

Scale and Relations of Spatial forms in Modern Latvian Regional architecture

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Abstract

In territory of Latvia the origins of the regional architecture formation are related to wooden houses built by the Baltic tribes and the architectonic space arrangements on castle hills, as well as spatial solutions in the rural environment – in farmsteads where in the natural environment context, following peculiarities of the topography, near water basins the building-forms of residential and household buildings were arranged and the proportions of their separate constructive parts were looked for. Due to the environmental interaction created by nature and people, every region of Latvia – Courland, Semigallia, Vidzeme and Latgallia – over the centuries has acquired its own language of architecture forms typical for the particular region: their qualitative features are the scale and relations of spatial forms.

Searches of the space and shape mutual impact and arrangement are also topical nowadays. Architects, following old traditions and preserving the human scale in environment, have created modern buildings in Latvia regions – complexes of residential and public buildings – and culture environment for daily activities. The interpretation of the building-forms formation and their separate parts, usage of natural building materials, also the searches of proportional relations of separate parts and details of buildings improve the language of architecture forms, awarding it new features.

The goal of the research is to find out the significance of the qualitative features of architecture – relations of the scale and spatial forms – for the emotional artistic expression achievement in the modern regional architecture of Latvia.

Keywords: environment, natural building materials, regional architecture, residential and public buildings, scale, shape, traditions

Introduction

Regional architecture in Latvia countryside and cities has been developing during lots of centuries thanks to the geographical placement of Latvia which has provoked the visits of neighbouring nations and impact of different cultures. Originally, typically rural wooden houses created the city building, which gradually were adapted to the requirements of city building. The oldest wooden buildings in

Latvia have been created by unknown authors: the building structure was made in order to achieve an aesthetically wholesome architectonic solution avoiding mechanical collection of separate elements in the construction volume. In the second half of the 18th century buildings were given a monumental shape, and each ethnographical region of Latvia (Picture 1) – Courland, Semigallia, Vidzeme and Latgallia – obtained its own characteristic language of architectonic forms, whose qualitative features are the scale and relations of spatial forms.



Picture 1. Map of Latvia with four ethnographic regions [I-1]

1. Ancient Wooden Building in Latvia

If we look into the distant past, we can see lots of common features in the urban and rural building layout and constructive formation, whose origin was connected with the subsistence farming. Popular architecture appeared in the presence of foreign relations and newly-introduced stone architecture.

The oldest buildings in Latvia territory were built of natural building material – wood, whose constructive possibilities and sizes – cover span, length of horizontal beams or straddle height, also the features – sensitivity to humidity, precipitations, long-horned beetles and fire, were taken into account when building wooden houses in different ages and countries in the corresponding climatic zones. The main types of wooden construction buildings were timber frame, log building and strut or lattice construction. The environmental influence was strong and local traditions obtained their reflections also in the buildings' architecture. This process was promoted by social structure, climate conditions, resources of local building materials and the use of logic, as well as the desire for simplicity in construction and décor. The

architecture of wooden buildings was expressed in the construction silhouette, roof constitution, also in the forms and décor of openings and small details. Understanding of wood properties had great significance which was expressed in a conscientious care of the created material and potentially longer live expectancy of the art value.

Evolution of wooden construction forms was a complicated and mutually reversible process, which was implemented in the contact of popular architecture and style architecture: first it was expressed in the city construction, but later it echoed in rural centres – manors, also influencing the architecture of farmsteads. The architecture of styles in the urban wooden construction encountered severe resistance of traditions.

The roof took an important place in construction: the roof pitch approved for rural buildings could also be met in urban wooden construction, confirming the influence of national building traditions on wooden architecture in towns.

Décor in construction was used very sparingly. Small detailed forms of functional significance can be counted as a decoration: porch railings, carvings at the end of barge boards, regularly placed reinforcement elements of the roof ridge. In barns the porch columns and lintel elements were emphasized with décor.

In the architectonic artistic form of buildings a special attention was paid to window and door openings and their infill. Smooth door leaves of vertically placed boards were made for buildings, but with crafts development the constructions of leaves were improved. Doors of buildings were emphasized starting from the 17th century – they obtained a decorative significance.

