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22 Riga street, Valdeka palace, Jelgava, Latvia, LV-3004
Phone: + 371 29185575
E-mail: una.ile@llu.lv

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INTRODUCTION

At the end of the year, our latest edition of the journal familiarizes the reader with the recent research findings in the landscape space. One of the most pressing issues is attributable to the heritage of the high-rise residential housing areas of the 60s–80s of the 20th century. The isolation or accessibility of the inner yards, shading and density of the woody plantations, the height, and their dendrological value – they are one of the criteria playing the role in providing quality of the living space in the urban environment. During that period, for the massive construction of the high-rise residential buildings, it was primarily required to provide quality of the housing, the diversity of the architectural and compositional solutions, and placement of separate elements of the point-type amenities. The criteria of the aesthetic quality of the outdoor space were not important. That was the country's political position in promoting an exaggerated population inflow from the fraternal republics. The second part of the published research is devoted to the rural cultural landscape in Latvia and its conservation opportunities. The restoration of the historic heritage and a strict observance of the protective zones are also extended to the distancing of the agricultural areas around the individual farmsteads.

The site's identity consists of different factors and one of them – the link to specific historical events or activities of known persons. It is brought to light in the research about Puzenieki Manor and its relation with the painter Janis Rozentāls. The nature of the identity of the site is particularly strongly marked by the bell towers of the rural churches. Unfortunately, over the past half century, they are gradually hidden by giant trees, so losing their powerful emotional dominants in the landscape. In turn, the research of the vertical dominants in the landscape solved by the modern engineering technology – view towers and platforms – shows that their form creation and the design can give aesthetically high-quality contributions to the rural environment.

PRIEKŠVārds

Mūsu jaunākais žurnāla izdevums gada nogalē iepazīstina lasītāju ar pēdējo pētījumu atziņām ainavtelpā. Viens no aktuālākajiem jautājumiem ir saistāms ar daudzstāvu dzīvojamo mikrorajonu mantojumu no 20. gs. 60. –80. gadiem. Iekšpagalmu noslēgtība vai caurstaigājāmība, apēnojums un kokaugu stādījumu blīvums, augstums un to dendroloģiskā vērtība – tie ir vieni no kritērijiem, kas spēlē lomu dzīves telpas kvalitātei pilsētvidē. Daudzīvokļu dzīvojamo ēku masveida būvniecībā šajā laikā kā primārais tika izvirzīta prasība par dzīvokļu kvantitāti, ēku arhitektoniski kompozicionālo risinājumu daudzveidību un atsevišķu punktveida labiekārtojuma elementu izvietojumu. Ārtelpas estētiskās kvalitātes kritēriji nebija svarīgi. Tāda bija valsts politiskā nostāja, veicinot pārspīlētu iedzīvotāju skaita pieaugumu no brālīgajām republikām. Otra daļa publicēto pētījumu aplūko Latvijas lauku kultūrainavu un tās saglabāšanas iespējas. Vēsturiskā mantojuma atjaunošana un aizsargzonu stingra ievērošana ir attiecināma arī uz agroteritoriju distancējumu ap lauku viensētām.

Vietas identitāti veido dažādi faktori un viens no tiem – saikne ar konkrētiem vēsturiskiem notikumiem vai kādu pazīstamu personu darbību. To pierāda pētījums par Puzenieku muižu un tās saistību ar gleznotāju Jani Rozentālu. Vietas Identitātes raksturu īpaši spēcīgi iezīmē lauku dievnamu zvanu smailes. Diemžēl pēdējā pusgadsimta laikā tās pamazām aizklāj milzu koki, tā zaudējot ainavā emocionāli spēcīgas dominantes. Savukārt, pētījums par mūsdienu inženiertehnoloģijas risinātajām vertikālām dominantēm ainavā – skatu torņi un platformas – pierāda, ka to formveide un dizains spēj dot estētiski augstas kvalitātes pienesumu lauku vidē.

Aija Ziemeļniece
Editor in Chief

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How to Measure the Impact of Spatial Aesthetics on the Everyday in Soviet Housing Estates?

Agnese Sofija Kusmane, Mag. art., *Doctoral student at Latvia University of Agriculture*

Abstract. This article describes a new method of measuring the influence of spatial aesthetics on preferability of scenes in the everyday in the Soviet residential areas of Riga – Agenskalna priedes, Kengarags, Zolitude and Lenina (Brivibas) iela. Serving as a rule, this method can also be used for the assessment of likability in urban spaces of other periods. In this case, the measurement table needs to be adapted to another scale. Discoveries in environmental psychology and evolutionary aesthetics inform the method largely. Scientists of this field have suggested that spaces with certain content, prospects and refuges, for instance, are liked and used by humans. Conversely, spaces that do not possess these contents are disliked and avoided. The last decade has also shown some attempts to introduce more specific measurements such as width, heights and length of spaces as well as size and counts of prospects, measured in meters, to describe the preferable spaces more precisely. The aim of this article is to analyse recent findings that propose concrete measurements of likable and dislikable spaces, to assemble them into a so called *model of spatial measurements* as well as to apply the model to the Soviet housing estates in Riga. The model of spatial measurements, which constitutes the basic tool of the method described in this article, can be used only, when open spaces in question have been measured in three dimensions. The model will be applied in four case studies from Riga, that will be introduced in detail in the chapter about the results. The application will allow a simple evaluation of any public space regarding its predicted likability, as long as one can measure its ground width, length, and heights of the buildings surrounding this space as well as count prospects and refuges. The model needs to be tested by consulting qualitative interview material on likability and perception *in situ*.

Keywords: spatial aesthetics, preferability, model of measurements.

Introduction

The question of how spatial aesthetics influence human's everyday life has challenged many. Yet, there is no reproducible method existing that can be used to measure this influence. In the times, when the Soviet housing estates are prone to be reconstructed and their reconstruction is meant to serve as an improvement of livability for the inhabitants, it is crucial to come up with a method that permits predicting preference of an outdoor space. Such method also helps to ascertain people's willingness to use and appropriate an outdoor space in order to model the reconstruction process accordingly. The aim of this article is to propose a new model of spatial measurement, based on evolutionary aesthetics and environmental psychology theories, that is capable to predict which spaces are potentially preferred by inhabitants and which are not. For the purpose of this article, a preferred scene equals a scene that is willingly appropriated, a disliked scene is a scene that is abandoned. The model differs from all other approaches which are currently in use, as it is three-dimensional and reproducible. To reach the aim of the article there are a few objectives in place: the existent measurements that are already calculated by numerous scientists on pleasant and unpleasant spaces, on spaces that induce feelings of safety or feelings of danger, on spaces that contribute to restoration or stress and alike need to be assembled into a united model. Based on layout plans of the

areas, the actual three dimensional measurements need to be carried out and, based on visits and photographs, the crucial elements, such as prospect and refuge, need to be counted. After that, the model of spatial measurements can be applied and potentially liked and disliked spaces can be detected.

Importantly, that spatial aesthetics in the context of this publication is defined as human visual perception field *in situ*. In an urban setting, the visual perception field is mostly defined by walls of houses. As opposed to a natural landscape, where, for instance, an everlasting field or moving foliage form a very blurred border of a visual field – the parameters of which are hard, if not impossible, to measure; a city possesses spaces that can be expressed in meters. Thus, spatial aesthetics are defined by the positions of walls of the buildings, their width, height, length as well as prospects and refuges these walls build. For the purpose of this article on the Soviet residential areas, the walls (not façades) are of specific significance, since they are the only elements that are expensive in reconstruction. The remains – façades, greenery, roads and everything also heavily influencing the sight – can be constructed or reconstructed if inhabitants voice the necessity. The created model, however, needs to be tested by acquiring qualitative data via interviewing inhabitants of the areas in question, which is the purpose of another article.

Method

The Choice of Theoretical Framework

There are numerous methods already used in landscape and urban settings which attempt to reach a similar aim – namely, to detect the impact of spatial aesthetics on the everyday, or some part of it, and I will introduce them shortly. A method that seems to have established itself in landscape research studies analyses the character of landscape in relation to perception [5; 14; 32; 34]. Such a method is largely based on environmental psychology theories as established by Kaplan's seminal work "Perceptions of Landscape: Conceptions and Misconceptions", too [17]. Back in the day, he created a matrix for evaluating the aesthetical qualities of nature, which are based on variables as mystery, legibility, coherence and complexity. These concepts in contemporary landscape theory turned into a sophisticated matrix of perceptual values: complexity, unity, cosiness and grandness [27; 24]. Regardless of their apparent poetic connotation, these concepts are strictly defined and thereby, allow researchers to use them for the analysis of landscapes. Mystery, for instance, shows how much new information a scene promises, legibility shows how much information is available from a certain vantage point and grandness shows how overwhelming a scene is. These concepts, applied on rural scenes, seem to be very convenient. Yet, an urban environment demands precise measurements of planned space and such concepts, undoubtedly valuable as we will see in the framework of the model presented in this text, cannot stand alone.

A method used in urban studies, namely spatial syntax, claims to analyse the interaction between social and physical realms in the city [10]. However, the fact that this empirical approach is only focussing on pedestrian movement on a two dimensional layout plan, provides hardly any possibility to use it for examining the influence of three-dimensionality on the urban space [3].

Another interesting method used in urban studies employs Geographic Information Systems (GIS). This method also gains popularity as it ascertains urban as well as rural spaces [22]. Yet, this method lacks theoretical input for choosing exact elements of analysis.

There is a large body of urban design literature that focuses on finding the ideal proportions of urban streets and squares or the "human scale". Often, large samples of qualitative data are used to support the findings. In many cases, also environmental psychology terms, such as mystery or legibility, are borrowed to qualify scenes [6]. However, most of the measures are expressed in proportions (1:2) and subjectively

given levels (for example medium, high or low level of mystery), which makes this method not reproducible on an objective basis.

As we can see, none of the methods mentioned, employed to investigate the existing urban spaces, can serve to understand the impact of spatial aesthetics on the everyday – space, as constituted by the walls of the buildings, their width, height, length as well as prospects and refuges, in order to ascertain which spaces are potentially preferred by inhabitants. Even though, some environmental psychologists and evolutionary aestheticians are interested in the urban environment and attempt to provide objective points of reference to measure three-dimensional space and predict its likability. These attempts are not yet part of a solid, widely used method, but rather bits and pieces of discoveries, that could become a method once connected. One of the objectives of this article is to compile a model, that can serve as a basis for such a method. I will shortly introduce now few concepts popular in both above mentioned fields.

The Main Concepts of Environmental Psychology and Evolutionary Aesthetics

The main premise of environmental psychology and evolutionary aesthetics is the belief that every human's most important aim is to survive and reproduce. Spaces, faces, smells, sounds etc., that promise the achievement of this aim cause happiness – the ones that predict or promise failure, cause disgust or fear. These emotions, processed through human's consciousness, turn into feelings of preference – like or dislike regarding to a particular space or anything else for that matter.

Appleton's *The Experience of Landscape* has been ground-breaking for investigating spaces. He established two theories of evolutionary aesthetics about landscapes: habitat theory and prospect-refuge theory [2]. He writes: "... aesthetical satisfaction, experienced in the contemplation of landscape, stems from the spontaneous perception of landscape features, which in their shapes, colours, spatial arrangements and other visual attributes, act as a sign-stimuli indicative of environmental conditions favourable to survival ..." [2, 69]. Appleton calls the above mentioned finding habitat theory. Appleton also states that humans evaluate any physical surroundings in which they find themselves with regard to the presence of prospect and refuge elements in those surroundings [20; 2, 70]. He calls an 'unimpeded opportunity' to see – a prospect, and an opportunity to hide – a refuge, hence, it is his prospect-refuge theory [2, 73].

According to Appleton, the physical shapes of a prospect may be direct or indirect. The first one ranges from a panorama (360° wide view) to a straight single as well as a multiple vista

(narrow view or views). The panorama has no limitations as regarding to sight – vistas, however, are restricted in some directions. Both direct prospects, panorama and vista, are available from the standpoint of a person. Indirect prospects, on the other hand, are secondary panoramas and secondary vistas, which are available only potentially, such as meandering medieval streets.

Appleton was less explicit regarding the description of the physical shape of a refuge. Later, Woodcock refines Appleton's work and defines two types of refuges: primary and secondary refuge [37]. From now on, I will use Woodcocks terminology about refuges. "Primary refuge measures the degree to which the viewer of the scene appears to be hidden from the view of others; secondary refuge is a measure of the number and quality of the other refuges available" [37, 25]. In other words, secondary refuge, opposed to the primary refuge, is situated at a distance from the observer. Primary refuge, in turn, surrounds the observer.

The next spin to this theory comes in 1979, when Kaplan presents his four categories (open, undefined scenes; spacious, well-structured scenes; enclosed scenes and blocked views) under the name of category-identifying methodologies (CIM). He provides an empirical theory, where three-dimensional environments are grouped according to their spatial shape, information and the action they cause as well as preference [15]. Kaplan was the first researcher to use so called lay-man in establishing CIM, while previous studies were merely based on so-called 'expert categories' [18]. Kaplan created CIM with the natural setting in mind, but they can be used in an urban environment, too, as already has been done [11]. In scenes with a low information level, chances of predicting what Kaplan calls 'potential actions' are limited, and vice-versa [8].

The category open, undefined scene is characterized by large, empty scenes that hardly possess any clues for potential actions – an open field or a large square, for example. Due to a lack of any space-organizing elements in such settings, a person's 'inner meter' cannot measure how small or large it is. According to Kaplan, this category is ranked with low preference. The category spacious, well-structured scene assembles environments that are spacious and provide some landmarks, structuring the given space into 'rooms', where different potential actions can take place. This category is the best-liked one [15]. The category enclosed scenes includes settings that "involve spatially well-defined dimensions with relatively limited depth" [15, 11]. Kaplan describes them as having the size of a car. The size will be 'adjusted' later in this text. This category is not particularly popular. The last category blocked

views includes environments where visual access is denied, as when in front of a blank, long wall. 'Blocked views' "make it difficult to find a direction in which to proceed" [15, 14]. This category is the least liked one. In one of the studies which apply Kaplan's categories in an urban setting, Herzog [11], who also interviewed lay-man, discovered a similar correlation between predicted preference ratings and spatial categories. The categories 'open, undefined', 'blocked-views', 'enclosed' were least liked and 'spacious, well-structured' settings were the most preferred ones. The categories themselves already propose a matrix that is in tune with the purpose of this article – to define liked and disliked spaces. However, there are also some downsides of the definitions of categories.

Both, Kaplan's and Herzog's, works use relative terms to define spatial categories: "spatially well-defined dimensions" and "too large". Yet, how large is too large to provide cues for potential action? How enclosed is too enclosed to ban information? How prominent are structures that organize a space into well-structured one? It seems that the only category that can be understood clearly from the literature is blocked view – which describes a situation in the city where people find themselves facing a monotonous wall. Thus, I will not search the measurements of this particular category, but look at the work of some scientists who tried to offer concrete metrics of three other categories. To render the found measurements into a system that can be reproduced for further usage, I will correlate them with the above mentioned categories of space.

The Model of Spatial Measurements

American environmental psychologist Stamps asked hundreds of lay-man to rank images of squares, focussing on the relationship between preference and enclosure [29]. Each of the squares was 49 m x 49 m large, but the heights of the buildings comprised three types: two stories (7.8 m), four stories (13.4 m) and six stories (19.8 m). The total gap size (the space between the buildings) varied from 7 m to 21 m, with different gap locations (middle, corners, both). His research proves that 49 m x 49 m squares are perceived as being safe, if the gap size is 14 m and the buildings are four stories high. Same yards are perceived as too wide if the buildings are two stories high. The difference in perception of safety declines, if the number of stories is larger than six. Stamps includes only one direct prospect in this setting and there is no refuge in it. In addition to that, Galindo and Hidalgo write "... the settings that ... allow the individual to observe the scene from a safe viewing point and with a wide perspective (open places) — will also be the aesthetically preferred settings" [7, 24].

So how do Stamps' findings correlate with three categories, for Stamps does not talk about any of the categories, even though, he is very well acquainted with them? His results demonstrate that the safest, optimally enclosed space is measurable. They also show that humans feel less comfortable if parameters change. According to Kaplan, maximum safety and preference is linked to the category 'spacious, well-structured space'. This is the reason, why yards and squares of the above-mentioned "ideal" dimensions calculated by Stamps will be further considered as a sample for identifying spacious, well-structured spaces in my research.

Yet, it is hard to believe that this sample is the only preferable yard space on earth. A new perspective to this issue is constituted by Spreiregen and Hayward & Franklin, who argued that not the actual size, but the height/depth (HD) ratio plays the decisive role with regard to the perceived enclosure. [28; 9]. Furthermore, contemporary scientists such as Alkhresheh also proved the usefulness of taking HD ratios into account [1].

The current HD ratio of Stamps' ideal square is 0,27. Accordingly, the optimal plaza space (49 m x 49 m, four stories at a height of about 13.4 m) can be increased proportionally in order to maintain the ideal size of a space. So, how far can parameters be stretched proportionally, while still maintaining their optimal spacious, well-structured virtue?

In order to resolve this issue, the analysis of preferred settings done by Herzog et al. is helpful [12]. These researchers have rated different urban and rural scenes according to their likability and assumed restoration effect. Again, in this research, Herzog does not talk about categories, but rather about the most preferred scenes. Thus, scenes which are most liked by non-experts are scenes that Kaplan calls 'spacious, well-structured scenes'; disliked ones are 'enclosed' or 'open, undefined scenes' or 'blocked views' – this represents a similar outcome compared to the conclusion of Stamps' findings. In this case, I took images depicting the smallest of large (larger than 49 m x 49 m) least-liked settings into account. For instance, a square of approximately 75 m x 75 m with few parked cars visible, embraced by six stories high houses and a gap of 24 m, demarcated by an approaching street. The relevant literature does not provide any evidence, neither photographic nor written, that any smaller disliked spaces of this particular ratio exist. Below this margin (75 m x 75 m, 21 m, ratio 0,27), the category 'spacious, well-structured space' begins. This space is an enlargement of 50 % in relation to the ideal space as defined by Stamps.

The variable that differs in both cases of squares described above, are prospects. Stamps' yards had

one primary prospect in form of a gap between the buildings, yet Herzog's space possesses a secondary prospect: a street approaching from the left side. Scenes with secondary prospects are more popular than scenes with direct prospects, since secondary prospects, such as bending streets, promise more information [23]. This might mean that a visitor of a yard larger than 75 m x 75 m would find the space likable, since a secondary refuge would encourage stronger feelings of preference. I will explain the significance of elements such as prospects and refuges subsequently.

Note, that both aforementioned spaces (plaza of 49 m x 49 m, surrounded by buildings 13,4 m of height and a yard of 75 m x 75 m, embraced by houses of 21 m of height) have ratios of 0,27. I will now introduce the ratio mark that indicates the change of a category, in order to correlate the measurements and categories according to the principle of analogy. Based on Stamp's ideal square (plaza of 49 m x 49 m, surrounded by buildings 13,4 m of height), I have chosen a ratio fluctuation of 0,5 points, as it reflects the difference of approximately two stories. Stamps indicates that two stories are enough to feel changes in safety and there are no other points of reference in the literature that indicate the perceived changes in ratio [29]. Thus, if the ratio is at least 0,5 points lower than the ideal ratio of 0,27 - namely, lower or equal to 0,22, then the space has to be called 'open and undefined'. The other side of the scale, a ratio which is 0,5 points higher than 0,27, marks another category called 'enclosed spaces'. So, if the ratio is higher or equal to 0,32, then the space is called an 'enclosed space'.

Now, after having established a ratio for all three categories, I will determine the missing smallest likable width and length parameters for the category 'spacious, well-structured'. In order to be precise, I will use a height of 13,4 m, like I did before. The ratio of 0,32 points at a height of 13,4 m is achieved, if the length and width of the square is 42 m. Thus, one can say that humans are not comfortable in the existing environment, if the ground space is smaller than 42 m x 42 m. Hence, this is the limit at the lower end of a 'spacious-well structured space'.

