roof structure consists of round wooden beams, the purlin or spar roof typologies being most frequent. The framework of the roof consists of the following elements: purlin (ridge, center, inferior), rafters, posts, collars. The roof is traditionally covered with wooden shingles with a width between 400-600mm (Crişan 2003).

The interior space of the house (depending on the typology and frequency of utilisation) can be divided in separate areas such as the following: the *quest room* (oriented towards the court and the street in the front area of the house); - the main room (for daily activities) - facing east and directly related to the hall; the access hall (this is where the oven is placed and where the cooking utensils are stored) (Pănoiu 1977).

Regarding the research area which includes the villages of Titeşti, Bratoveşti and Boişoara of Vâlcea County the most frequent wooden species are the following: fir, birch, beech, ash, aspen, oak, linden, elm. For the structure of the building oak is used frequently to perform the grounds. Over time, due to the decreasing geographic spread of this species it had to be gradually replaced by fir. Beams are also usually made of oak or fir. In the case of the coating material, the range of utilised species is wider (oak, willow, poplar and softwood - fir or pine). Concerning the general architectural, functional and structural characteristics, vernacular housing of Vâlcea County presents several similarities with the one analysed in Sibiu County.

In the case of furniture, initially the joints were simple, but with the diversification of tools (XVI-XVII centuries) besides the butt and lapped joints, tenon, finger and dovetail joints have started to be utilized and more ornamentation of the wooden surfaces (Cismaru 2003).

## CONCLUSION

Based on the analysis conducted in different selected areas of research (Spain, Greece, Switzerland, Austria, Hungary, and Romania) in Europe, it was possible to conclude that the construction materials and the climate are the main elements that influence spatial typology and architectural aesthetics of the vernacular dwelling facade. 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 as wood, earth or stone 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.

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