The window has always been an active element in the façade of the building – the construction document of the age which included the information on the stylistic and constructive evolution of the construction components. Window leaves were divided into several panes and their sizes were determined by the glass manufacturing facilities. Glazing of small panes was used for the window leaves of urban wooden residential buildings which were fastened in wooden laths. Glass size determined the constructive and architectonic construction of windows.

2. Planning of Latvian Farmsteads and Urban Environment in Latvia

Historically Ethnographic Regions

In **Courland** the prevailing type of farmers' settlements was single-homesteads, but there were also lots of dispersed villages. The system of two yards was popular: the residential building was in the centre, but between it and the stockyard – the work or “dirty” yard. The “clean” yard was made between the residential building and barn. People of the residential building could easily get into both yards through the communicating hall in the central part of the building. There were also other types of the yard planning, in which the layout of the buildings depended on the size, terrain and other factors of the farm. All buildings were placed

round the yard, but several rooms of different character – residential and outbuildings – were joined under one common roof in one building [1, 40–41].

Semigallia due to the fertile lands and more favourable historical conditions became economically the most developed region of Latvia where single-homestead settlements dominated, but along the border of Lithuania and on the coast of the Rīga Gulf – villages. In Semigallia a residential building was situated in the centre of the yard which was surrounded by a garden. On one side of the residential building barns and granaries were placed. The buildings together formed a closed yard. Further on the other side of the residential building a threshing barn was built, but even further behind the barns a bath house was situated [1, 196–197].

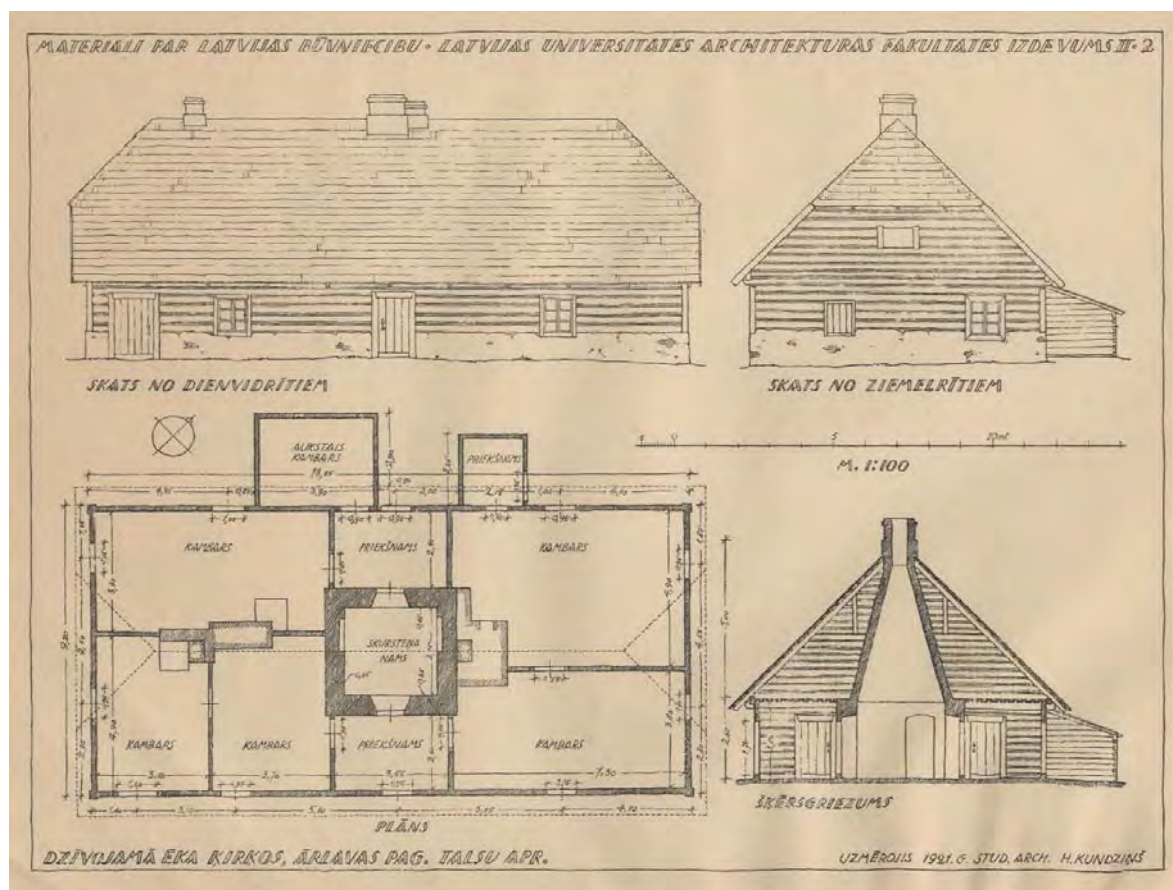
In **Latgallia** the farmers' material culture was based on the regional ancient inhabitants' – Latgallians – culture. Due to the cultural interaction of strong Latvian and Slavic people- Russians, Poles, and Byelorussians – in all areas of life and regions lots of local peculiarities appeared. In Latgallia the prevailing types of farmers' settlements were terraced villages and dispersed villages. Each type had several versions: a street made the planning of the terraced village; a cruciform or T-shape layout was also possible. Within the borders of the villages farmsteads had several options of layouts: buildings were built around a rectangular yard which was formed by two parallel buildings built facing with their side walls the street, or all buildings, facing the street with their side, were placed according to the principle of two yards – the residential building in the centre, on one side from it – the barn, on the other side – the granary. Sometimes the residential building and barn were placed so close together that the roof pitches touched each other. A closed stockyard was situated between the buildings, but the barn and other buildings were placed further [1, 162–163].