Based on the metrics and ratio fluctuations detected above, I will now derive the missing width and length parameters of an 'enclosed' and 'open, undefined yard space'. The smallest width and length parameters of an 'enclosed space' are 1 m each, the largest ones correlate with the upper border of 'spacious, well-structured space' – 75 m. The smallest 'open, undefined space' length and width parameters correlate with the smallest 'spacious, well-structured space' measurements – 42 m, the largest are 100 m.

In short, yards that are 42 m – 75 m large and surrounded by buildings that are 13,4 m – 21 m high, within a height to width ratio, that is larger than 0,22 and smaller than 0,32, compose a setting that is defined as likable within this framework. Thus, it corresponds with the description of a ‘spacious, well-structured environment’. Spaces with smaller or larger parameters and spaces with smaller or larger ratios are either ‘enclosed’ or ‘open, undefined settings’. Spaces that possess at least one primary prospect like in Stamps’s examples and fit into the measurements and ratios given above, are called ‘Standard yard spaces’. ‘Spacious well-structured yard spaces’ within the above mentioned parameters are liked and, within the framework of this article it is assumed, that the liked spaces are the ones that are used and appropriated in the everyday. Accordingly, the yards fitting the parameters of disliked spaces are assumed not to be used and appropriated.

There are some peculiarities that are equally important as length, width, height and ratio. Namely, specific prospects and refuges called legibility and mystery. As it has been indicated, I will describe them more precisely in the following, after explaining the measurement system for streets.

Research done by Alkhresheh contributes to the issue of safety and comfort by investigating cognitive variables, such as the feeling of enclosure with regard to streets [1]. Alkhresheh generated images and conducted a survey on very long, seemingly endless and straight streetscapes with setbacks of façades indicating a crossroad in the middle and background parts. The straight view complies with the direct type of vista, but the setbacks comply with the idea of secondary refuge as identified by Woodcock: a scene with a potential hiding place in the distance [37]. I will use one primary prospect and one secondary refuge for all street space categories in order to define ‘standard street spaces’.

In his doctoral dissertation, Alkhresheh not only describes the ideal ratio(s), but also gives measurements of preferred streetscapes [1]. His extensive empirical research, which was conducted as a streetscape ranking survey (comfort, safety, perceived enclosure), has shown that the most optimal streetscapes are those that comprise a height to width ratio value of 3:4. The function of comfort and safety shows an inverted U-shape. With regard to Stamps, Alkhresheh also does not talk in terms of ‘spacious, well-structured streets’ and does not use any of the other three categories for that matter. Yet again, the most comfortable, safe streetscape should be ranked as ‘spacious, well-structured’, since that description fully corresponds to the concept of a ‘spacious, well-structured space’. Conversely, streets that are too enclosed belong

to the category ‘enclosed space’ as well as streets that are too large and wide, these ones belong to the category ‘open, undefined space’.

According to Alkhresheh, streetscapes that make humans feel comfortable and safe, reveal ratios of 0,5 to 1.5, with 0,75 being the ideal ratio [1]. Alkhresheh’s findings are valuable for my work, since they provide ratios for streetscapes that I will use. His presented concept of an ideal street includes a height and width range of 6 m to 12 m. This research shows that values between 6 m to 12 m, within the given ratio, define a ‘spacious, well-structured street’. Ratio and height/width measurements that exceed the given ones, tend to be far less popular. The ideal streetscape is 9 m high and 12 m wide with a ratio of 0,75. The optimal street view proposed by Alkhresheh clearly fits into the requirements that Kaplan proposes for the category ‘spacious, well-structured scenes’ [15].

Lindal and Hartig demonstrate similar findings, too [21]. Higher buildings or a shorter distance from the street turn a similar space into an enclosed setting. They found, that the safest street is 14 m wide and is surrounded by houses that are 11 m high. Buildings higher than that create feelings of extreme enclosure and thus, generate negative feelings of being entrapped. I will use the measurements by Lindal and Hartig as a basis for my research, since they are closer to the real situation in Riga.

So far, it is known that the ideal streetscape is 11 m high and 14 m wide, this ratio can fluctuate between 0,5 to 1.5, 0,75 being the ideal ratio. Such a street has one primary prospect and at least one secondary refuge. The ratios are relative, as we have seen in the example with yard spaces. For instance, a street space that is 75 m high and 100 m wide, is hardly pleasant, even though the ratio is 0,75. Again, I have to ask a similar question compared to the one in the part about yards: Where is the turning point (expressed in meters) that marks the beginning of streetscapes being too large or small and disliked? I will use the same enlargement procedure that I used for yards, too. In case of the yards, described above, the ‘ideal’ size has been increased by 50 % to detect the upper boarder of a ‘spacious, well-structured street’. I will use Lindal and Hartig’s standard (11 high, 14 wide street) and enlarge it by 50 % [21]. The result is the largest possible ‘spacious, well-structured street’ being 16,5 m high and 21 m wide. A street exceeding these limits is either an ‘open, undefined street’ or an ‘enclosed street’, depending on ratio. Alkhresheh himself ranks spaces larger than this as not particularly safe or comfortable, too [1]. Thus, this is the first divide between two categories of streetscapes. I will leave the smallest end of a ‘spacious, well-structured street’ at the point of

TABLE 1

Standard spaces [Source: created by author]

Category Setting	Length as bordered by walls (m)	Width as bordered by walls (m)	Heights of buildings (m)	Ratio	Prospect amount/ type	Refuge amount/ type	Mystery	Legibility	Preference
Spacious-well structured yard	42–75	42–75	13,4–21	0,27 + - 0,5	1 primary	–	–	–	Liked
Open-undefined yard	> 42–100	> 42–100	> 8,5–21	< 0,22	1 primary	–	–	–	Disliked
Enclosed yard	1–75	1–75	> 14–26	> 0,32	1 primary	–	–	–	Disliked
Spacious-well structured street	Unl.	11–16,5	14–21	0,5–1,5 Ideally 0,78	1 primary	1 secondary	–	–	Liked
Open-undefined street	Unl.	11–43	14–21	< 0,5	1 primary	1 secondary	–	–	Disliked
Enclosed street	Unl.	1–16,5	14–25	>1,5	1 primary	1 secondary	–	–	Disliked

11 m in height and 14 m in width, since in Riga's residential areas there are no buildings smaller than that and of interest for me anyway.

From the 'ideal' street space given above, I will now detect the smallest and largest parameters for two other categories analogically, as I did for the yard spaces. I will start with 'open, undefined street spaces' and will continue with 'enclosed streets'. Yet, I will use different ratios – these ones already established by the findings of Alkhresheh. The starting point is 0,75 – the ideal ratio. When 0,25 are subtracted, resulting in the smallest ratio of 0,5, the ratio for the category 'open, undefined street' is achieved. If 0,75 is added, then the largest ratio is reached – 1,5. Similar to the yard spaces, the largest ratio corresponds to an 'enclosed space' and the smallest to an 'open, undefined environment'. The smallest width parameter of an 'open, undefined street', in analogy to the instance of yard spaces, correlates with the smallest width parameter of a 'spacious-well structured street' and it is 11 m wide. Further, derived from a maximum height of 21 m – the highest 'spacious, well structured street' building, which is also the highest

possible height of a building in an 'open, undefined street' environment - one is able to detect the largest width parameter of an 'open, undefined street space'. It must be two times the height in order to receive the ratio 0,5, hence, it is 42m. Thus, 42 m is the widest street parameter in the category 'open, undefined street'. The smallest enclosed street width is 1 m. The largest width parameter is 16,5 m, which corresponds to the largest width parameter of a 'spacious, well-structured street space'. This correlation is similar to the principle used in case of yard spaces. Accordingly, the highest building of an 'enclosed street space' is 25 m high – which is derived from the given width (16,5 m) multiplied with the ratio 1,5.

In short, streets that are 11–16,5 m wide, surrounded by buildings that are 14–21 m high, within a height to width ratio of 0,5–1,5, compose a street that, in this framework, is defined as a preferred one. Thus, this type of street corresponds to the description of a 'spacious, well-structured environment'. Spaces with smaller or larger parameters and spaces with lower or higher ratios, are either 'enclosed' or 'open, undefined

streets'. Spaces that possess one primary prospect as well as one secondary refuge and fit into the measurements and ratios given above are called 'standard street spaces'. Spacious, well-structured streets are considered to be liked and appropriated in the everyday. Conversely, the streets that fit into the parameters of disliked spaces are assumed not to be used and appropriated.

The specifics of length, width, height, ratios as well as prospect and refuge of three different categories explained above, namely, the category 'spacious, well-structured, open, undefined and enclosed space' is summarized in Table 1 below. As I already mentioned above, the fourth category, 'blocked views', is well described in the literature and does not need to be measured.

Table 1 only provides measurements for rectangular spaces – but how to treat irregular yards? In order to attribute a theoretical category and to find a ratio of the space according to the literature, one needs to divide height by width or length. Unfortunately, there is no answer to the question, as to the procedure applied in the case of irregular spaces. However, I am convinced that it is reasonable to analyse slightly irregular yards by calculating the medium size of the side, which is one fourth of the sum of all four sides. For example, if the sides are 60 m, 80 m, 90 m and 110 m long, then the medium length is 85 m. However, this calculation only makes sense, if the difference between the sides is not too vast and also, if the yard actually has four sides. If the difference between the sides is two times the smallest side, then the size of the smallest side is taken as a reference length for the whole area. This means, if the sides of a yard are each 30 m, 100 m, 30 m and 100 m long, the medium length is 30 m (and not 65 m). Such a yard is more like a street space. In case of a street, the length of the view is not significant - at least this is how street spaces are treated within the scope of this work. When calculating the ratio of a yard, it makes sense to treat street-like yards the same way as streets, i.e. to take only the smallest side (width and not the length of a street) and height of the buildings into consideration. In the case of triangles, which only occur rarely, the measurements are calculated by extracting one third of the sum of three sides.

In the case of buildings with variant heights within the visual field of one scene, the same principle applies. If the difference between the heights of the buildings is not too large, then a medium height is calculated by adding together the different measures of height and dividing them by the number of the heights added. If the scene is defined by the buildings, the height of which is considerably different (the smallest height is two times smaller than the

second smallest height), then the height of the largest building is taken as a parameter.

If a scene is constituted by 'blurred' arrangement of buildings, such as houses placed in fishbone or zig-zag patterns, then the closest corners of the buildings must imaginatively be linked together. The link has to be considered as the border of the given setting.

Adding the Elements of Mystery and Legibility to the Model

Having constructed the metric standards to identify three spatial categories, I realized that the above mentioned prospects and refuges can vary a lot in any given case. This means, that an application of such standards to spaces in Riga's residential areas turns out to be problematic. For instance, think of a square or a yard that does possess the 'ideal' size, shape and height. Namely, a yard that is 49 m wide and long and surrounded by walls that are 14 m high. However, this yard has three secondary prospects and two secondary refuges instead of one direct vista. Is it more popular and appropriated, rather than the 'ideal' square which has only one direct prospect? Is it possible that a decent amount of secondary refuges is able to alleviate the dislike of a space that, according to the standard, would fit into an 'open, undefined setting'? Does a balanced feeling – something between like and dislike – appear in such cases? If yes, I will preventively call this feeling 'toleration' and accordingly, call the corresponding spaces 'tolerated spaces'. A tolerated space is, in terms of like and dislike, in the middle of the scale. Hypothetically, under certain circumstances tolerated space can become a space that is appropriated by inhabitants, especially if there are no spaces in the proximity that are more popular.

To investigate how and which kinds of prospects and refuges influence the attachment to certain spaces, two more supplementary concepts, already mentioned in this article, need to be included in the aesthetical assessment framework: legibility and mystery. The former is a specification of a prospect, the latter is a particular type of refuge. According to Kaplan, the prospect as a promise for more information accessible at the current moment develops into the concept of mystery. The secondary refuge as a possibility of making sense of a scene from a safe vantage point contributes to the concept of legibility [17]. I include these concepts, but no other elements such as complexity, coherence etc. (see above) in the assessment model, as empirical investigations prove that high levels of mystery and legibility correlate with higher preferability [23].

Note, that not every secondary refuge represents legibility and furthermore, that not every secondary prospect promotes mystery. Legibility is provided by

TABLE 2

Allowed Deviances [Source: created by author]

Category Setting	Length as bordered by walls (m)*	Width as bordered by walls (m)*	Heights of buildings (m)*	Ratio	Prospect amount/ type	Refuge amount/ type	Mystery	Legibility	Preference
Open-undefined yard	> 42 – 100	> 42– 100	> 8,5–21	< 0,21	Not relevant	Not relevant	At least 1	At least 1	Tolerated
Enclosed yard	1–75	1–75	> 14–26	> 0,33	Not relevant	Not relevant	At least 1	At least 1	Tolerated
Open-undefined street	Unl.	11–43	14–21	< 0,5	Not relevant	Not relevant	At least 1	At least 1	Tolerated
Enclosed street	Unl.	1–16,5	14–25	> 1,5	Not relevant	Not relevant	At least 1	At least 1	Tolerated

* If parameters are two to three times larger than parameters of the upper border, then there should be two to three times more mystery/legibility in order to rank the space as tolerated.

a secondary refuge, creating the possibility to understand the scene from a safe vantage point. If, from this refuge, one would look onto another part of a scene that is not completely available from the initial standpoint, then the observer would see yet another portion of the given setting. Not every secondary refuge offers more information of a scene as the original standpoint does. Regarding the mystery component or the secondary prospect, “the preference for scenes where it appears as if one could see more if one were to ‘walk into’ the scene a ways” [17]. The possibility of gaining more information is provided by a prospect that is a ‘bended, curved’ or ‘fractured vista’. Only straight vistas do not represent mystery.

There is no literature on how to combine metrics and mystery as well as legibility elements in the evaluation of spaces. We only know that their presence positively influence preference. The ‘standard open, undefined, disliked space’, according to my framework, becomes ‘tolerated space’, if there is at least one element of mystery and one element of legibility. If the setting is twice as large as a ‘standard open, undefined space’, then two elements of mystery and legibility are needed in order to outbalance dislike and turn the space into

tolerable one. The same applies for ‘enclosed spaces’. The ‘standard enclosed, disliked space’ turns into a tolerated one, if there is each, one element of mystery and one element of legibility. If the size of a standard space is doubled, mystery and legibility need to be twice as high as the original amount and so forth. I will call such deviances from standard metrics of categories ‘allowed deviance’, which will serve as a predictor of tolerated settings.

Mystery and legibility will be only measured within a distance of 75 m. Namely, the upper border of ‘spacious, well structured space’ in my framework. Logically, there is no use of a single secondary refuge within a distance of 200 m. Such a distance is too far to be reached within a ‘safe’ time frame. The explanation given above is summarized in Table 2.

Field Work Methods

Methodologically, my work presents an innovation, as not only the spatial measurement model constructed above was never used before, but also because my work was conducted in situ. Most research on spatial categories or on related topics relies on photo and video material, drawings

or computer simulated images of spaces as stimuli for participants to rank spaces according to preferability and/or feeling of safety, comfort, enclosure etc. [33; 13; 30; 21; 35]. I will, on the contrary, use formal standards and deviances in order to predict the category in real space. In the following part, I will explain the method used to collect data in this field.

I have selected 80 possible everyday routes in every housing estate, five of which were selected by the random choice principle to avoid subjectivity. Every route runs between two points: the exit of a dwelling to the nearest facility, such as public transport stops, shops, libraries, post offices, parking lots, schools, kindergartens etc. Each route comprises a distance of at least 500 m. Besides, none of the routes is longer than 800 m – a distance, where “psycho-social purposes of neighbourhood [are] ... strongest” [19, 2107].

Furthermore, on each route five scenes are marked, except for Lenina iela residential area, where the routes are significantly shorter than anywhere else. However, the choice of scenes on the routes is not random. Each time, the visual field changes, it reflects a change in the landscape and a new scene with different visual characteristics has developed.

After detecting the scenes, they are captured by using a photo camera according to a shooting script. A shooting script is a set of guidelines that is closely linked to the research question [31]. The camera is situated at the height of the average eye-level (160 cm) and at the degrees of 180 horizontally and 90 vertically, always facing the walking distance. Although the field of the human vision as well as the informational load of the particular scene depend on age the usage of peripheral vision or movement of head permits humans to mostly perceive the front hemisphere of what is surrounding them and thus, acquire at least a vague idea of the scenery at the angle of 180° [36; 4]. Hence, 180° images represent the field of both – direct and peripheral sights. All in all, I detected 99 scenes for further analysis. This method of camera usage for fieldwork is called photo-documentation [26]. This method forces the researcher to work according to a certain system or a route, instead of pushing the button of a photo camera whenever there is an interesting scene for the analysis [31; 25].

Eventually, the photos and Google earth data of the particular scenes will be measured and analysed. The height to width ratios are measured by using supplementary data from original layout-plans of the residential areas. The determinant points are walls and streets. Attribution of theoretical spatial category is carried out on the basis of measurements and scene elements. Importantly, the notes on irregularities and particular features, such as hills

and groups of trees, have to be marked. In the end, the presence of these elements might play an important role when data, extracted from the metric method, is compared to a set of data from an interview.

Later on, the estimated theoretical preferability ratings will be attached to each scene. Every scene is allocated a number of points: 30–21 means liked; 20–11 tolerated, and 10–0 disliked. The precise number of points depends on the quality and visibility of the mystery and legibility component in the scene. All information about each scene will be displayed in a table.

Lastly, all the scenes in the four residential areas are depicted on a route map. Theoretical categories and likability rankings, as well as borders of each setting, are graphically depicted.

Results and Discussion

The creation of replicable method for evaluation of influence of spatial aesthetics on the everyday and particularly the assemblage of the model of spatial measurements proved to be a complicated process. It was decided that four spatial categories, introduced by S. Kaplan in 1979, will serve as the basic division of all possible spaces in an urban environment. After that, the measurements stated in the last decade by various scientists of liked and disliked, safe and dangerous, too enclosed or too open spaces etc. were fitted to three (one did not need any measurements) of categories, which were also granted different likability options. Categories had to be expressed as spaces of a rectangularish or triangularish shape to adapt them to the measurements. It turned out, that quite a few parameters of liked and disliked, comfortable and uncomfortable, safe and unsafe etc. spaces were already published in the literature. Yet, there were many others that had to be calculated based on an analogy principle, which might be considered to be a downside of the model. To achieve a more differentiated model, the counts of mystery and legibility elements were included. The completed model proved to be easily applicable in most of the cases. The precision of the measurement of spaces in three dimensions played an important role in the process. Yet, there were also a few uncertainties about the application of the model, caused by irregularities of spaces, for instance, if an outdoor space is not a rectangle or triangle, but has a very asymmetric shape. Here, the space's measurement can hardly be precise - this results to be a downside of such a model, too.

In short, 99 scenes were analysed by the metric method, these are:

- 41 open, undefined disliked scenes;
- 28 open, undefined tolerated scenes;
- 19 enclosed disliked scenes;

- 10 enclosed tolerated scenes;
- 1 spacious, well-structured liked scene.
- there are no blocked views amongst the scenes.

It is expected, that the 60 disliked scenes are rejected by the inhabitants, all 29 tolerated scenes are appropriated under certain circumstances, and the only liked scene is appropriated. Depending on amount of prospects and refuges, some of the disliked scenes were rated with the minimum of the possible points – 1, some were rated with the maximum – 10. Yet, some tolerated scenes were ranked with the least possible number of points – 11, which shows that they were ranked closely to the disliked scenes. Some other scenes with 20 points almost reached a liked scene status. The system of points will gain its importance, once the results are correlated with qualitative interviews. For the purpose of shortness, I will not discuss the given points here.

If one looks closer at the distribution of scenes among particular residential areas, then the composition is (in chronological order):

- Agenskalna priedes (24 scenes): 13 open, undefined disliked; six open, undefined tolerated; three enclosed, disliked; two enclosed tolerated scenes;
- Kengarags (36 scenes): 14 open, undefined disliked; ten open, undefined tolerated; nine enclosed, disliked; two enclosed tolerated; one spacious, well-structured liked scene;
- Zolitude (31 scene): twelve open, undefined disliked; nine open, undefined tolerated; seven enclosed, disliked; three enclosed tolerated scenes;
- Lenina iela (8 scenes): two open, undefined disliked; three open, undefined tolerated; three enclosed, tolerated scenes.