Vidzeme farmers' material culture was based on the ancient inhabitants' – Latgallians and Livs – material culture which during the historical development was influenced by the Selonians, Estonians and Slavs living in the neighbourhood. Due to the interaction of different national cultures and historical and social-economic conditions several local regions with their own material cultural peculiarities were formed in Vidzeme. In Vidzeme during the 18th and 19th centuries there were two types of farmers' settlements: single-homesteads and dispersed villages, which sometimes were rather closely built up. In single-homesteads and villages buildings were placed around an irregular yard, where on one side the residential building was placed, but on the others- outbuildings. The barn was sometimes built in the garden, but the granary was placed further from the other buildings, as if forming a special threshing barn's yard [1, 90–91].

3. The Earliest Buildings in Latvia Countryside and Towns

In **Courland** farmstead and town buildings were mainly built in log construction with trimmed beams which had already been used in building since the 13th century. Wall resistance of log buildings depended on the wood bonding techniques; therefore in the corners of the buildings dovetail joints were made which

had already been used in building since the 16th century. The quick boom of wood construction encouraged carpenters to improve their woodworking techniques, look for a variety in the constructive formation and appearance of walls. The economic considerations became important – walls of strutted log edges were made, in which it was possible to use shorter timber. Such a wall construction solution was pretty close to the strutted or lattice construction principles. The variety of wooden buildings increased – residential homes, warehouses and outbuildings were built. The construction form and décor were solid.



Picture 2. Residential building of a three-part planning with a smokestack in Talsi Parish, Courland [2]

The proportions between the walls of the building and the height of the roof were important in Latvian national building. Traditionally the roof takes an outstanding place in building construction and about two thirds of the total building height was allocated to its construction. Buildings were covered with either a tent roof or a double pitch roof, or a double pitch roof with hip ends. Straw, reed and also shakes were used for roofing. The roof pitch had to be a little smaller than 45 degrees, so the rafters in the gable would make a little wide angle. The roof pitch approved as appropriate in the national building was also found in the urban wooden building [4]. In Courland as the local peculiarities in national building should be mentioned: a residential building of two-part or three-part planning with a

communicating central part of the building, in which a furnace with a funnel type smokestack and two unheated vestibules (Picture 2), a massive barn with an open porch and porch poles adorned with decorative woodcarvings (Picture 3) were situated, as well as a horseshoe-type or angled stockyard, where under one roof different rooms connected with cattle breeding were joined together [1, 41].