The below given visual data summary represents bird's eye view images picturing every route represented by lines and arrows of different colours. Next to the arrow, there is a white circle that shows a letter and a number. The letter indicates the name of the area (A for Agenskalna priedes, K–Kengarags, Z–Zolitude, L–Lenina iela), the first number is the number of the route, the second number is the number of the scene. Every scene is demarcated by a rectangle or triangle. They all represent wall to wall spaces, which can be viewed from a given standpoint marked as an arrow. The colours reflect the following meanings: dark blue represents an 'open, undefined, disliked scene'; light blue represents an 'open, undefined, tolerated scene'; dark green represents an 'enclosed, disliked scene'; light green represents an 'enclosed, tolerated scene' and yellow represents a 'spacious, well-structured scene'.

A route (marked in red) in Agenskalna priedes is composed of five scenes: four yards, one street. Figure 1 represents these five scenes filled with three

different colours, representing a theoretical ranking of each scene. The route starts with scene A11 which is ranked as an 'open, undefined and disliked scene'. Then the route proceeds through settings A12 and A13, categorized as 'enclosed and disliked scenes'. In the end, the route leads through the spaces A14 and A15 which are 'open, undefined and tolerated areas'.

As explained earlier in this article, the shape of the yards is defined by the walls or streets. Note, that the shape of settings A12 and A13 is defined by the buildings standing in the front part of the scene. The points, where buildings end, the straight lines of the scenes are seemingly formed by empty air and not by walls or streets. Yet, standing at the viewpoints A12 and A13, the field of vision is strongly influenced by these bordering houses close to the viewer. Hence, the whole shape of the setting is defined by those houses, even though they only border a very small fraction of the space.

Figure 2 shows a route (marked in red) in Kengarags, that includes eight settings. Note, that one of them falls under two types of spaces: street and yard. Thus, there are eight yard spaces and one street space. The route starts with an 'open, undefined, disliked street scene' (K11). Then it moves through a small gap (10 m) between the buildings, which are categorized as an 'enclosed, disliked yard scene' (K12). This kind of gap appears triply on this route, since the groups of houses, through which the route is proceeding, are identical. The following space is an 'open, undefined, disliked yard' (K13).

The route proceeds with two 'enclosed, disliked yard spaces' (K14, K15, the above mentioned gaps), and continues with the yard K16, the form of which is identical to K13, and both are 'open, undefined, disliked yards'. It is followed by an 'enclosed, disliked yard scene', which is just another gap like the one in scene K17. At the end, the first route leads into a scene that splits into two separate settings - an 'open, undefined, disliked street' and an 'open, undefined tolerated yard' (K18.1, K18.2). Note, that this route is mostly passing through disliked settings.

Figure 3 shows a route (marked in red) in Mikrorayon, nr. 2 in Zolitude, that is composed of four street spaces and three yard settings. The first and second viewpoints are 'open, undefined, disliked street spaces' (Z11, Z12). 'Open, undefined, disliked settings' are changed by an 'enclosed, disliked space' that is formed by a yard (Z13). Further along, the red route crosses an 'open, undefined, tolerated street' (Z14) and a horseshoe-shaped yard, which is also an 'open, undefined, tolerated space' (Z15). After that, the route leads through an 'enclosed, disliked tunnel-like space' (Z16) and passes on to an 'open, undefined, disliked street' (Z17).

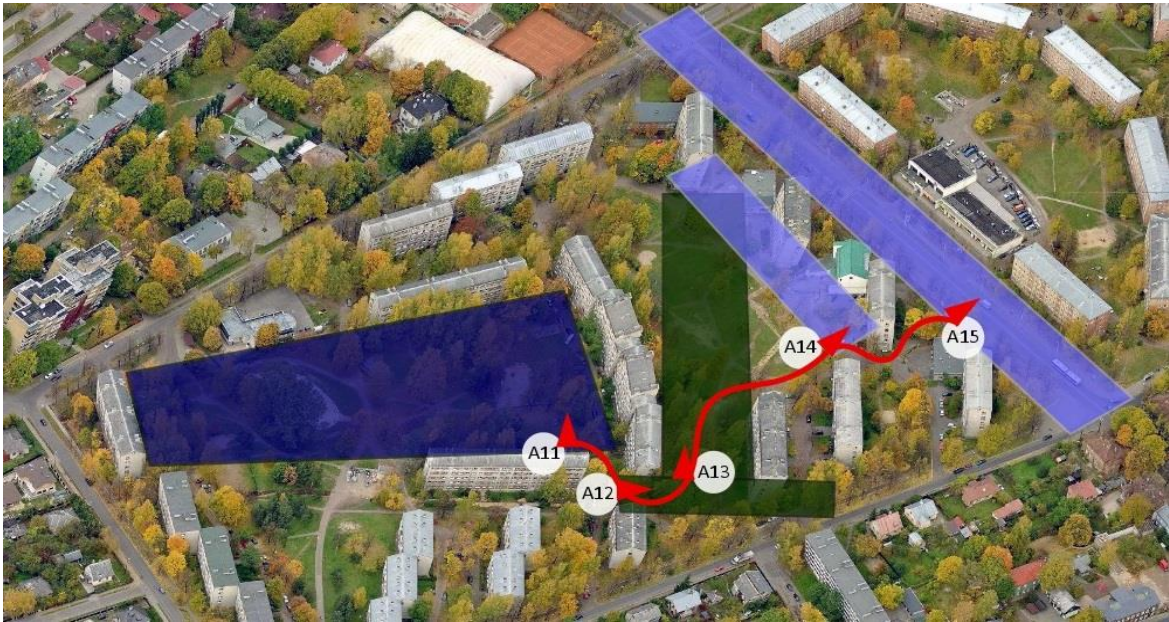


Fig. 1. Agenskalna priedes, first (red) route with five stations A11 – A15. Dark blue – open, undefined, disliked scene; light blue – open, undefined, tolerated scene; dark green – enclosed, disliked scene [Source: created by author]

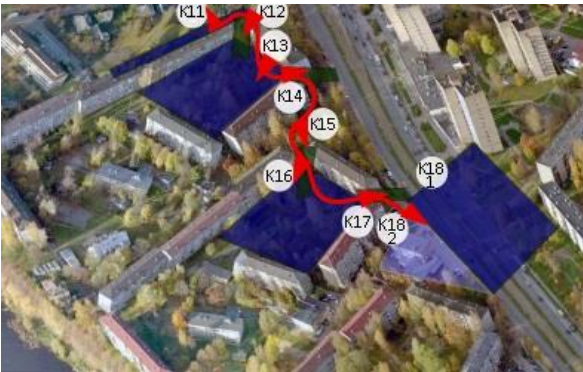


Fig. 2. Kengarags, first (red) route with eight stations K11–A18. 2. Dark blue – open, undefined, disliked scene; light blue – open, undefined, tolerated scene; dark green – enclosed, disliked scene [Source: created by author]

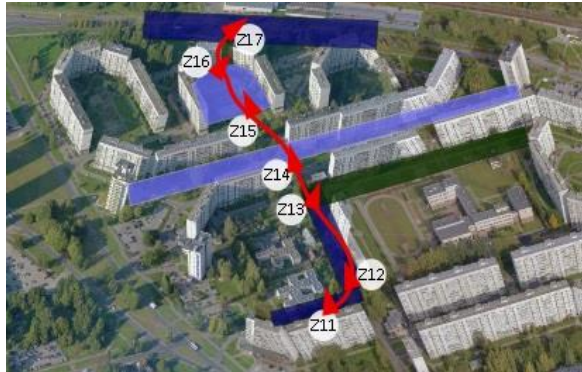


Fig. 3. Zolitude, first (red) route with seven stations Z11–Z17. Dark blue – open, undefined, disliked scene; light blue – open, undefined, tolerated scene; dark green – enclosed, disliked scene [Source: created by author]

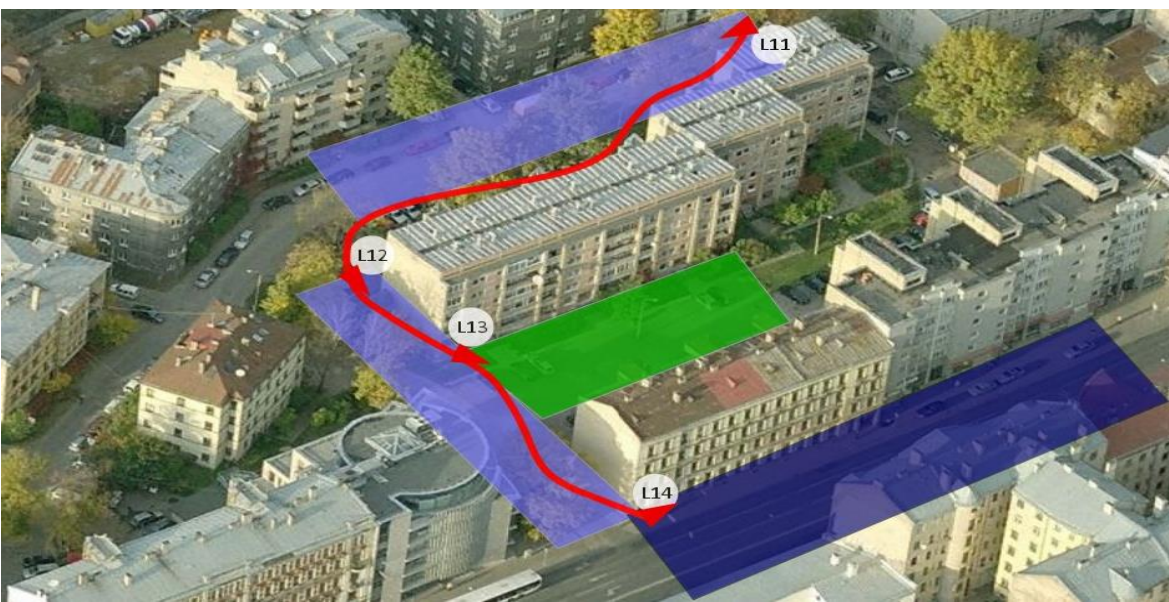


Fig. 4. Lenina iela, first (red) route with four stations L11–L14. Dark blue – open, undefined, disliked scene; light blue – open, undefined, tolerated scene; light green – enclosed, tolerated space [Source: created by author]

The first route shows some quite interesting features of Zolitude – namely, large spaces that would, for their size alone, usually be ranked as disliked spaces. However, they are ‘upgraded’ to tolerated spaces, because of a reasonable amount of mystery and legibility, which is created by bending house façades and addendums of the buildings on the ground floor level, especially on the street.

Lenina iela (now Brivibas iela) 177 consists of only two blocks of five stories each. Figure 4 shows a route (marked in red) in this area. It contains one yard scene and three street scenes. The first two settings are ‘open, undefined, tolerated street spaces’ (L11, L12). Here, the size of the housing blocks almost allow these streets to be categorized as ‘spacious, well-structured’. The red route also includes an ‘enclosed, tolerated yard’, which, due to many setbacks, represents large amounts of legibility. At its last point, the route enters an ‘open, undefined, and theoretically disliked, street scene’ (L14). Interestingly, the last scene is on Lenina iela, which consists of a large number of pre-war buildings.

Conclusion

The aim of this article was to create a model of spatial measurements, based on recent findings in environmental psychology and evolutionary aesthetics, as well as to show its applicability to assess the predicted likability of the Soviet residential areas in Riga. Furthermore, my intention was to develop a model that can also be reproduced in order to measure other modern urban spaces. The above mentioned goals have been achieved. Yet, the model might need some improvements. As an example, the model is created for measurements of

outdoor spaces being rather regular than irregular in shape. Assessing yards and streets with an irregular shape is rather difficult by using this model. In addition to that, the issue of HD ratios used in the model needs to be addressed, too. Here, the fluctuation of ratios defining categories is based on observations by Stamps and Alkhresheh. Deeper and wider knowledge of how ratios change among different categories would define the model more precisely. Likewise, the introduction of tolerated spaces presented in this article, meant as a compromise between traditionally known liked and disliked spaces, potentially needs reconsideration – there might be even more than three levels of certain feelings about spaces. In addition to that, it is questionable, if the viewpoint of the observer might change the preference ranking of a yard or a street, since the visual field and thus, the visible space under question, might alternate as one moves further along. Also the fact that mystery and legibility are measured only within a distance of 75 m can be interpreted as a problem. It must be proved if mystery and legibility elements that are situated further than this distance play a significant role, too. All in all, the overall results achieved by this method have to be tested and improved by using qualitative interviews. Most likely, interviews with inhabitants will show that they render the scenes somewhat differently with regard to their preferability and appropriation as well as their visual perception. Yet, the prospects are that social, economic, cultural aspects of each individual will still leave some detectible common pattern of impact of spatial aesthetics in perceiving spaces of the Soviet residential areas in Riga.

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INFORMATION ABOUT AUTHOR:

Agnese Sofija Kusmane, Mag.art., Doctoral student at Latvia University of Agriculture. Her research interests include correlation of space and behavior as well as forestry. E-mail:kusmane@gmail.com

Kopsavilkums. Raksts iepazīstina lasītāju ar jaunu un reproducējamu teorētisko metodi telpiskās estētikas ietekmes novērtēšanai uz iedzīvotāju ikdienu, kā piemēru izmantojot četrus Padomju laika tipizētās arhitektūras dzīvojamajos rajonos Rīgā – Āgenskalna priedes, Ķengarags, Zolitūde un Leņina (tagad Brīvības) iela. Izvēlētie ansambļi pārstāv četras atšķirīgas dekādes Padomju laika pilsēt būvniecībā. To izvēle un analīze pamatojama ar apstākli, ka daudzi no šī laikmeta dzīvojamo rajonu iedzīvotājiem izrāda interesi par rekonstrukcijas veikšanu. Tomēr ir svarīgi apzināties, ka ne vienmēr pārbūve uzlabo dzīves kvalitāti. Lai izprastu šo rajonu telpiskās estētikas ietekmi uz ikdienu ir nepieciešams izveidot metodi, kas ļauj šo ietekmi izmērīt. Rakstā aprakstītā metode ir reproducējama, tās autore tiecas piedāvāt pielietojamu un atkārtoti izmantojamu veidu, lai noteiktu Padomju dzīvojamo rajonu rekonstrukcijas optimālāko ceļu. Aprakstīto metodi iespējams izmantot arī citu laikmetu pilsētvides pētniecībai, tomēr šajā gadījumā rakstā piedāvātā mērījumu skala jāpielāgo attiecīgo ārtelpu izmēriem. Teorētisko nostādņu pamatā ir evolucionārās estētikas un vides uztveres psiholoģijas atziņas. Šo lauku zinātnieki jau pirms vairākām desmitgadēm ir atklājuši, ka ārtelpas, kurās ir vērojami, piemēram, tādi elementi, kā skats un slēpnis, ir daudz patīkamākas un tiek apmeklētas un lietotas jeb aproprīetas biežāk. Ainas, kurās šādi elementi nav redzami, attiecīgi nav tīkamas un netiek aproprīetas. Pēdējās dekādes laikā vairāki zinātnieki ir aprēķinājuši dažu patīkamo un nepatīkamo telpu izmērus. Rakstā ir apkopoti pieejamie mērījumi, kas izsaka patīkamu un nepatīkamu telpu lielumus metros. Lielākā daļa rakstā citēto mērījumu ir izkaisīti vairāku autoru darbos. Trūkstošos lielumus autore ir aprēķinājusi, vadoties pēc analogijas principa. Tur klāt visi patīkamo un nepatīkamo telpu mērījumi ir klasificēti, izmantojot četras vides uztveres psiholoģijā pazīstamas telpu kategorijas. Tās ir: atvērta, nedefinēta telpa; plaša, strukturēta telpa; ierobežota telpa; bloķēts skats. Plaša strukturēta ārtelpa ir vistīkamākā, bet pārējās cilvēka acij ir netīkamas ārtelpas. Rakstā citētie un jauniegūtie mērījumi, pakārtoti attiecīgajām kategorijām, ir apvienoti telpisko mērījumu modelī. Modeļa pielietošanas gaitā ir iespējams noteikt katras analizētās ārtelpas, šajā gadījumā – pagalma vai ielas – teorētisko pievilcīgumu un iespējamo aproprīācijas intensitāti. Modeļa izmantošana ir iespējama tikai tad, ja interesējošās ārtelpas ir iespējams izmērīt trijās dimensijās – ir nepieciešams zināt gan telpu ieskujošo ēku augstumu, gan pagalma vai ielas platumu un garumu. Svarīga ir arī ārtelpas apskate, kuras laikā ir iespējams identificēt specifiskus skatus un slēpnus, to skaits arī ir būtisks, lai klasificētu ārtelpu kā potenciāli patīkamu vai nepatīkamu. Svarīgi paturēt prāta, ka metode esošajā stadijā ir izmēģinājuma fāzē, to ir nepieciešams pārbaudīt un uzlabot, balstoties kvalitatīvo interviju ar iedzīvotājiem materiālā.

Lookout-spots in the telescope

Anna Eplényi and Olga Harea, *Szent István University, Hungary*

Abstract: In the last decade the classical architectural expression of “watch-towers” transformed into a more complex landscape-related composition of “observation-spots, view-platforms or panoramic walkways”. This research focuses on 30 various examples of contemporary lookout- tower- platform design which are located in the open, natural, unbuilt landscape. The examples are compared according to 9 aspects (complexity of landscape experience; panoramic-views and close-up sensory experiences, reflection of local materials, fitting into the terrain of the site, the path-system to the site, fitting to the natural setting, metaphoric meaning and scale of intervention). In contrast with classical towers this selection highlights a more sensitive design approach of observing and experiencing the natural environment. Our goal is to find the most harmonious sites and the best compositional linkages in-between the open views/scenarios and the local landscape setting/site. The research concludes that there are five main category according to their ‘fitting’ forms of these scenic spots: A) classical lookout towers, B) modified viewing/observation towers, C) lookout platforms, terraces and decks, D) raised walkways, canopy walks, E) viewing gallery pathways; and the last one offers a much greater variety of experiences with harmonious linkage with the site.

Keywords: watchtower, lookout platform, walkway, scenic spot, landscape design, contemporary architecture.

1. Introduction – Catching the view

The experience of the *far-distance-views* and *landscape-vistas* have always been a crucial issue in the history of landscape architecture as well as in the garden art: Islamic *Miradors* are balconies of the small-scale garden courtyards; the *Ting*-pavilion symbolise the hut of the resting owner in Chinese poet’s garden, while the *Lou* (two storied pavilion) serves as a lookout point outwards the garden; renaissance *Belvedere* or *eye-catchers* of landscape parklands underlines the importance of inner and outer focus-points in the landscape-design. While landscape-gardeners of the 18-19th century had the possibility to gently modify the terrain of the site, the designers of today have limited tools to transform the *landscape-scenario* itself (in a natural park or protected site), but they can manipulate the experience of the *sights from the viewer’s perspective* by influencing the tourist-paths, lookout-spots and their scenery-types [1]. More and more emphasis is put on the site attachment and on the mimicry-design with sensitive and gentle landscaping. This research lists plenty of ways on how this *landscape-linkage* can be improved with contemporary architectural and landscaping compositions.

In the last decade the compositions of classical *lookout-towers* pass through significant changes. They are not anymore vertical towers with a single spiral-staircase and a platform to look-out, as former narrow minarets or concrete geodesic reference-columns (common in Eastern-Europe as alternative view-towers). The historical *castle tower-like objects* were followed in the middle of the 20th century by high *metal/concrete structures* combined with TV/Radio station-towers giving a rather industrial character to the landscape, acting as an aggressive giant foci. Although various *wooden structures* have been (re-)built lately, their “main

view-spot aim” remained traditional: a vertical gesture with only up/down orientations, looking-out only on the top, and references to the natural-habitat of the site which were untouched.

Since then, the millennium “creative viewing-experiencing-spot and walkway” remains one of beloved topic in contemporary architecture. The open landscape offers free ideas, unlimited size and forms for design: vertical & horizontal forms; static & dynamic circulations; rigid-rectangular & soft-ornamental forms; glass platforms, CorTen-steel or abstract wood formation... but the question remained: “*whether the building will be central or secondary element in its surrounding*” [2]. These spectacular architectural-sculptures underline the need for new, contemporary landscape architectural interventions, which must serve as a compositional link between “the sign/foci and the terrain of landscape”. The article intends to get closer to the complexity of embedding of these architectural forms into the landscape.

2. Evaluating method of the view-sites

In the first phase, were collected 30 random-examples of lookout-compositions, built in the last 15 years, mainly located in natural parks, around visitor centres or scenic mountain-, waterside zones varying in size, materials and in function. The aim of our research is to have a *better understanding* of this new landscape <+> architectural linkage, and to conclude compositional principles and better fitting criteria.

We raised the questions, as: *What kind of lookout-compositions are being built nowadays? > How can we categorise them (function, form)? > In what ways do these compositions fit in the original/natural landscape setting? > How can we define a “fitting”- criteria- system? > According to*

these principles, which one of these examples/types fulfil the “most harmonious linkage” with the site?

To formulate an ‘objective, measurable judgement’ of ‘subjective, artistic interventions’ we created a qualitative description of 30 examples. For a quantitative result a comparative analyse-table was created with 9 Yes/No questions. The questions discuss the complexity of the site: *materials, close-up views and open vistas, landform fitting, paths, metaphors*. All “Yes” answers refer to a better landscape-sensitive planning, to an approach which emphasises not only the building, but all design-equipment around it, which led to a complex, harmonious-landscape-reference. The evaluation Table contains the name, location, the surrounding LA-type in five categories according to our judgement.

The 9 research questions are:

- Does the view-spot allow a wider complexity of landscape-experience, besides the “look-out” experiences?
- Does it provide far-away-views, open panoramas into the aerial distances?
- Does it provide close-up sensory experiences (smell, taste, noise) of the site?
- Does it fit with its materials or forms to the local setting?
- Does it fit with its terrain-modelling, joining to the local setting, surface?
- Does the way/path fit in design-style with the spot?
- Does the “engineer-contractures” of the composition fit into the natural setting?
- Does it have a metaphoric/symbolic reference to the site?
- Does the scale (view shed, distance and size) of the view-spot fits to the scale of the surrounding landscape “unit”?

After summing-up the 9 answers, the final box refers to the main research question: How harmoniously the composition fit with its surroundings?

3. Results – describing the lookout-spots typology

In this long chapter the descriptions and the evaluation of view-spots are combined to allow a visual explanation and a typology-description at the same time for the reader. After each group there are listed the examples with picture.

3.1. Classical lookout towers

Usually, they are high, vertical features with strong up/down dynamic; the composition has a concentric symmetry; their goal is to be seen from far distance as an accentuated focus in the landscape; they act as a strong architectural signs.

The main goal is only to provide panoramic-look-out experience with large view shed (usually only from the top-level); from the top they are point-like feature without joining to a path network in design. No. 1–7.

1. Viewing Tower Lommel, Belgium

Arch.: Ateliereen Architecten, 2014-2015, Mat.: Steel structure, timber, ropes | The tower, 30m high, is situated into a scenic nature reserve next to a lake - distinctive of its sand dunes and pine trees. The aim was to join the viewing tower and scenic nature into one view, maintain the beauty and peace of the surroundings. The triangular structure, comprising the inner staircase and three platforms, is wrapped in a rope that reflects the lines formed by the dunes and desert-like landscape of the area. The built form, with its natural materials and color scheme blends perfectly into the surroundings and allows visitors to embrace the nature, observe and experience the views of the surrounding pine forests and lake [3].

2. Jübertower Hemer Landmark, North Rhine-Westphalia, Germany

Arch.: Birk + Heilmeyer and Knippers Helbig Advanced Eng., 2010, Mat.: wood, steel | The look-out tower is located on the forested hill Jüberg. The main goal was to design a landmark of the regional garden and flower festival, corresponding to the forest aisle. The tower has a hyperboloid structure comprising 240 straight timber batons, criss-crossing in two directions around the tower. This simplified static model, visible from far away, contains a steel stairs that lead to the observation deck at a height of 23.5 meters, which offers visitors a spectacular 360-degrees view [3].

3. Viewing tower at Vecht Riverbank, Dalfsen, The Netherlands

Arch.: Ateliereen Architecten, 2012, Mat. Steel structure and staircase, wooden slats | The tower, 20m height, is located on the edge of the forest in Dalfsen. The main goal was to provide a panoramic-look-out experience, a wide open view over the river and to provoke the curiosity of the visitors. The rectangular steel structure of the tower and staircase are covered with wooden slats, which at the lower part has bigger distance between the slats than on the upper part. Therefore, the footprint of the structure is transparent and fits perfectly in the forest, offering views of landscape from the top level as well as along the way through the gaps of the wood [3].



Fig. 1. The Lommel observation tower
[Source: <http://www.archdaily.com>]



Fig. 2. The Jübertower Hemer Landmark
[Source: <http://www.archdaily.com>]



Fig. 3. Viewing tower at Vecht Riverbank
[Source: <http://www.archdaily.com>]



Fig. 4. The Maule watchtower surrounded by vineyard
[Source: <http://www.archdaily.com>]

4. *Vigilante del Maule, Maule, Chile*

Arch.: Carlos Jarpa, 2011, Mat. Pine strips, steel plates | The observation tower is located on the vineyards of Maule town. The aim was to create a tower to guard the fields. This wooden construction reaches towards the sky and offers picturesque views of the scenic Chilean landscape. The airy, open grid construction of the tower provides a visual lightness of the structure that blends well with the surrounding landscape [4].

5. *Timber observation tower, Hermanice, Czech R.*

Arch.: Mjölke Architekti, Mat.: Wood, steel | The tower, a strong architectural sign with 25 m height, is situated in an open landscape – a rural site along a Czech mountain range. This structure was designed before finding a site or a client, and then commissioned by the mayor of the town Hermanice. Built from larch, the tower has a straight shape with a curved top, which accommodates a rooftop viewing platform, looking out across the Czech woodland and on towards Germany and Poland [5].

6. *Kisfaludy Observation Tower, Hungary*

Arch.: Platinum Group Ltd, 2011, Mat.: Wood, steel | The tower is situated on Badacsony hill, on the northern shore of Lake Balaton. The aim was to replace the existing old observation tower with a new and higher that offers a wider views. The new structure, comprising a steel stairs that lead to the observation deck at a height of 18 meters, is covered with wooden slabs and provides visitors a great view of the surrounding hills [6].

7. *Angular seaside tower, Lincolnshire, England*

Arch.: Gruff and MSA, 2014, Mat.: Steel | This tower represents an inner chamber and rises above a man-made grass bank that extends along the top of the beach. The main goal was to develop structures along the coastline, to encourage greater public use and to make further connections to this unique landscape. This angular blue-painted form creates a vertical landmark on the flat coastline and provides a panoramic view of the sand that stretches towards the sea [5].

3.2. *Modified lookout/observation towers*

Usually they are also high compositions, but they discover other directions besides the vertical (asymmetric, round, spiral, and nest), therefore they have more view-levels, beginning from ground-close levels to the top. They are also focus-point in the landscape, with greater transparency of the volume and lightness of materials; the form is rather asymmetrical; the hiding/mimicry-character is stronger than the eye-catching role (bird-observation areas, strongly protected areas). No. 8–13.

TABLE 1

A table sheet of the lookout-composition according the 5 category-type [Source: created by author]

Nr. on the description sheet	NAME OF VIEW-SPOTS, LOOKOUT COMPOSITIONS	LANDSCAPE TYPE	CATEGORY-TYPE	1. Does the view-spot allow a wider complexity of landscape-experience, beside the "look-out experiences"?	2. Does it provide far-away-views, open-panoramas, aerial distances?	3. Does it provide close-up sensory experiences (smell, taste, noises)?	4. Does it fit with its materials to the local setting?	5. Does it fit with its terrain-modelling, joining to the local setting, surface?	6. Does the way/path to the view-spot fit in design-style with the spot?	7. Does the "built/engineer-structures" of the composition fit into the natural setting from all direction?	8. Does it have a metaphorical/symbolic reference to the site?	9. Does the scale (viewshed, distance, size) of the view-spot fits to the scale of the surrounding landscape "unit"?	How harmoniously fits in the composition with its surroundings?	Average of the category type
1	Viewing Tower Lommel, Belgium	Lakeside	Classical tower		✓		✓		✓	✓			5	3,3
2	Jübertower Hemer Landmark, Germany	Forest	Classical tower		✓		✓					✓	3	
3	Viewingtower at Vecht Riverbank, NL	Riverside	Classical tower		✓		✓			✓		✓	4	
4	Vigilante del Maule, Chile	Vineyard	Classical tower		✓		✓			✓		✓	4	
5	Timber observation tower, Czech Republic	Forest	Classical tower		✓		✓						2	
6	Kisfaludy Observation Tower, Hungary	Forest	Classical tower		✓						✓	✓	3	
7	Angular seaside tower, England	Seaside	Classical tower		✓	✓							2	
8	Observation Tower on the River Mur, Austria	Riverside	Modified tower	✓	✓				✓	✓	✓	✓	6	4,8
9	Viewing Tower, The Netherlands	Forest	Modified tower	✓	✓		✓			✓	✓	✓	6	
10	Kupla-Helsinki Zoo Lookout tower, Finland	Seaside	Modified tower	✓	✓		✓						3	
11	Observation Tower, Latvia	Forest	Modified tower	✓	✓		✓	✓	✓	✓		✓	7	
12	Bostoren Forest Tower, The Netherlands	Forest	Modified tower	✓	✓								2	
13	Bird observation tower, Germany	Seaside	Modified tower	✓	✓				✓	✓	✓	✓	5	
14	Sohlbergplassen Viewpoint, Norway	Forest	Raised walkway	✓		✓		✓			✓		4	5,0
15	Tree Canopy Walk, USA	Forest	Raised walkway	✓		✓		✓	✓	✓		✓	6	
16	Lotterywest Federation Walkway, Australia	Forest	Raised walkway	✓	✓	✓		✓		✓	✓	✓	6	
17	Top of Tyrol, Tyrol, Austria	Mountain	Platforms	✓	✓		✓	✓	✓	✓		✓	7	5,7
18	Aurland Lookout, Aurland, Norway	Fjord	Platforms		✓			✓		✓		✓	4	
19	Viewing platform Conn, Switzerland	Fjord	Platforms		✓		✓	✓	✓	✓	✓	✓	7	
20	Cardada Viewpoint, Switzerland	Mountain	Platforms		✓		✓	✓	✓	✓	✓	✓	7	
21	ALPSPIX viewing Platform, Germany	Mountain	Platforms		✓		✓		✓			✓	4	
22	Glacier Skywalk, Canada	Mountain	Platforms	✓	✓		✓	✓	✓	✓		✓	7	
23	Grand Canyon Skywalk, USA	Mountain	Platforms		✓		✓		✓		✓		4	
24	Trollstigen Route, Norway	Fjord	Viewing Gallery	✓	✓		✓	✓	✓	✓	✓	✓	8	7,3
25	Selvika, Norway	Seaside	Viewing Gallery	✓		✓	✓	✓	✓	✓		✓	7	
26	Viewpoint on Pedreira do Campo, Portugal	Seaside	Viewing Gallery	✓		✓	✓	✓	✓	✓		✓	8	
27	Seljord and the Legends, Norway	Lakeside	Viewing Gallery	✓		✓	✓	✓	✓	✓	✓	✓	8	
28	Observation platform and Pavilion, Latvia	Riverside	Viewing Gallery	✓		✓	✓	✓	✓	✓		✓	7	
29	Moses Bridge, The Netherlands	Moat	Viewing Gallery			✓	✓	✓		✓	✓	✓	6	
30	Limmat Footbridge and Promenade Lift, CH	Riverside	Viewing Gallery	✓	✓	✓	✓		✓	✓		✓	7	



Fig. 5. The observation tower shaped like "a cucumber"
[Source: <https://www.dezeen.com>]

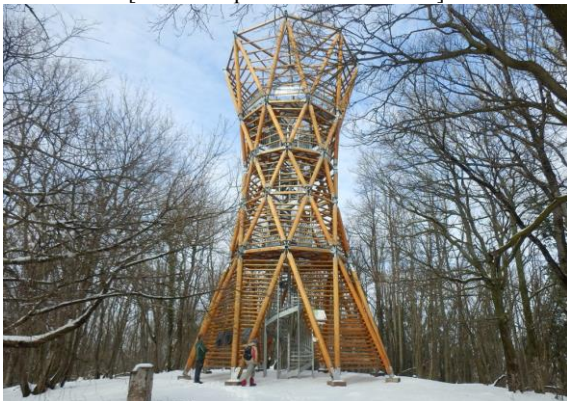


Fig. 6. The Kisfaludy Observation Tower, the tallest
observation tower of Lake Balaton
[Source: <http://balcsi.net/balatoni-kilatok/badacsony-kisfaludy-kilato#/>]



Fig. 7. The Angular seaside tower and coastal landscape
[Source: <http://inhabitat.com/skinny-observation-tower-amplifies-the-howls-and-whistles-of-coastal-wind/>]



Fig. 8. The observation tower on the River Mur
[Source: <http://www.archdaily.com>]

8. *Observation Tower on the River Mur, Styria, Austria*

Arch.: terrain:loenhart&mayr, 2009, Mat.: steel, aluminum | The structure, set amidst the landscape of the European habitat system "Green Belt", rises over the river Mur at the Austrian border with Slovenia. The aim was to design an observation tower to mark the European Green Belt. The architects were inspired by a historical double-spiral staircase, built around 1500 in the nearby Graz Castle and well known for the unique spatial atmosphere. The access and construction principle of the tower is based on the idea of a double helix that is perceived as a continuous path rising up through the trees. This architectural sculpture, 27 m height, fits into the landscape as naturally as a harmonic counterpoint, offers access to the ecology of the surrounding floodplain forest and lets visitors to experience the river catchment and scenic beauty from different heights. In a homage to this historical site, the Austrian poet, Erich Fried, wrote that "the double-spiral staircase connects space and time like a screw" [5].

9. *Viewing Tower, Reusel, The Netherlands*

Arch.: Ateliereen Architecten, 2008–2009, Mat.: Steel skeleton, wood | The tower, 25 m height, is located in an outdoor sports park. The aim was to design a landmark with sport facilities which would be the main attraction of the site. The structure which consists of six cubes with different positions, is made of halved logs, grown in the surrounding forest, which are slotted into the steel frames horizontally and vertically. It provides sport facilities like climbing and abseiling as well as allows people to enjoy a panorama view of the surrounding landscape. The use of wood makes the tower to fit in its setting [5].

10. *"Kupla"-Helsinki Zoo Lookout tower, Helsinki, Finland*

Architects: Avanto Architects Ltd, Building Start-End: 2002, Materials: Wood | The tower, 10 m height, is situated on the top of a prominent bedrock promontory on the western edge of Korkeasaari Zoo. The aim was to project a view tower out of timber for the Zoo. The bubble-like structure consists of two levels wrapped around with a wooden grid shell left open at the top. Here, the grid shell refers to the animal cage, while the bubble shape resembles and eye-a suitable symbol for viewing platform. Despite the contrast between the transparent structure, the ground-level arrangements and heavy rock base, the tower fits partly in its surroundings just due to its organic shape [2].



Fig. 9. The Viewing Tower and the surrounding forest
[Source: <http://www.archdaily.com>]



Fig. 10. The “Kupla”- a transparent landmark
[Source: <http://architecturelab.net>]

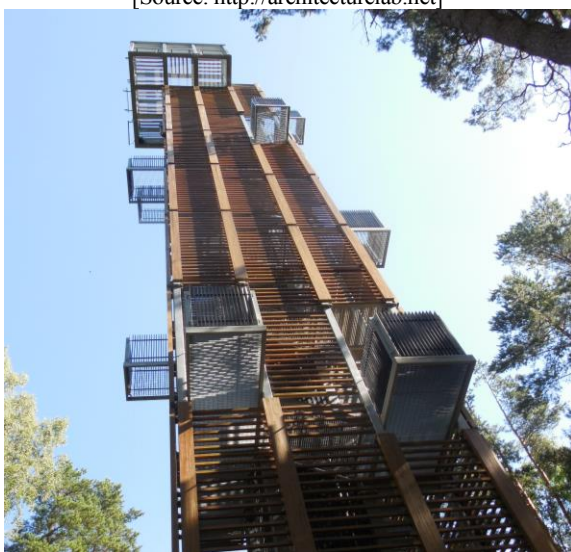


Fig. 11. The Jurmala Observation Tower-“The view over Latvia” [Source: Anna Eplényi, 2015.]



Fig. 12. Bostoren Forest Tower and the wooded landscape
[Source: <http://www.eikongraphia.com/?p=2777>]

11. Observation Tower, Jurmala, Latvia

Arch.: ARHIS Architects, 2010, Mat.: Metal, grids, wood | The structure, 38 m tall, is situated on a flat and forested site, in the heart of Dzintaru Mezaparks in the most famous recreation area. The main goal was to integrate the tower into its surroundings. The parallelepiped tower is made of metallic structure and covered by wooden elements. It comprises a metallic staircase that whirls around a squared structural core, an asymmetric platform at the very top and 12 randomly distributed balconies along the way. This tower allows visitors to experience the park from different heights as well as provides the view of the sea and the city of Jurmala. Surrounded by traditional wooden architecture and a park with Grcic-park-benches with mirrored containers used as cafés, the tower is perfectly fitted, almost not being visible through the trees around it [3].

12. Bostoren Forest Tower, Putten, Netherlands

Arch.: SeARCH Architects, 2004–2009, Mat.: Steel, wood, glass | The tower, 38 m height, sits in the heart of a forested Estate. The aim was to design an additional element to the Estate which allows views of surrounding trees. The built form, with a circular planted platform at the top of the tower, is rather a new piece of the forest than the expected look-out platform. The heavy structure mimics the colors of the forest in brown, green and copper with a spiraling stair and several cantilevered decks. These decks offer a view over the forest as well as different activities: peep-holes, a climbing net and a small performance space [7].

13. Bird observation tower, Heiligenhafen, Germany

Arch.: GMP Architecture, 2003–2005, Mat.: Wood | The asymmetric tower, 15 m high, is located on the peninsula Graswarder, in a natural bird-reserve. The aim was to erect a suitable observation tower, which allows observing birds without disturbing them. The structure, made of beams and ledgers with diagonal bracing, represents a stylized figure of a sitting bird that blend well with the surrounding natural environment and provides a good view of the entire area [8].

3.3. Raised walkways, canopy (tree top) walks

These are elevated walkways about 2–30 m above ground level; combined with towers to reach these heights. They are often hidden in natural setting (forest, canopy) with mimicry effects, so they are not visible in the open landscape so strongly, therefore they don't want to act as a focus-points. They are creeping- hanging- linear features; they provide a stronger, direct close-up nature-experience (smell, touch); here the function and the structure tend to be more important than the artistic sign of “being seen”. No. 14–16.



Fig. 13. The Bird observation tower
[Source: <http://architizer.com>]



Fig. 14. The Sohlbergplassen observation deck
[Source: <http://www.archdaily.com>]



Fig. 15. The observation platform of the Tree Canopy Walk
[Source: <http://www.worldarchitecturenews.com>]

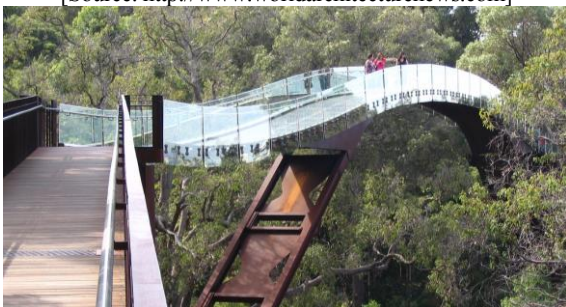


Fig. 16. A section of the L. Federation Walkway
[Source: <http://architectureau.com/articles/a-walk-in-kings-park/>]



Fig. 17. The "Top of Tyrol" viewing platform
[Source: <http://www.aste-weissteiner.com>]

14. Sohlbergplassen Viewpoint, Stor-Elvdal, Norway

Arch.: Carl-Viggo Hølmebakk, Mat.: Concrete, steel | The view spot, inspired by a painting of Norwegian artist Harald Sohlberg, is located within the first Norwegian national park in Atnsjø. The aim was to find a constructive solution which adapts to existing trees and which doesn't affect the roots of these trees. The geometry and structure of the platform was inspired by the densely growing pine trees on the hill side and the distant mountains. In early stages of the project, the platform had a flexible construction made in steel, but after load tests on a 3D-model, the structure was changed to concrete. The heavy and elevated structure, affecting the terrain and roots as little as possible, offers to the visitors a breathtaking panoramic view [3].