*Picture 3. Log barn with an open porch adorned with decorative poles in Courland.
Foto: Vitolds Mašnovskis. 31.03.2010. [1-2]*

In **Semigallia** farmers built solid log buildings from trimmed beams which in the corners were joined in cross corners (Picture 4), also strut structures were used. Buildings were covered with a tent roof or double pitch roof with hip ends, and straw was used for the roofing, but in the second half of the 19th century – also shingles and tiles. In the villages by the Riga Gulf coast reeds were used for the roofing material [1, 197].

In Courland and Semigallia a two-part and three-part planning was common in residential buildings since the 17th century, which in the second half of the 18th century was improved: in the central part of the building a smokestack with a furnace was made, but one could enter the rooms only through the vestibule [3]. In towns next to the smokestack, placed in the central part of the building, two vestibules were attached: one facing the street, but the other facing the yard, through which it was possible to get into the outbuildings and garden. The entrance into the building was emphasized by the form of the door opening and portal.

In the western part of Latvia the two-part and three-part planning residential houses with a communicating central part were adapted to town conditions and construction of wooden buildings was promoted. Three-part planning residential houses were considered as the most appropriate for town building and they were placed on both sides of the street, so that the longer façade directed towards the carriageway would form the building line. In the townscape the silver grey wood tone and moss green tone prevailed. In some places the existing tiling roofs stood out especially brightly. People from towns and countryside, when staying in a particular spatial environment, which provoked emotions, obtained a certain understanding of environmental characteristics and functional content of spatial forms, the sense of scale – the ability to compare the proportions of the environment and body dimensions – was developed.



Picture 4. A wealthy farmer's residential house in Semigallia [I-3]



Picture 5. A residential house with a massive double-pitch, thatched roof with hip ends [I-4]

In **Vidzeme** farmers mostly built log buildings from round or slightly trimmed beams, which in corners were joined in cross corners. Buildings were covered with tent roofs or double pitch roofs with hip ends, but in East Vidzeme – also double pitch roofs. Straw or shakes were used for roofing, but in the second half of the 19th century shingles were used more often. Wealthier farmers' buildings had tiles on roofs. In the 18th-19th centuries buildings of Vidzeme farmsteads had lighter building forms than in Courland. Decorative elements were used less, whereas they were homogeneous. In Vidzeme as the local peculiarities in national building should be mentioned: a residential building of a two-part or three-part planning, threshing barn with a low and wide roof, tradition to build in one farm several small single-room barns, a bath house with additionally built living-rooms, as well as a threshing barn for living whose walls under the deep eaves made up only one fourth of the overall building height (Picture 5) [1, 91].



Picture 5. Threshing barn with a high roof in Vidzeme. [PK]

In **Latgallia** in the 19th century farmers built small log buildings from round beams, which were joined in corners with cross corners. Buildings were covered with double pitch roofs of straw or shake roofing. Utility rooms of different character were often joined under one roof, but sometimes also living-rooms and utility rooms. In

Latgallia the most obvious local peculiarities in national building should be mentioned: an Eastern European style chimney-less log with a “Russian stove”, a two-part or three-part residential house with an unheated vestibule, porch poles decorated with wood carvings, roof barge boards (Picture 6), window ledges (Picture 7) and gables of the buildings. A high fence with a decorative gate separated the yard from the street [1, 163–164].



Picture 6. Décor – barge board horses on the gable of a residential house [I-5]

Picture 7. Window decoration of a residential building in Latgallia. 09.06.2013. [I-6]

4. Artistic Expression in Modern Regional Architecture in Latvia

In the dynamically variable and information exuberant world where, forming super big spatial structures the scale and proportions are totally subjected to the economic requirements, each of us assesses the events and phenomena according to our knowledge and understanding of space and time. The scale determines a person's attitude towards regional expressions in art and architecture. A definite, diverse environment, where expressing an active attitude towards the surroundings, a human being would be able to develop the sense of scale and proportions, which has been developed in the interaction of experience and information during the lifetime, is very important for personal development.

In Latvia during lots of centuries rural and urban environment and landscape rich in architectonic and natural forms have been formed, which cannot be imagined apart from the cultural values and traditions. Wooden and log buildings have become a part of rural landscape, which encourage us to cultivate and develop the ancient

building traditions. The ability to perceive with an interest and shape the surrounding area in a creative way gives stimuli to restore the ancient buildings, changing their original function, as well as to create modern and contemporary wooden buildings. Studying the historical heritage, which shapes our living space, Latvian architects find new, creative solutions for the development of the informative emotional potential, for the attainment of artistic expression and identity preservation. The regional architecture is enriched by compositions of new construction planning created on a human scale, as well as in the spatial context of landscape and architectonic space.