15. Tree Canopy Walk, Philadelphia, USA

Arch.: Metcalfe Architecture & Design, 2009, Mat.: steel, wood, netting | The structure is situated in Morris Arboretum (Uni. of Pennsylvania). The aim was to design an attraction that celebrates the human experience using play and social interaction. The network of walkways (138m in length), suspended at 9 meters above the forest floor with the form guided by trees, contains five stations dedicated to different wildlife and natural exhibits and viewpoints. The structure is made mostly of recycled galvanized steel to avoid the competing with the trees [3].

16. Lotterywest Federation Walkway, Perth, Australia

Arch.: Donaldson + Warn Architects, 2003, Mat.: Steel, cast iron, glass | The structure is located in Kings Park, the most important recreational parkland in Western Australia. The goal was to design tourist attractions that would provide enjoyable and educational opportunities. This "viewing edge," comprising pathways, lookouts, raised walkways and a bridge, is a journey through the park's history in relation to Indigenous and European culture. The artwork and construction materials enhance the natural setting enabling visitors to appreciate the importance of conserving biodiversity, the cultural and natural heritage and the geographic features of the surrounding landscape [9].

3.4. Platforms: lookout platforms, terraces, decks

These compositions overhang the landscape-cliffs into the space/air. They are reaching out their arms in the distance to create an astonishing experience (glass floor, hanging platform). As a "horizontal-tower" they are more gentle focus-points. With their airy placing on the terrain they fit more moderately to the hillsides and become an integrated part of the view, also allowing the vistas. The platforms are joined with paths to the spot which creates a harmonious design. No. 17–23.



Fig. 18. The Aurland wooden platform
[Source: <http://www.saunders.no/work/item/98-aurland-lookout>]



Fig. 19. The triangular viewing platform "Conn"
[Source: <https://divisare.com>]



Fig. 20. A part of the Cardada project - The viewing platform.
[Source: http://jakem.ch/html/bruecken_en.php]



Fig. 21. The AlpspiX viewing platform
[Source: <http://aasarchitecture.com>]

17. Top of Tyrol, Stubai Glacier, Tyrol, Austria

Arch.: Astearchitecture, 2008–2009, Mat.: Steel, larch handrail, stainless steel net, grate | The platform cantilevers nine metres over a rock top of Great Isidor Mountain. The main aim was to create a spiritual place for to revival seasonal and summer tourism. The eye-catching platform, made of weather-resistant corten steel, expresses both a dynamic and static aspect and blends perfectly into the rock and ice of the glacier [10].

18. Aurland Lookout, Aurland, Norway

Arch.: Todd Saunders & Tommie Wilhelmsen, 2005, Mat.: Concrete, glass balustrade, steel, pine timber | The elevated walkway, surrounded by pine trees, extends over the fjord and offers visitors the illusion of falling into the landscape. The goal was to prioritize nature, maintain the beauty and peace of the surroundings with a minimum impact on the existing landscape and terrain. Built of structural steel, wood and glass, the construction seems to embrace nature. This minimalist structure, 30 m long, 4 m wide and 9 m tall at its peak, complements the splendid views of the surroundings [11].

19. Viewing platform Conn, Flims, Switzerland

Arch.: Corinna Menn, 2006, Mat.: Steel, larch wood, steel cables | The main goal was to design a viewing spots with a minimum impact on the existing landscape, providing to the visitors gorgeous views over the Rhine Gorge Ruinaulta, known as "Little Swiss Grand Canyon". Anchored to the outer edge of the forest, the transparent and fragile viewing platform allows amazing views of the site and provides unusual shocking experience [12].

20. Cardada Viewpoint, Cardada, Orselina, Switzerland

Arch.: Paolo Burgi, 2010, Mat.: Steel, titanium, local granite paving stones | Cardada landscape promontory is a platform which is located on the top of the mountain above Locarno. The goal was to integrate a functional project into a very particular landscape with minimal impact and to perceive the landscape as a horizon of history. Suspended in mid-air over the tops of the woods below, the platform displays a 180 degree window on the unforgettable views of the surrounding landscape [13].

21. ALPSPIX Viewing Platform, Alpspitze, Germany

Arch.: Dieter Wallmann, 2009–2010, Mat.: Steel ramps | The viewing platforms are located at the base of Alpspitze peak in the Wettersteingeirge Mountains in Bavaria. The aim was to design a new tourist attraction which lets the visitors to experience a spectacular alpine high. The two separate steel structures, that crisscross each other, are both 23m long with 13m of that length fully cantilevered, open to visitors the unmatched views [14].



Fig. 22. The cantilevered Glacier
[Source: <https://www.dezeen.com>]



Fig. 23. The Grand Canyon West and the famous Skywalk
[Source: <http://gatetoadventures.com>]



Fig. 24. The outlook plateau of the Trollstigen National
Tourist Route [Source: <http://www.e-architect.co.uk>]



Fig. 25. The Selvika rest stop [Source: <http://www.e-architect.co.uk/norway/selvika-havoeyssund>]



Fig. 26. The Walkway and viewpoint on Pedreira do Campo
[Source: <http://www.shapedscape.com>]

22. Glacier Skywalk, Jasper National Park, Canada

Arch.: Sturgess Architecture, 2013, Mat.: Corten steel, glass, stone, wood | The "glacier skywalk" structure is based on the concept of cropping out from the landscape, creating an experience of a natural extension of the land. The curved glass-floored structure, protruded some 30 m from the cliff's edge, encourages guests to experience this incredible landscape. The use of corten steel and glass makes the structure to blend well with its mountainous landscape [3].

23. Grand Canyon Skywalk, Arizona, USA

Arch.: M.R.J. Architects, 2004–2007, Mat.: Steel, glass | The Grand Canyon Skywalk cantilevers over the edge of a cliff on the Hualapai Indian Reservation, overlooking the western edge of the Grand Canyon. The goal was to design a tourist objective to deliver to the visitors an ultimate viewing experience. The glass-bottomed, horseshoe-shaped bridge allows visitors to walk beyond the canyon walls, providing an unparalleled view of this natural wonder [15].

3.5. Gallery: viewing gallery pathways

These landscape-design compositions are a combination of walkways, paths and other additional functional elements (roofed shelter, hut, platform, lift, or bridge) creating a long experiential-network. The path is close to the ground with various lookout compositions fitting in the terrain; more close-up experiences to landscape details; the path guides through an open-landscape, so the view is not always astounding, but the coherence and complexity of design led to a harmonious intervention. No. 23–30.

24. Trollstigen Route, Romsdalen - Geiranger Fjord, Norway

Arch.: Reiulf Ramstad Architects, 2004–2010, Mat.: Corten steel, wood, concrete, glass | Trollstigen is one of the most beautiful mountain roads in the world. The aim was to enhance the experience of the Trollstigen plateau's location and nature, underscore the site's temper and character. The zig-zagging pathways lead to viewing platforms which allow the visitors to observe nature from up high and enjoy the unique angle of view and the incredible scenery [3].

25. Selvika, Havøysund, Finnmark, Norway

Arch.: Reiulf Ramstad Architects, 2007–2012, Mat.: Concrete | The roadside stop is a part of the development of the National Tourist Route that follows the Arctic Ocean and meanders through a rugged landscape of cliffs and untamed nature. This architectural element, composed of different functions, invites the visitors to a slow wander in the beautiful, open and rough landscape. Made of light grey concrete, this meandering walkway sits gently in the terrain and fits well with its surrounding landscape [16].



Fig. 27. The elevated walking path and view tower
[Source: <http://www.landezine.com>]



Fig. 28. The Observation platform and Pavilion
[Source: <http://www.designboom.com>]



Fig. 29. The Moses Bridge - „Invisible Bridge”
[Source: <http://www.archdaily.com>]



Fig. 30. Limmat Footbridge and Promenade Lift
[Source: <http://www.archdaily.com>]

26. Viewpoint on Pedreira do Campo, Açores, Portugal

Arch.: M-arquitectos, 2012, Mat.: Wood | Walkway and viewpoint lie on a particular geological site, located in Vila do Porto, Santa Maria Island. The main goal was to design a solution that would preserve the landscape without compromising its identity. The organic walkway, with a fantastic viewpoint at the end, is perfectly integrated into its scenic environment and allows the visitors to explore the history and nature of the place [17].

27. Seljord observation tower, Telemark, Norway

Arch.: Rintala Eggertsson Architects, 2011, Mat.: Wood | "Seljord and the Legends" is a rural district development project that consists of several sub projects. The goal was to exhibit the landscape, associated with local tales and legends, by adding simple architectural constructions and pieces of art to it. The 15 m high tower, elevated walking path with designated stopping places and art installations are located in the middle and southeast sections of the lake. Made entirely of wood, the composition blends into its natural surroundings [18].

28. Observation platform and Pavilion, Koknese, Latvia

Arch.: Didzis Jaunzems, Laura Laudere, Jaunromans and Abele, 2013, Mat.: wood | The construction, comprising the view terrace and pavilion with varying levels of "openness," is situated on the coast of the Daugava River in "The Garden of Destiny" – a memorial park for all the souls that have been lost to Latvia in the last century. The main goal was to design a structure which will create a harmonious environment to discover special character of the site. Taking the site's topography and the existing features around the site into consideration, the architects designed a structure that is partly sunken into the ground. The sloping roof of the building provides an elevated deck that visitors can walk over, while the surrounding terrace concludes at a balcony that cantilevers out across the water. This structure provides visitors spectacular views over the River in all kind of weather conditions, and allows visitors to choose the level which suits them. Therefore, the built form, shaped in a way that preserves the most valuable trees on the site and made almost entirely from wood, blends perfectly into its natural surroundings. In 2012, it won the Prize of the Year in Latvian Architecture Best Works Award [5].

29. Moses Bridge, Halsteren, The Netherlands

Arch.: RO&AD Architecten, 2011, Mat.: Accoya Wood, Angelim Vermelho | This iconic Bridge is sunken in the moat of the Fort de Roovere. As part of a recent restoration project, the aim was to build the access to the line's Fort and to preserve the site's

aesthetic integrity with dramatic view. This bridge, which is almost invisible provides to the visitors an unusual sensory experience, allowing visitors to pass right through the water, disappearing into the abyss, without getting wet [16].

30. Limmat Footbridge and Promenade Lift, Ennetbaden, Switzerland

Arch.: Leuppi & Schafroth Architekten, 2007, Mat.: steel structure | The Limmat River winds around the town of Baden and forms a valley that naturally separates it from the neighboring village of Ennetbaden. The structure, composed of a horizontal bridge, a vertical elevator tower and a horizontal walkway, connects the two towns with direct access for pedestrians and bicyclists. Red-brown in color – varying in shade, depending on the light – this steel artifact complements its surroundings [3].

4. Conclusion

According to our quantitative analysis, the lowest scores were given to the classical towers (in average: 3,3 / 9), which are usually only architectural-focus-points without the compositional elements that could link them closer to the site. The modified towers have higher result (in average: 4,8 / 9), because the transparent, segregated structure allows more flexibility.

Platforms and raised walkways received higher scores (in average: 5,7 and 5 / 9), which suggest that they provide a more complex understanding of the landscape habitat with close-up sensory experiences, with linking pathways and with better connection to

the terrain. Especially, the platforms show a great compositional variety with astonishing solutions depending on the landform of the site.

Far the highest scores were given to the viewing galleries (in average: 7,3 / 9) and only this group contains 3 projects with the highest points (8: Trollstigen Route – Norway, Viewpoint on Pedreira do Campo – Portugal, Seljord and the Legends – Norway), which can emphasize that these lookout-interventions fulfil the most harmonious linkage with the landscape scenario. This is not (only) reached by a high, vertical focus object but rather with very gentle modification, with artistic land-fills, land-cuts and path-circulation matching with its materials to the local settings. They might look ‘simple’ but on the other hand it can be treated as a submissive, humble artistic interaction with the site. This approach is closer to landscaping attitude, then architectural.

The study underlines that in the last 20 years, due to the wish for ‘interactive design in landscape experience’, this simple architectural objects went through several development phases. Thanks to the new engineer-solutions, the former ‘tower’ changed its character in all directions (horizontal – platforms, linear raised pathways or gallery walkways) and the complex surrounding of the towers became also a target for artistic design. The architects discovered a new-beauty in these lookout compositions, which led to harmonious landscape-linkages and a more complex experience of the site.

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INFORMATION ABOUT THE AUTHORS:

Anna Eplényi PhD. MSc. Landscape Architect and BA. Art-teacher, leader of Children Art Studio Foundation (www.gyikmuhely.hu). Since 2015 Senior Lecturer at the Dept. of Garden Art and Garden Techniques at the Szent István University (Budapest) teaching various creative topics (drawing, sketching, modelling, garden art). E-mail: eplenyi.anna@tajk.szie.hu

Olga Harea MSc. Architect. Graduated Technical University of Moldova, Faculty of Architecture and Urban Planning. PhD student at Szent István University, Faculty of Landscape Architecture. In the PhD research she focuses on the contemporary architecture and their forms of fitting into local landscape character, especially in the wineries topic. E-mail: hareaolga@gmail.com

Kopsavilkums. Pēdējos gados arhitektūras jomā novērojama izpausme, kas tiek pasniegta dažādos veidos un risinājumos. Saistībā ar ainavu tiek veidoti jauni un moderni skatu torņi, kas ir atšķirīgi ar savu formu, materialitāti un citām iezīmēm. Daudzveidīgie skatu torņi ietver gan novērošanas vietas, platformas, celiņus un citus labiekārtojuma elementus, kas atbilstoši papildina un funkcionāli veido apkārtējo ainavtelpu. Veiktais pētījums koncentrējas uz 30 dažādiem mūsdienu skatu torņu piemēriem, kas atrodas atklātā un neapbūvētā ainavā. Konkrētie pētījumā analizētie piemēri ir salīdzināti pēc pētījumā izvirzītiem 9 aspektiem: ainavas sarežģītība; skatupunkti – panorāma, tuvplāni; vietējo materiālu atspoguļojums; reljefa iezīmes un ietekme; infrastruktūra; dabiskās vides iezīmes; objekta nozīme un mērogs. Pētījuma mērķis konstatēt un fiksēt harmoniskas vietas un objektus, kas iezīme racionālus kompozicionālos risinājumus, sasaisti ar ainavtelpu, kvalitatīvus skatupunktus un vietējās ainavas sasaisti ar objektu. Pētījumā secināts, ka pastāv 5 galvenās kategorijas: a) klasiskas formas skatu torņi; b) modificēti skatīšanās, novērošanas torņi; c) skatu torņi ar platformām, terasēm un klājiem; d) ar izvirzītiem celiņiem pastaigām; e) harmoniska sasaiste ar ainavtelpu.

Church landscapes in Latvia, Vidzeme region coastal area

Madara Markova, Natalija Ņitavska, *Latvia University of Agriculture*

Abstract. Church buildings are visually expressive dominants of the landscape; however, the sacral landscapes have not been extensively researched. In order to reveal the character of church landscapes and its elements, a thorough appraisal of the selection of indicators, of their scale. A particular research method was used for characterisation of the church landscape in Vidzeme, on the coast of the Baltic Sea and along the bay, synthesized by a way of such specific research method as image ability. The research area is a Latvia coastal landscape of the region of Vidzeme. The objects of research are located in a coastal area of Vidzeme – the Lutheran, Catholic and Orthodox churches. The research includes 9 churches. The visual identity of the landscape of coastal churches and gardens of Vidzeme as it is found in this research in common can be defined as landscapes of typical small coastal populated areas with certain natural elements and some unique human-made elements that cause neutral and pleasant feelings and emotions. The research on the landscapes of the coastal churches of Vidzeme is a continuation of the research on the landscapes of the coastal churches of Kurzeme.

Keywords: church landscape, sea coastline, image ability, cognitive.

Introduction

The research on the landscapes of the coastal churches of Vidzeme is a continuation of the research on the landscapes of the coastal churches of Kurzeme, that was done in two parts – South Kurzeme and Nord Kurzeme in year 2015 [20,21].

The landscape visual protection on the European level has become current along with an implementation of the European Landscape Convention. Ever since the middle ages the feature of populated area is the buildings of public nature, designed for people gathering, buildings for living and church along with the burial area – as the local religious focal point [2] both in the visual aspect and in the spiritual and planning form. It is limited information available about church landscapes; therefore the determination of the landscape character is included in the fixation of the current state. In turn, determined indicators have been used relatively recently in the research. One indicator provides a little information so it is valuable to use of a system of indicators, where each of them would be representative, available, reliable and efficient [4; 11]. More common use of indicators is for large-scale landscapes [7; 27; 28], however, they can also be used in smaller areas [28; 29].

The historical development and architecture of the landscape of Vidzeme coastal landscape.

The coastal stage Carnikava – Ainaži has been inhabited since the 5th, 6th century, when the first Liv settlements appeared there. The 13th century is marked by the building of Bishop Albert's castle and ports, as well as a number of ferries across the rivers next to castle mounds or castles. The areas around Riga were forested and natural. During the period from the 14th to the 19th century, the coastal development was affected by the Northern War and going into the Russian yoke. Several fortifications and castles were destroyed during this period, but

church and manor building thrive. The period of manor thrive contributed to the increase of the coastal population density and infrastructure development – dwelling houses were built, even whole villages, pubs, factories, windmills, etc. The period of a coastal thrive is the 19th century, which is characterized by a rapid growth of shipping and shipbuilding industry as well as the opening of the Naval School in Ainaži. Several Orthodox churches, pharmacies, outlets, schools were also built in this period. Later, coming across the World War I and World War II, many objects and the infrastructure were destroyed. In the period of occupation and collectivization the fish canneries developed, on concentrating the population in collective farms and artificially created centres, as well as developing agriculture, fur farms and livestock industries. In Soviet times, the coastal section from Carnikava to Saulkrasti developed as summer cottages and resort area, where people from all over the Soviet Union went, but summer cottages were granted mostly to the residents of Riga, forming an original structure of a seasonal in nature landscape [15; 16; 18; 26; 30; 31; 35; 38].

The religion and churches in Vidzeme. The first information about Christianity had reached the Baltic shores, including Vidzeme, well before the arrival of German crusaders. Until the times of Swedish, Latvians remained true to the ancient Latvian spiritual values. In Swedish times, on changing the state power, not only the ancient Latvian traditions were considered combating, but also Catholic traditions that were unacceptable for Swedes, for example, a special honour and adoration of the cross, iconic and a few small cottages prayer – a chapel, which in some places in Vidzeme continued until the 18th century [3]. Although in the beginning of Swedish times throughout the whole

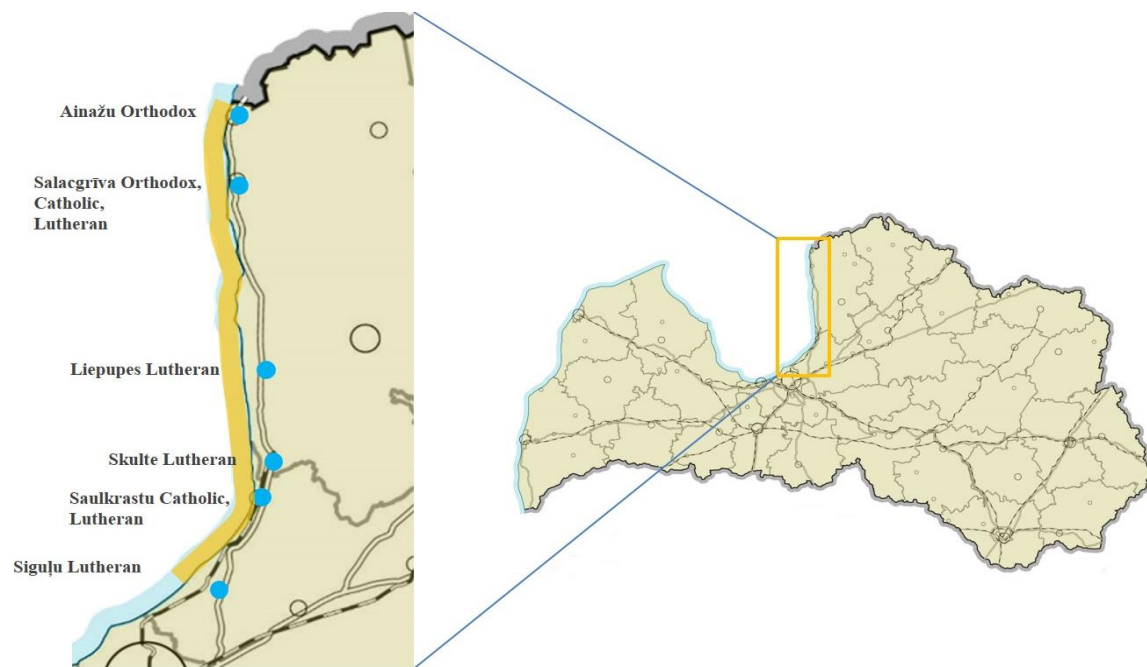


Fig. 1. Research territory in Latvia and objects [Source: scheme by authors]

Vidzeme only 17 churches were more or less in a good condition [8]. In the 18th century Latvia was not still a united territory and different development continued in various different spheres of life in each of the culture-historical districts, including religion. The life of the Latvians of Vidzeme in the 18th century was influenced by Hermhutism or Brethren church, the only European trend of that time, which directly reached Latvians [3; 8]. The feature of Brothers' action was the simplicity and public worships took place in the holy houses. Such house in Valmiera was built already in 1739. Public worships outside Valmiera were held in special chambers. Later the holy houses had been build after the sample of Valmiera. The religion in independent Latvia was considered as a cultural indicator, the accepted decision of the government took a great importance in the maintenance of spiritual life. Later, the purposeful work of the Christian tradition limiting was carried out in the Soviet Latvia. The Soviet laws significantly changed the functioning of all the religious confessions. All the legal regulations of the Soviet Latvia operated so that the churches would not be able to maintain their properties. Gyms and trade-union committees, warehouses, workshops and even factory workshops were mostly arranged in churches or churches were even blown up. For example, electrical warehouse was arranged in the church of Carnikava in the time of Soviet authority. Often, they remained empty, were demolished and collapsed. In the renewed Republic of Latvia many of destroyed churches came again to the management of Christian churches and thus slowly but with great perseverance and private financial assistance they are reborn again [3].

Materials and methods

Research Area and Objects. The research area is a coastal landscape of the region of Vidzeme in Latvia. The objects of research are located in a coastal area of Vidzeme – the Lutheran, Catholic and Orthodox churches. The research includes 9 churches (Figure 1).

The largest populates areas in the area are Saulkrasti, Salacgrīva and Ainaži, and a number of small villages, such as Carnikava, Liepupe, etc.

Methods. Monographic or descriptive method, based on the existing as well as scientific knowledge and theory acquired during the research, was used for the theoretical foundation for the development, as well as for the compilation, the identification and interpretation of the results.

Several landscape research methods were used to characterize the church landscape of the coastline of Vidzeme: method of image ability; descriptive inventory; definition of the perception criteria of the landscape visual overall image.

The method of imageability. The characterization of the church landscape of the coastline of Vidzeme was carried out by the method of image ability. By Kevin Lynch's thoughts image ability is a quality of a physical object, which creates a possibility to cause a strong impression in any observer [17]. This is a form, colour or an arrangement, which contributes the formation of the widely recognizable, powerfully created, widely used mental image of the environment. Lynch admits that image ability could also be called as image ability or visibility, but in the sense that objects could not only be seen in a landscape, but also could be felt in the environment.

The term “image ability” is being used with the meaning of “legibility” [19].

Indicators of image ability in the church landscape were defined during field surveys in 2012 and 2014 within the framework of the expedition, on using aerial photographs as a reference. An aerial photograph of the surveyed church landscape was prepared before going to the particular place. A detailed survey of each place was made on scouring the area and all access roads to analyse all the available viewpoints. The place image ability schemes of the landscape of particular churches where this method was used were made on the basis of aerial photograph to be able to clearly define the scope. On the other hand, notably objects in the image ability schemes differ in which elements form the nature of the church landscape and landscape borders. Image ability schemes are made in „AutoCad 2012” program, using a variety of graphical tools, as well as inserting there the aerial photo of a particular church landscape.

Descriptive inventory. A fixation of church garden elements of the coastline of Vidzeme, consolidation of the results and transformation to visual patterns were made by tying a quantitative method with a qualitative method. A descriptive inventory was used in the research of the garden landscape space and elements, which is widely used in the evaluation of visual resources [1]. Descriptive inventory includes a combination of quantitative and qualitative landscape evaluation methods on analysing and describing their components.

The method of synthesis is used in the field research for the broadest possible collection of data, when separate elements of the research object are combined into a single whole, in order to study their interrelationships. The synthesis method is also used to interpret the data. Quantitative and qualitative indicators of the landscape are collected in the matrix used in the field research such as plants, separate landscape elements – benches, fence, crucifix, free standing bell tower and other [19]. Based on the experience of the previous research a matrix of survey and cartographic materials had been already prepared before the expedition using an electronic card system kurtuesi.lv. Survey matrix includes all the most anticipated parameters of the church landscape and elements of the church garden that would be useful for the further research. On surveying the church gardens in the coastline of Vidzeme, there were fixed elements existing in every church garden. Later data obtained in matrixes were summarized in the "Microsoft Office Excel 2007" program.

The identification of essential and distinctive characteristics and qualities is also known as landscape characterization. This approach in this research is complimented with historical situation

comparison. In historical pictures we can also find landscape elements and visibility of church in landscape context. This is still a relatively new approach to display and interpretation of the landscape. Landscape characterization approach rooted in England [5; 28], later it developed in Scotland, Ireland and in other places in Europe. Landscape characterization is considered as an effective tool in forming the comprehension of the importance of the landscape [12]. It is possible to use it for variety of scales, from the international up to the local [28; 29]. The reading of the landscape by using the landscape indicators, in this case landscape elements – benches, fence, crucifix, free standing bell tower and other. The physical components of the landscape, related activities, its importance and symbolism are basic formative elements of the landscape identity [12; 28; 29]. The research focuses on the visible physical identity.

Perceptual criteria for the visual overall image of the landscape. Visual formative elements of the landscape identity are closely related with the human subjective perception where are separated several levels of perception – visual availability, scale, natural landscape, use intensity, diversity, consistency or harmony. On the basis on these theoretical visual perception levels of the landscape identity the visual survey matrix of the landscape was designed, which served as the data collection, surveying the research area. The survey matrix includes the total subjective visual evaluation of the landscape [6; 22; 14; 10; 28; 25; 23; 13; 9; 36; 32; 33; 34]. There were determined following parameters for the subjective evaluation of the landscape: the visual availability, scale, topography, colour, materials, texture, diversity, rarity, senses, movement, and natural landscape.

Based on the theoretical group of criteria determined to define the identity of visual landscape, each landscape type specifies the possible criteria that may be slightly different in the urban and rural environment. Determination of the perception criteria of the landscape overall image is described in the detail in the authors' previous researches [24].

Results and discussion

Church buildings in the seaside of Vidzeme are both made of wood (Siguļi) and stone (Ainaži) and brick (the Orthodox of Salacgriva) and masonry buildings (the Lutheran of Saulkrasti (Peterupe), Skulte, Liepupe, Salacgriva), as well as the Catholic of Salacgriva was built in 1997 of reinforced concrete. All of these churches have bell towers, which makes buildings prominent and the silhouette is recognizable in small rural settlements and urban landscapes, neither of these churches are located in the rural landscape. The Roman Catholic church of Saulkrasti is made of unusual material, built in 1998, it is with an iron frame, on both sides of foam.



Fig. 2. The landscape of the church of Salacgrīva (at that time Vecsalaca) in the end of the 18th century [37]



Fig. 3. The landscape of the church of Salacgrīva 2016 [Source: author photo]

Image ability. Image ability is an essential characteristic aspect of the church landscape. Factor that affects the visibility of the church is the height of the church building and expressiveness of the church building bell tower as a dominant in the landscape. All 9 churches of this research territory are above 6 metres high, exceeding the height of the low-rise buildings. Most of the churches (eight) are located in flat places and only one is located in relief. These factors influence that more than a half of the churches are visible from distance.

The view line of the Catholic church of Salacgrīva, on approaching from Riga, is more than kilometre long. Other view lines are not so long because of the surrounding buildings, although it is not high, it is quite dense and surrounded by greenery.

The Lutheran church of Salacgrīva is located on the right bank of the river of Salaca (Figure 3). The building is surrounded both by trees and greenery and the plant cover of the bank of the river of Salaca. The landscape has been the focal point for the populated area for a long time, since the castle mound is situated near. In the end of the 18th century the ruins of the former stone castle of Riga Bishop Albert, built in 1226, had been expressively visible in the landscape (Figure 2). On the north side the church landscape is surrounded by a mixed-use building.

The landscape of the Lutheran church of Skulte is marked by a typical character of a pine forest and a nature of the 18th-century architecture (Figure 5). This landscape started to develop after 1755, when the stone building was built in the place of the previous wooden church building in this place (Figure 4).

The Lutheran church of Saulkrasti is a dominant, which is visible from the main driveway roads (Figure 7). The existing trees of the church garden obscure the building only partially, and help to stand out among the current surrounding city building. The current church has been already the fourth in this place, and the landscape has developed since the middle of the 17th century (Figure 6).

All of the landscapes of coastal churches of Vidzeme are placed in small cities or villages on the side of the road.

Occurrence of elements in the church gardens. Church landscapes and church gardens in the Latvian regions are formed according to different principles. These differences reproduce regionally different historical development and traditions. In general church gardens of Vidzeme have ascetic nature, where the church building is the most visible as a main dominant.



Fig. 4. The landscape of the church of Skulte in the beginning of the 19th century [37]



Fig. 5. The landscape of the church of Skulte in 2016 [Source: author photo]

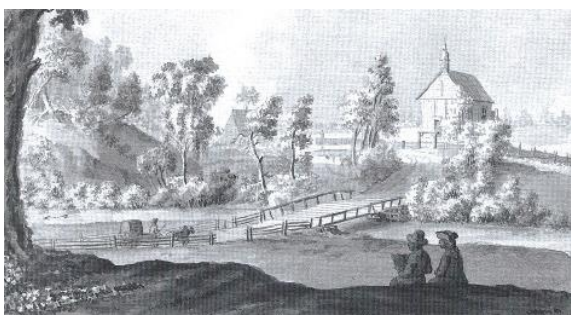


Fig. 6. The landscape of the church of Pēterupe in the middle of the 17th century [37]



Fig. 7. The landscape of the church of Pēterupe in 2016 [Source: author photo]

TABLE 1
The occurrence of elements in church gardens in the coast of Vidzeme [Source: construction by M. Markova]

No.	Element	Occurrence of the element in the church garden, %
1	Bench	55
2	Fence	44
3	Household building	44
4	Decorative facade lighting	44
5	Memorial sign	44
6	Outdoor toilet	33
7	Tree perimeter	22
8	Bicycle racks	22
9	Crucifix	11
10	Burials next to the territory of the church garden	11
11	Flagpole	11
12	Free standing bell tower	0
13	Burials inside the territory of the church garden	0

Most common elements in church gardens of coastal landscape of Vidzeme are bench, fence, household building and decorative facade lighting and also memorial sign. Quite often in church gardens there are outdoor toilets, tree perimeter and bicycle racks. Crucifix, Burials next to the territory of the church garden and flagpole could be found only in the one of nine churches. Also the elements are mentioned here that are usually found in church gardens, but in coastal church gardens of Vidzeme they were no free standing bell tower and Burials inside the territory of the church garden (Table 1).

The results of the percentage distribution of the occurrence of the elements in church gardens are rounded to the whole numbers to obtain greater transparency.

Criteria of the perception of the visual landscape overall image. The visual availability of the landscape of the coastal church garden of Vidzeme on the results of the research is open (25 %), restricted (25 %) and partly available (25 %), more rarely narrow and restricted (Figure 12). It is based on typical coastal landscape structures of Vidzeme in rural areas or on fully enclosed areas formed by coastal forests and a structure of a small town, as well as the medium scale of the church building. It is proved by the landscape scale on the results of the research which in 58,33 % of cases is medium, 8,33 % – close, 8,33 % – intimate. (Figure 13). The scale of the landscape and the visual availability is closely linked to the characteristics of the terrain, where 25 % consists of flat areas, 16,67 % of each

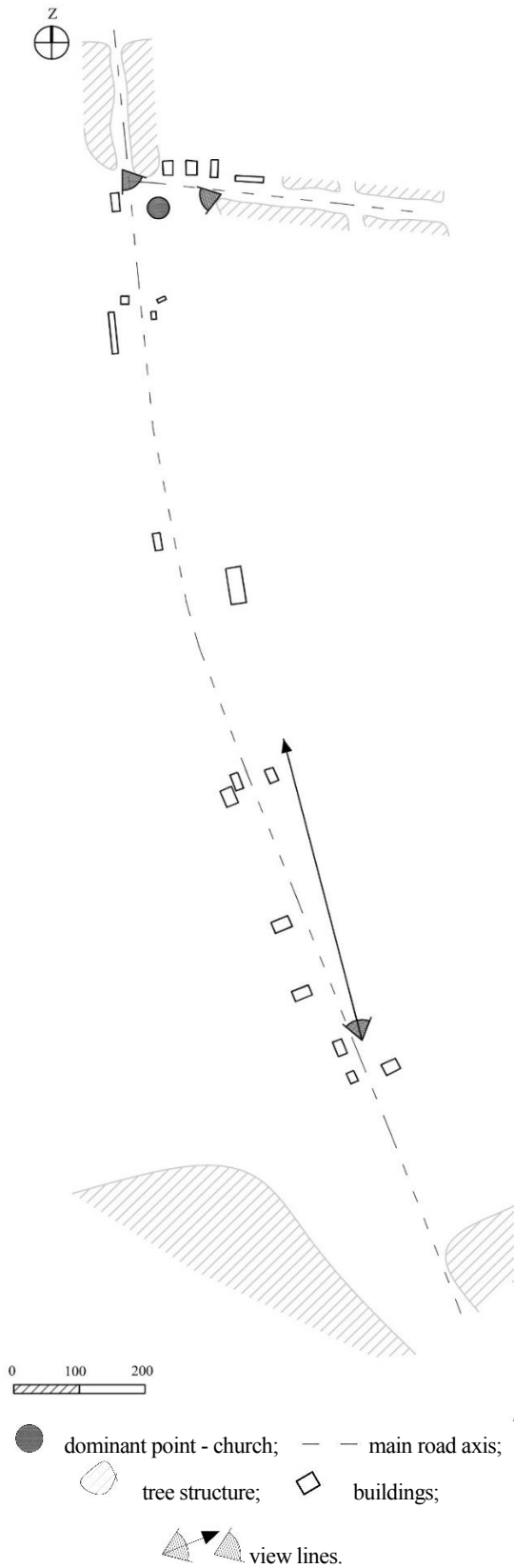


Fig. 8. The image ability scheme of the landscape of the Catholic church of Salacgriva
[Source: scheme by M. Markova]

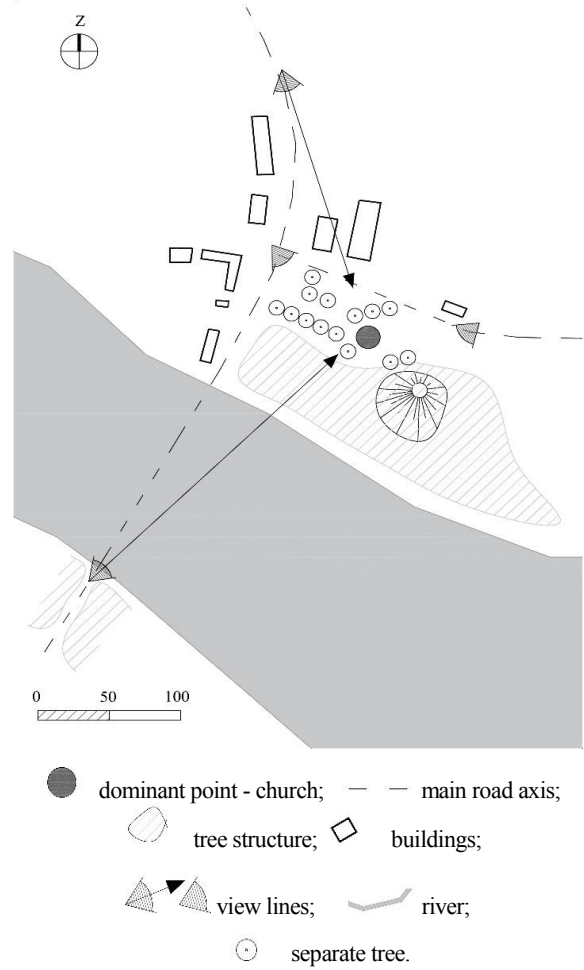


Fig. 9. The image ability scheme of the landscape of the Lutheran church of Salacgriva
[Source: scheme by M. Markova]

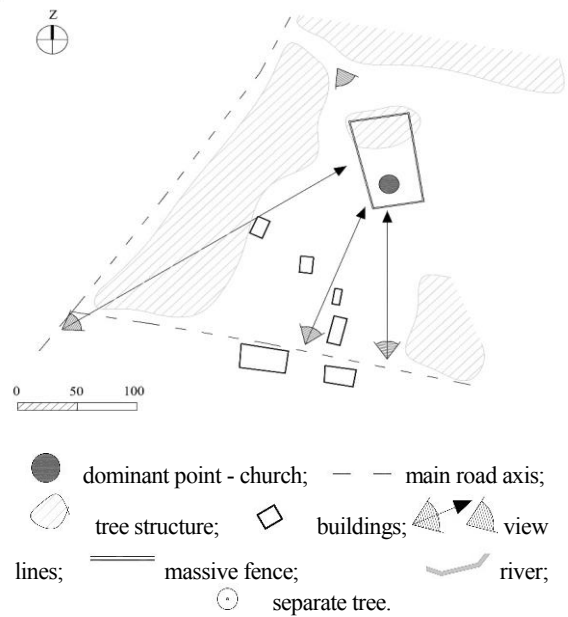


Fig. 10. The image ability scheme of the landscape of the Lutheran church of Skulte
[Source: scheme by M. Markova]

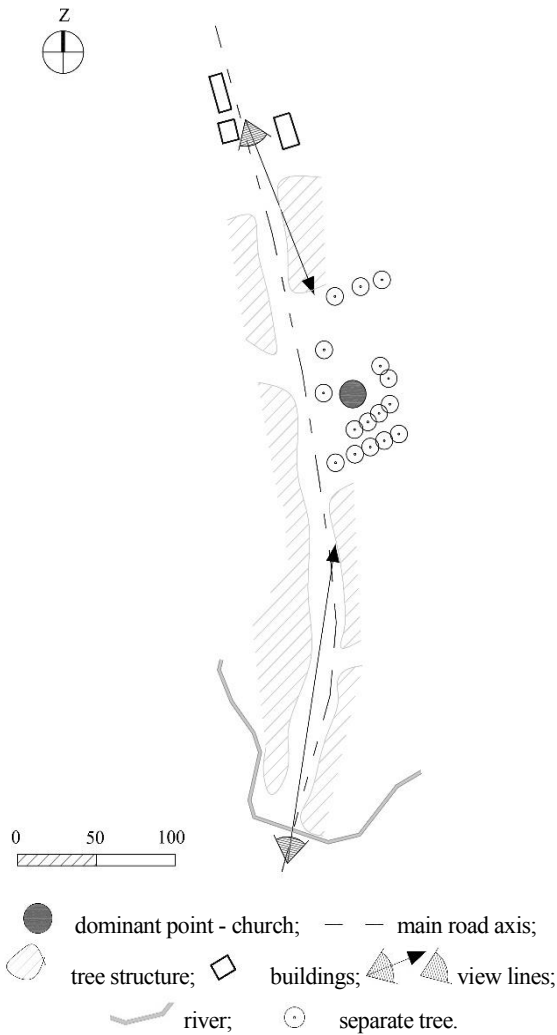


Fig. 11. The image ability scheme of the landscape of the Lutheran church of Saulkrasti (Pēterupe)
[Source: scheme by M. Markova]

consists of plain areas with some hills and gently undulating terrain and the only one of the churches (8.33 %) is located on expressed castle mound. The identity of the coastal church landscape is also closely connected with the used materials, which here is represented by a brick (in 4 cases), plaster with stones (in 6 cases) and stone (in 4 cases) and metal elements (in 5 cases). The texture of the landscape is generally rough (58,33 %) and fine (16,66 %).