Picture 8. Village "Amatciems". Architects: Sarmīte Bumbiere and Pēteris Blūms. [1-7]

In Vidzeme village "Amatciems". was built, changing the landscape (Pictures 8, 9 and 10), whose owner is *Aivars Zvirbulis*. The idea, construction and traditions of Latvian single-homestead were included in the planning of "Amatciems". Few-storey residential buildings placed among the water bodies and clusters of trees integrate nicely into the landscape. Preserving the human scale in the spatial composition of separate buildings and houses, it is possible not only to amalgamate organically and cover all spatial expression components, but also guarantee an appropriate perception of the spatial composition. Territory of village "Amatciems" is divided into 0,4 to 1,5 ha large piece of land.



Picture 9. Winter panorama of village "Amatciems".[I-8]



Picture 10. Autumn panorama of village "Amatciems". [I-9]

In Latvia due to the impact of different cultures the architectonic image and constructive solution of individual contemporary residential buildings is developing. The planning of family buildings is being improved, therefore the historically traditional two-part and three-part planning is not topical any longer. An environmentally – friendly and ecological building and harmonic integration into the landscape have become essential. Natural materials are used in building, the technology of log house building, technologies of thatched roofs and other national building traditions have been developed. One-storey buildings of village “Amatciems” have a single silhouette, which can be supplemented with a ground floor and attic (Pictures 11 and 12).



Picture 11. Village “Amatciems”.. Family house with living-rooms in the attic [I-10]



Picture 12. Village “Amatciems”. A country house [I-11]



Picture 13. Village "Amatciems". A family house [I-12]



Picture 14. Village "Amatciems". On a terrain slope a residential building a with a reed roof in winter [I-13]



Picture 15. Village "Amatciems". Stylized shingle roof of a country house [I-14]

Nowadays in order to create an image of detached houses built in Latvia towns, countryside or outskirts, solutions are being searched for the compatibility of the modern building with historical one. The changes in wooden and log house constructions are mostly connected with solution searches for a rational planning of the houses, constructive architectonic building, houses' sustainability and efficient energy, using local timber resources and providing a comfortable erection of prefabricated wooden houses. Developing the construction of log houses, the traditional building techniques are used, at the same time enriching the regional architecture with expressive building forms, where a special attention is paid to the proportions of exterior walls and roof height (Picture 13), as well as the roof shape and roofing material (Pictures 14 and 15). Ornament is used modestly.

Home construction can choose one of the three building types – timber frame, log or stone building, supplementing it with a boulder, decorative wooden cladding, colored glass or stucco exterior wall finishes. Acceptable roof coverings are reeds, split wood chips, clay or concrete tiles, as well as turf coverage. Each farm building volumes are adapted to site terrain, up to 8 meters above the spatial scale to be built or cultivated surface of medium height.



Picture 16. Guest house “Krauklīši” in Vidzeme. [1-15]

In the modern rural landscape of Latvia ecological, structural and functional changes take place, and under this influence also building of functionally new unconventional wooden buildings and log houses – rest homes and guest houses, social buildings and monumental complexes. A new type of wooden buildings, preserving the human scale, creates changes in the perception of open space, construction volume relations and language of architectonic forms. In Vidzeme the construction forms of the guest house “Krauklīši” (Picture 16) recalls a residential house in the countryside. In the high-roof attic rooms are made for guests’ accommodation.

Conclusions

1. In the modern Latvia the conventional building techniques are used for creation of wooden buildings and log houses of unconventional construction volume. The roof is emphasised in the human scale built houses, but the height of the ground floor exterior wall reaches approximately one third of the construction overall height.
2. Newly erected buildings are covered with stylized ancient roofs which are made of natural roofing material – straw, reed and shingles.
3. In rural environment buildings are mostly placed in groups, preserving the traditions of a single-farmstead planning.

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Materials from collections

PK – Postcards from Silvija Ozola's collection

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