The landscapes of coastal churches fundamentally are natural landscapes with some human-made elements (50 %) or natural landscape with some human made elements (25 %), because they are mainly located in small coastal villages or near village borders. Thus, the landscape movement is also explained, which at the results of the research is defined as quiet (33,33 %) or active (33,33 %). Landscapes feelings and emotions are the resultant summary of all elements of the landscape and the landscape characteristic peculiarities – the

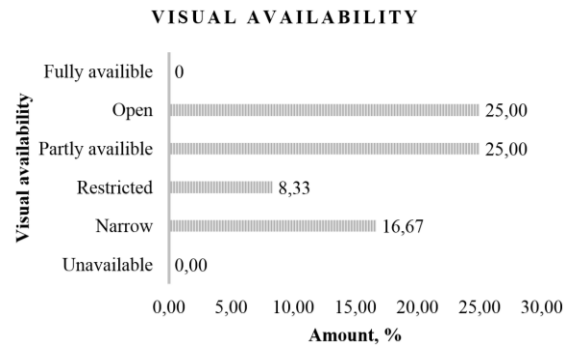


Fig. 12. Visual availability
[Source: scheme by N.Ļitavska]

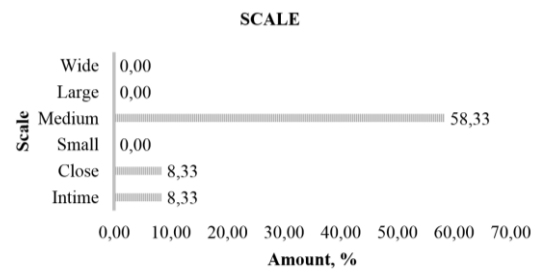


Fig. 13. Landscape Scale [Source: scheme by N.Ļitavska]

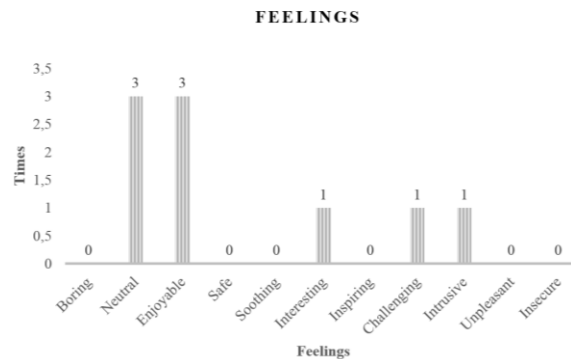


Fig. 14. Feelings [Source: scheme by N.Ļitavska]

landscape of the typical church of small settlements is characterized as neutral (in 3 cases), pleasant (in 3 cases) feelings, and rarely interesting, challenging or obtrusive emotion (Figure 14). On evaluating the landscapes of the coastal church of Vidzeme they are defined as peculiar (33,33 %) and typical (33,33 %), which in turn is connected on the one side with the typical architecture with the church tower to the most of the buildings, but in return with a common readable elements that bring this typicality and peculiar landscape features. Consequently, the whole landscape diversity is characterized as simple (41.67 %) and in some cases complex (16.675) or different (16.67 %), the reasons for this fact is based on the existence of traditional church gardens and in some cases the church garden area is used much more widely than just for the needs of the church, but is integrated in the common infrastructure of villages and small towns.

Conclusions

The visual identity of the landscape of coastal churches and gardens of Vidzeme in common can be defined as landscapes of typical small coastal populated areas with certain natural elements and some unique human-made elements that cause neutral and pleasant feelings and emotions. This medium-scale landscape spaces can be characterized by nuanced colour palette and the rough texture, which is closely linked with commonly used range of materials – plaster, stone, and brick and metal roofs. Church landscapes and church gardens in the Latvian regions are formed according to different principles. In general

church gardens of Vidzeme have ascetic nature, with most common elements – bench, fence, household building and decorative facade lightning and also memorial sign. On making the research of the landscape of all Latvian coastal churches and gardens it is observed the most pronounced signs of globalization for the stage of Vidzeme that have affected the landscape of populated areas, bringing elements and functions of a modern landscape in the church gardens also, this could be explained as a fact that at this stage all the church areas are located within the populated areas.

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INFORMATION ABOUT THE AUTHORS:

Madara Markova, Dr.arch M.Markova is assistant professor in Latvia University of Agriculture, Department of Landscape Architecture and Planning. Academic and research interests: landscape identity, coastal landscapes, landscape study. E-mail: madara.markova@llu.lv

Natalija Ņitavska, Dr.arch N.Ņitavska is associated professor in Latvia University of Agriculture, Department of Landscape Architecture and Planning. Academic and research interests: landscape identity, coastal landscapes, landscape study. E-mail: natalija.nitavska@llu.lv

Kopsavilkums. Lai gan dievnamu ēkas ir vizuāli izteiksmīgas ainavas dominantes, sakrālās ainavas nav plaši pētītas. Lai atklātu ainavas raksturu un tās elementus, veikta rūpīga indikatoru izvēle un to mēroga noteikšana. Indikatoru metode pielietota Vidzemes dievnamu ainavu, kas atrodas gar Baltijas jūras piekrasti, raksturošanai. Izpētes teritorija ir Latvijas piekrastes ainava Vidzemē. Izpētes objekti ir izvietoti piekrastes teritorijā – luterāņu, katoļu un pareizticīgo dievnami. Pētījums aptver deviņas dievnamu ainavas. Vidzemes piekrastes dievnami ir gan koka (Siguļos), gan akmens (Ainažos), gan ķieģeļa (pareizticīgo – Salacgrīvā), gan mūra (luterāņu – Saulkrastos (Pēterupē), Skultē, Lielupē, Salacgrīvā), kā arī dzelzbetona (katoļu – Salacgrīvā). Visiem šiem dievnamiem ir zvanu torņi, kas izceļ dievnamus ainavas siluetā starp mazām lauku apbūves struktūrām un arī pilsētās. Neviena no Vidzemes piekrastes dievnamiem nav izvietots lauku ainavā, tie ir tikai lauku apdzīvotajās vietās vai pilsētās. Dievnamu ainavas un dievnamu dārzi ir veidoti pēc atšķirīgiem principiem katrā no reģioniem. Šis atšķirības atspoguļo reģionāli atšķirīgo attīstības un tradīciju vēsturi. Kopumā Vidzemes piekrastes dievnamu dārzi ir askētiski, ar dievnamu kā galveno dominanti. Vēl dievnamu dārza ainavā sastopami elementi ir soli, nožogojums, saimniecības ēkas, dekoratīvais fasādes apgaismojums un piemiņas zīmes. Samērā bieži dievnamu dārzos ir arī āra tualetes, perimetrālie koku stādījumi un rītiņu novietnes. Savukārt krucifiksi, apbedījumi ārpus dārza teritorijas, karogmasti ir reti sastopami elementi – katrs tikai vienā dārza teritorijā no deviņām. Citviet Latvijā baznīcu dārzos ir sastopami brīvstāvoši zvanu torņi un/vai apbedījumi dārza teritorijā, bet Vidzemes piekrastes dievnamu dārzu teritorijās tie nav. Kopējā piekrastes dievnamu ainavu vizuālā identitāte Vidzemē, kas tika atklāta pētījuma gaitā, var tikt raksturota, kā tipiska mazo apdzīvoto vietu piekrastes ainava ar konkrētiem dabas un unikāliem cilvēku veidotiem elementiem, kas izraisa neitrālas un patīkamas sajūtas un emocijas. Šis vidēja mēroga ainavtelpas var tikt raksturotas ar niansētu krāsu paleti un raupjām tekstūrām, kas ir cieši saistīta ar izmantoto materiālu klāstu – apmetumu, akmeni, ķieģeļiem un skārda jumtiem. Šis pētījums ir turpinājums pētījumu sērijai par piekrastes dievnamu ainavām.

The cultural environment and its identity: conservation issues

Jānis Zilgalvis, *a full member of Latvian Academy of Sciences*

Abstract. There are lots of sites in Latvia, where once, in the cultural environment events have taken place which with years running are destined to stay in memory and which have left their marks in our cultural life. They are personalities, their work, thoughts, feelings, and love as well. One of such sites is Puzenieki Manor in Kurzeme, not far from Ventspils.

Keywords: protection and preservation of architectural and cultural heritage, monument, landscape architecture, parks and gardens.

Introduction

Kurzeme is rich with many noteworthy monuments of manor architecture. The building consists of evidence of construction art of different periods and styles, and the cultural landscape cultured over years. One of such sites is Puzenieki Manor, for the study of which a broader work is not devoted, particularly in the context of the activities of specific historical personalities. The need for a broader study of the manor is also topical, as its building and the existence of the surrounding landscape environment are threatened by mismanagement, lack of funds, and indifference.

The owners of the manor and the cultural environment

In 1640, from Puze (Pussen) Manor about a third of the land area was separated and Puzenieki Manor, also Pusseneeken Manor, was built. During this time and until 1842, the manor was managed by the von Mirbach family, when its last owner Friedrich Karl von Mirbah (1767–1842) deceased. After short ownership changes, Puzenieki Manor was bought by Karl Ernst Oscar Wilhelm von Grotthuss from Spāre (Spahren) Manor, who deceased in 1920. But already from 1913, the manor was managed by his son Kuno [1]. In 1921, he was still living at Puzenieki, occasionally staying in Germany. During the time of E. O. V. von Grotthuss, the holding of the manor prospered - advanced management methods were introduced, appropriate for the age relationships formed between the parish landlords and the owner of the manor.

When the new master arrived at his estate, he found the old manor house – *kavalierhaus* [2] there, which was a single – storey building with a steeply pitched roof of roofing tiles and a small portico in the center. The corners of the building were rust-adorned and it was raised to the ground floor. The building center of the manor was also formed by a number of other dwelling houses and outbuildings. We can see all this in the allocation plan of the

manor lands, made in 1921 on the basis of the plan of the last quarter of the 19th century [3]. One of the outbuildings – the cattle-shed with the hen house attached to it, and the milk house were located near the manor house mentioned above (to the left of it), but opposite it, a beautiful granary stood (the end of the 18th century) with a porch arcade and the architecturally artistic solution of ornate facades made by plaster, near it – a masonry horse stable with semi-circular windows of the main facade (the end of the 18th century). A wider economic complex was located in the outermost end of the pond with the servants' houses, cattle-sheds, the granary, threshing barn, grain barn, cellar, etc.. The pond was split into two parts by a path which ended in the cattle-shed and opposite the old manor house – the smithy with a flat. Other outbuildings were located more distantly. Apparently, the existing housing did not satisfy the new owner and his family's desires and in 1868, as the year on the facade of the end of the building tells, the new manor house was completed, which resembled a palace. It was a large single – storey building on a high ground floor, covered with a steeply pitched roof of roofing tiles. It also had the so-called drempel storey, illuminated by small square-type windows. The centers of both longitudinal facades of the building were emphasized by a broad risalit with a triangular gable. Risalits also had a wide drempel storey, illuminated by small round windows. At the main entrance, there was a porch with a terrace at the top, on the other, park side – a terrace in the center, but in one of the end facades - a wide, co-called Swiss-style veranda. At the park side, there was an adjacent asymmetric extension of the house, probably a much older building, as it is apparent from the roof form with the upturned ends of the rafters and the different height of the foundations.



Fig. 1. The new manor house

[Source: State Inspection for Heritage Protection of the Republic of Latvia, Monument Documentation Center, 1949]



Fig. 2. The granary

[Source: State Inspection for Heritage Protection of the Republic of Latvia, Monument Documentation Center, 1949]



Fig. 3. The old manor house

[Source: State Inspection for Heritage Protection of the Republic of Latvia, Monument Protection Center, the 1920s]



Fig. 4. The interior view of the new manor house

[Source: State Inspection for Heritage Protection of the Republic of Latvia, Monument Documentation Center, 1920]

Little is known about the interior of the building. In 1949, information was provided by A. Gusars about it, “*The hallway divides the building into two parts, on the northern side, three halls with a lobby and the central entrance. These rooms are with a parquet floor and a wide ledge along the top of the walls. In the corners of the rooms – white glazed tile ovens. The window and door border of brown oak. Brass door fittings. On the southern side of the building, the rooms are simpler designed with colored wallpaper and style ovens. From the hallway, the wooden stairs curving lead to the second floor, where, in the projection of the middle part of the building, there are two wider rooms*” [4].

The manor building was surrounded by a park, designed in the second half of the 19th century, but some noble trees evidenced of its earlier origin. The linden alley led into a rectangular courtyard, where an oval path led to wide main entrance stairs. On the other side of the palace, there was a vast glade with symmetrically arranged plantings. The path network, as shown in the above plan of 1921, was also regular.

Outside the area of the park, on the other side of the cobbled stone Puze – Ugāle road, there were ponds. That was the architecturally spatial and scenic environment of the building of the manor center, where a number of people, among them K. E. O. V. von Grotthuss himself and his wife Carolina Louise von Fircks lived and worked. Without their son, there were two daughters in the family, one of them – Dorothea Louise Caroline von Grotthuss, called Cary, born in Cirole (*Zirohlen*) Manor, in December 1859. Thus, when the new manor house was ready, she was nine years old. It had to take another 27 years to associate this manor, Cary von Grotthuss and developments in it with the founder of our national oil painting Janis Rozentāls (1866–1916). At Puzenieki, the artist arrived in 1895 to paint the portraits of the owner of the manor and his wife. Parallel to this work, photos for composition searches were taken. A special photo session was devoted to Cary von Grotthuss – walking along the shaded alleys of the manor park, resting on the edge of the pond pergola, enjoying tea or coffee on the terrace together with other people of the manor.

In these photos, both the openness with which Cary engaged in the photo session and the romantic atmosphere that reigned in the relations of the artist and his model were felt [5]. Cary has a specific role in the artist's creative work, she is mentioned in almost all editions devoted to Janis Rozentāls, and not a few in number [6]. And each of the authors describes this friendship, which lasted long years, a bit differently. As the blessed rain over the art life of Janis Rozentāls rained down the concern of Cary.

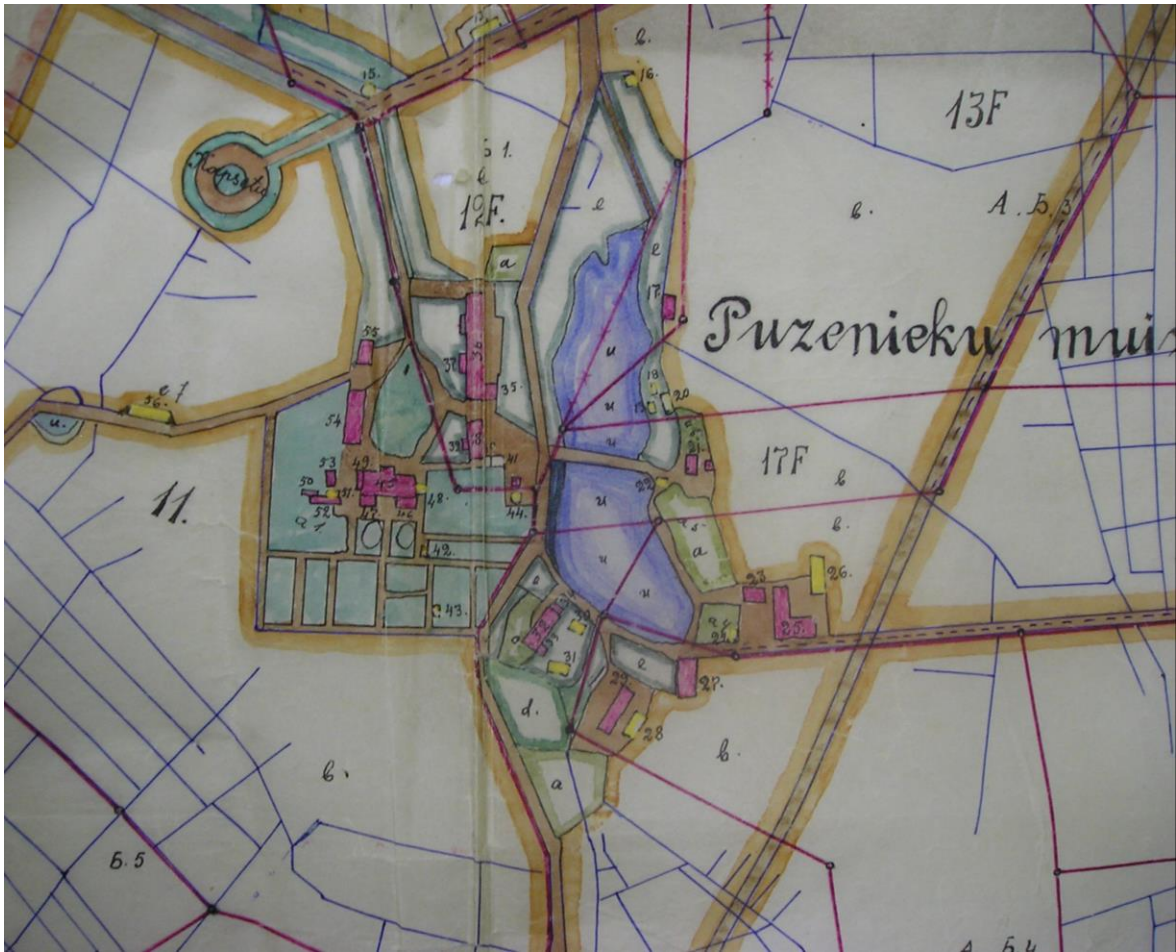


Fig. 5. The allocation plan of the lands of Puzenieki Manor. Fragment. 1921.
[Source: Latvia State Historical Archive, 1679.f., descr. 172, p. 2007]



Fig. 6. The park [Source: photo by author, 2016]



Fig. 7. A view with Cary von Grotthus at Puzenieki manor
[Source: Literature, Theater and Music Museum,
1895, photo by J. Rozentāls]

With a loving woman's charge, she took care that the German nobility recognized the new talented painter [7]. Elsewhere, it is said that Cary ... gave the blessing to Janis Rozentāls art and life for many years, provided many orders for Janis Rozentāls in the barons' circle of Kurzeme ... [8]. For many years, Cary von Grotthus followed the creative art of J. Rozentāls and up to World War I they exchanged with letters. They revealed the nature of their relationship, intimacy, and feelings. Here's one of them, written from Spāre Manor, "Dear old growler! Hearty thanks for Your dear letter in which I appear to get so much attention. Earlier you sometimes laughed about me that I am and remain the same, regardless of the years and circumstances. Well, now I no longer could say so about myself. A lot of that in me and in my neighborhood has changed, just my heart still has remained the same, and if someone at once has filled it, a small, warm place in my heart is always left for him "[9]. The summer of 1895, supposedly, gave many new initiatives. Around 1900, the portrait of Cary Grotthus was painted, and it was possible to see it at the exhibition – Janis Rozentāls (1866–1916), dedicated to the artist's 150 anniversary.



Fig. 8. The new manor house
[Source: photo by author, 2016]



Fig. 9. The granary [Source: photo by author, 2016]



Fig. 10. The horse stable [Source: photo by author, 2016]

The art and technique. 13.08.–30.10.2016. In the Latvian National Museum of Art. A youngish woman in a white robe holding a hat in one hand, in the second – a tiny bouquet of flowers, she stares sideways and her eyes seem quite the same that appear in the photos taken in the summer at Puzenieki.

After World War II, C. von Grotthuss lived in Germany, married and passed away in 1940. Puzenieki Manor was one of the sites that kept the memory of her and Janis Rozentāls. But it no longer was half its tidiness, romance and cozy air as earlier. Time and another political-economic situation introduced their adjustments and they were cruel to this environment.

Conservation issues of the manor's cultural environment and threats to the site's identity

In 1921, the buildings of the manor center for the most part of stone and brick – in a sufficiently good condition, but the servants' houses allotted – old ... [10]. Judging by the photos of the end of the 1940s, the building of the manor center before it had been little changed. The palace was not modified yet, also the main buildings of the courtyard – the granary and the horse stable.

In the second half of the 1940s, a trauma center and some flats were located in the manor house. The other rooms were empty. The further Soviet time was particularly destructive for the building of Puzenieki Manor. The manor house was in a miserable condition, the doors and windows were broken down, the rooms were full of litter and freely accessible to everyone. During the times of the group holding Blāzma, renovation works of the building were started, which by its collapsing finally stopped. The manor house was transformed to the point of absurdity. The small windows of the drempele storey were made larger, in some places also raising the height of the ledge, the roofing was replaced by tin instead of roofing tiles, a simplified architecturally decorative solution of the facade, on the side of the park – a single - storey boiler house was built (an extension of the building can be seen here already in the plan of land of 1921), the wooden veranda vanished and the porch lost its looks, without mentioning the destroyed builders' carpentry and joinery. The building, balanced in its volume, got a massive, primitive, and inexpressive appearance. During the period of awakening, several auctions were held, until the building became privately owned. Today, it is not used (except the park-side extension of the building that is inhabited) and puts off by its disfigured appearance.

At the end of the 1940s, the granary was in a satisfactory technical condition, it was used as a warehouse for collective farmers. By Decision No. 671 of the LSSR Council of Ministers taken on October 31, 1962, the building is in the list of the State Protected Architectural Monuments with No.179. 179. Over time, the condition of the granary increasingly worsened. Becoming a private property, the rescue works were launched, but they stopped. In 2007, the documentation was prepared anew to include the granary with the status of national importance in the list of the State Protected Cultural Monuments despite the fact that the building had no roof and the beautiful facades no longer were covered with plaster. Unfortunately, the inclusion process stopped, or as it is said– stayed in the air hanging ... The granary without the roof, plaster, windows and doors is still awaiting its rebirth... In 2005, the horse stable is still covered with a roof, but now only masonry is left from it. The roof

construction and coverage remains are right there in front of the building, already ingrown in the grass. In turn, in the 1920s, 30s the old manor house was rebuilt into a school – the second floor was built, the layout was changed, the portico – removed. Today, this building is abandoned – the wind is whistling in its opened doors and windows, the fucked up rooms give evidence of a long abandonment and hopelessness. All the above building *nicely fits* into the park's scenic surroundings. It is overgrown, unkempt and it is even difficult to perceive its plan. Today, being at Puzenieki Manor, even with difficulty it is not

possible to imagine the environment where Janis Rozentāls and Cary von Grotthuss met.

Conclusions

In the preservation of the cultural environment, the identity of the site plays an important role, which can consist of various factors and one of them – the link to specific historical events, or the activity of specific well-known persons. If the cultural environment is destroyed or changed, its identity is lost. That's why, preservation of the site is important as a whole, justifying its importance with scientific research.

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INFORMATION ABOUT THE AUTHOR:

In 1979 Jānis Zilgalvis graduated from the Faculty of Architecture of the Riga Technical University. In 1990, he defended his doctoral thesis on the subject of the manor architecture of the second half of the 19th century – the start of the 20th century. Since then, he is the Head of the Architecture Department of the State Inspection for Cultural Heritage. Since 2012 – a full member of the Latvian Academy of Sciences. Over 180 scientific and popular scientific publications and 18 books (some co-authored). The main lines of research – the manor architecture and cultural history, sacral architecture, protection of cultural heritage.

Kopsavilkums. 1640. gadā no Puzes (Pussen) muižas tika atdalīta aptuveni viena trešdaļa zemes platības un izveidota Puzenieku (Pusseneeken) muiža. 1842. gadā to nopirka K. E. O. V. fon Grotuss (von Grotthuss) no Spāres (Spahren) muižas. No 1913. gada muižā saimniekoja viņa dēls Kuno.

Muižas apbūves centru veidoja virkne dzīvojamās un saimniecības ēkas. To var redzēt muižas zemju sadalīšanas plānā (1921. g., uz 19. gs. pēd. cet. plāna pamata). 1868. gadā pabeigta jauna kungu māja - liela vienstāva ēka uz augsta cokolstāva, segta ar stāvu divslīpju kārniņu jumtu. Tai bija arī t. s. drempeļstāvs, izgaismots ar nelieliem kvadrātveida lodziņiem. Ēkas abu garenfasāžu centrus akcentēja plašs rīzālītis ar trīsstūrveida frontonu. Pie galvenās ieejas atradās lievenis ar terasi augšpusē, otrajā, parka pusē centrā bija terase, bet vienā no gala fasādēm – plaša t. s. Šveices stila veranda.

Muižas apbūvi ieskāva parks, kurš veidots 19. gs. otrajā pusē, taču atsevišķi dižkoki liecināja par tā senāku izcelsmi. Liepu aleja veda taisnstūrveida pagalmā, kur ovāls ceļš pieveda pie pašām pils galvenās ieejas kāpnēm. Otrā pusē pilij pletās liela lauce ar simetriski izvietotiem stādījumiem. Ārpus parka teritorijas, otrpus laukakmeņiem bruģētajam Puzes – Ugāles ceļam atradās dīķi. Tāda bija muižas centra apbūves arhitektoniski telpiskā un ainaviskā vide, kurā dzīvoja un strādāja K. E. O. V. fon Grotuss un viņa sieva K. L. fon Firksa (von Fircks). Ģimenē bez dēla auga divas meitas, viena no tām – Doroteja Luīze Karolīne (Dorothea Louise Caroline von Grotthuss), saukta par Keriju (1859–1940). K. fon Grotusi un norises Puzeniekos varam saistīt ar mūsu nacionālās glezniecības pamatlicēju Jani Rozentālu (1866–1916).

Puzeniekos mākslinieks ieradās 1895. gadā, lai gleznotu muižas īpašnieka un viņa kundzes portretus. Paralēli šim darbam tapa fotogrāfijas kompozīcijas meklējumiem. Īpaša fotosesija tika veltīta K. fon Grotusei. Viņai ir īpaša loma mākslinieka daiļradē, viņa pieminēta teju vai visos izdevumos, kuri veltīti J. Rozentālam. Un katrs no to autoriem mazliet citādāk raksturo šo draudzību ilgu gadu garumā. K. fon Grotuse ilgus gadus sekoja J. Rozentāla daiļradei un līdz pat 1. Pasaules karam apmainījās vēstulēm. Tajās atklājās viņu attiecību raksturs, intimitāte un jūtu pasaule. 1895. gada vasara Puzeniekos, domājams, deva daudz jaunu ierosmju. Ap 1900. gadu tapa Kerijas Grotuses portrets. K. fon Grotuse pēc 1. Pasaules kara apmetās uz dzīvi Vācijā. Puzenieku muiža bija viena no vietām, kas glabāja atmiņas par viņu un Jani Rozentālu. Taču tajā vairs ne tuvu nebija tās sakoptās, romantiskās un mājīgās gaisotnes, kas senāk. Laiks un cita politiski ekonomiskā situācija ieviesa savas korekcijas un tās šai videi bija nežēlīgas.

Spriežot pēc 1940. gadu beigu fotoattēliem muižas centra apbūve pirms tam bija maz mainījusies. Pils vēl nebija pārveidota, tāpat arī pagalma galvenās ēkas klēts un stallis. Īpaši postošs Puzenieku muižas centra apbūvei bija tālākais padomju laiks. Kungu māja atradās nožēlojamā stāvoklī, izgāztas bija durvis un logi, telpas piemēslotas un brīvi pieejamas ikvienam. Kopsaimniecības Blāzma laikā uzsākti ēkas atjaunošanas darbi, kas tai sabrūkot, apstājās. Kungu māja tika līdz nejēdzībai pārveidota. Apjomā līdzsvarotā ēka ieguva masīvu, primitīvu un neizteiksmīgu izskatu. Atmodas laikā notika vairākas izsoles, līdz ēka kļuva privātīpašums. Šodien tā netiek izmantota.

1940. gadu beigās klēts bija apmierinošā tehniskā stāvoklī to izmantoja kā noliktavu. Kļūstot par privātīpašumu, tika uzsākti glābšanas darbi, taču tie apstājās. Klēts bez jumta, apmetuma, logiem un durvīm joprojām gaida savu atdzimšanu. Stallis 2005. gadā vēl bija segts ar jumtu, taču tagad no tā vairs palikuši tikai mūri. Savukārt vecā kungu māja, kas 1920., 30. gados pārbūvēta, par skolu šodien ir pamesta. Parks ir aizaudzis, nekopts un tā plānojumu grūti pat uztvert. Šodien esot Puzenieku muižā pat ar grūtībām nav iespējams iztēloties to vidi, kad šeit satikās J. Rozentāls un K. fon Grotusa.

Kultūrvēsturiskās vides saglabāšanā liela nozīme ir vietas identitātei, kuru var veidot dažādi faktori un viens no tiem – saikne ar konkrētiem vēsturiskiem notikumiem vai konkrētu plaši pazīstamu personu darbību. Ja kultūrvēsturiskā vide tiek iznīcināta vai izmainīta, zūd arī tās identitāte. Tāpēc nozīmīga ir vietas saglabāšana kopumā, tās nozīmīgumu pamatojot ar zinātnisku izpēti.

Valle Rectory: the research of the cultural and historical environment and landscape

Jānis Zilgalvis, Dr. arch., *a full member of Latvian Academy of Sciences*
Mārcis Zilgalvis, *architect*

Abstract. It is essential to maintain the cultural and historical environment and landscape in places where it has not lost its quality and the original substance. This environment consists of buildings, the road network, water bodies, the terrain, plantations, etc.. In this respect, rectories are no exception and often determine the cultural and historical values of a more extensive landscape. The Valle parsonage is one of such exceptions.

Keywords: architectural and cultural heritage, monument protection and preservation, landscape architecture, historical environment.

Introduction

Rectories are an essential requirement of the manor architecture of Latvia. Many of these typological groups of buildings are demolished, collapsed, others – helplessly waiting for their revival. The building of the parsonage consisted not only of the rectory but also of other buildings such as the lessee's house, servants' house, horse stable and cattle-shed. The landscape and the surrounding cultural environment played a special role in the creation of the expression of the ensemble. An important role was also played by the park and its elements - the terrain, road network, as well as more distant places, where the church, sextonate, farmhouses of the rectory were located. The pastor's house was not just a place often visited by the parish members – church meetings, pastors' conferences, musical and reading evenings, as well as other events took place there. This also applies to the Valle parsonage, where the architectural and historical inventory was carried out a considerably long time ago and, unfortunately, proper public attention was not paid to the fading values there. Therefore, the need to refocus on the research of this site in a broader environmental context was urgent.

The architectural and spatial solution of the pastor's house

The Valle (Wallhof) pastor's house is supposedly a log house, built in the late 18th century or in the early 19th century. It is a long single-storey building, covered with a steeply pitched roof with partially tapered ends. The gables of the house are created as a construction of frames. The pastor's house is raised on a high rubble masonry base and a small cellar is built at its southern end. The main entrance is located in the center of the building, the household-type entrances are built at both ends. On the ground floor, a total of 30 large and smaller rooms are located. They are chained along the corridors but several rooms are also walk-through. A veranda is added to the main entrance,

but at the garden side - an asymmetric extension with a lattice gable. From the main entrance, we arrive in the lobby, which is lighted by two small windows on either side of the door, and further in the corridor, which in the northern end is concluded by one of the household entrances. The second corridor is located on the left, and, supposedly, it is built later. Larger and more spacious rooms are located on the garden side and part of them are walk-through ones. On the second floor, a room is built, which can be accessed by steep stairs at the southern end of the entrance. On the other end of the attic, the room is not built, although the constructions show that it has been intended to be built.

Such a solution - building rooms at both ends of the attic, leaving a free space in the middle, is characteristic to pastors' houses of the second half of the 18th century and the first half of the 19th century. In the cellar, there is only one small room but the entrance with the stairs is supposedly created or rebuilt later than the cellar. Its walls are built of boulders and red bricks. The original layout has partly remained, because the room partitions have been repeatedly changed, new door openings are created, the historical ones are built over. The log exterior walls of the building are originally painted red-brown, as evidenced by the surveys of the author of this article, but in the 1930s they are covered by planks, and, probably, then the shingle roof of the building is built. Supposedly, around the same time the veranda, located at the courtyard side, is also transformed. At first, there is a simple wooden porch there, later the windows are glazed and the constructions are complemented by a board-sown ornamental decor (silhouette carvings). With the original porch, the stairs are wooden but the present stone ones could have been made in conjunction with the modifications of the years mentioned above.

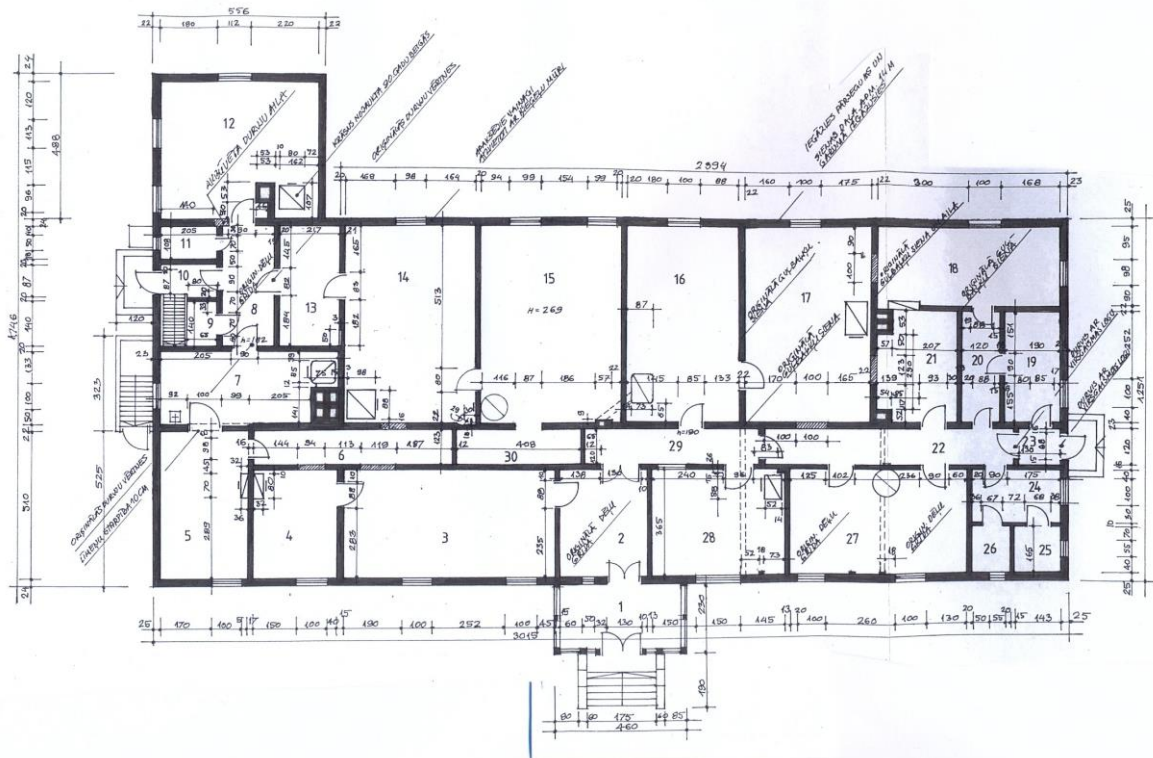


Fig. 1. The layout of the first floor of the pastor's house [Source: drawing by author]



Fig. 2. The Valle pastor's house
[Source: State Inspection for Heritage Protection of the Republic of Latvia, Monument Documentation Center, the 1960s]



Fig. 3. The courtyard of the Valle pastor's house [Source: photo by author, 2001]

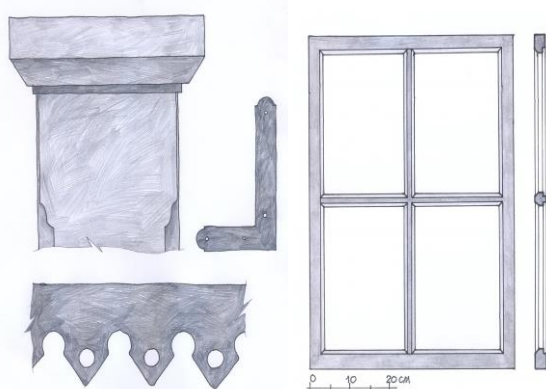


Fig. 4. Details of the pastor's house
[Source: drawings by author]



Fig. 5. The road to the pastor's house
[Source: photo by author, 2000]

Cultural and historical developments

There is little information about the Valle pastor's house. According to the information provided by the pastor Theodor Kallmeyer, around 1595 the first pastor of Valle was Henrich Mollerius [1]. Next, the parsonage is associated with the pioneer of our written language and the founder of the spiritual prose – the theology professor Georg Mancel (*Mancelius*) of the University of Tērbata (1593-1654). G. Mancel (*Mancelius*) was born at Mežamuiža (at Augstkalne) in a pastor's family. Until 1603, he studied at home, later at Jelgava Big City School, Dome School in Riga, Szczecin Pedagogicum (monastery school), Rostock University. In 1615, he returned to Zemgale. Soon one of his philosophical essays was published [2]. The post of the Latvian pastor at Valle was offered to him by Duke of Courland Friedrich (1569-1642). What were the duties of a pastor with regard to the parish at this time? The Lutheran pastor of Courland – Paul Einhorn (–1655) indicates [3] that the pastor must know not only the language of the native speakers but also the respective area's dialect: at Valle – Semigallian and Selonian, that the pastor's role is to visit the folks once a year: to go from house to house, to check how they come to realize devotions, to watch their serving to idol deities and combat it. At Valle, Mancel had an opportunity to study people, learn their language. The only source allowing it was meeting and talking to people. As for literature, there was only one book



Fig. 6. The northern end of the Valle pastor's house
[Source: photo by authors, 2001]



Fig. 7. The pastor's house from the side of the yard
[Source: photo by authors, 2008]

in Latvian at that time: Enchiridion that with its too meager language could not satisfy him [4]. Almost thirty years had passed from the publishing of this book, and no one had tried to improve the written Latvian language. Mancel learned the language from people, it is evidenced by his widespread popular sayings and culture observations of people in his later writings [5]. At Valle, Mancel spent five years. There, he started to lead a family life but that life was interrupted by the Polish – Swedish wars, and Mancel moved to Sēlpils. Later Mancel lives in Tērbata, in 1637 he returns to Latvia and serves at the Duchy of Courland as a court pastor. He spends his old age in a small manor near Jelgava. The Valle pastor's house is the only place in Latvia, which indirectly keeps the memory of this man, who has revised and supplemented the first Latvian song and gospel book [6], published the Solomon psalms [7] translated by him, written the great literary work *The long awaited Latvian sermons book – Lettische postill* [8]. It should be mentioned that his activities were not only religious in their nature. Mancel understood the psychology of the era, formed his own philosophical view of the world, improved his knowledge of Latvian. After G. Mancel, a number of other pastors have served in the parish, here are some of them – Balthasar Paroemius (1621–1655), Andreas Dannenfeld (1652–1701), Christian Dietrich Brieskorn (1702–1711), Friedrich Wilhelm Hildebrand (1711–1753) and others. From 1906, Alfred Alexander Wolański served as a pastor in the parish. The Valle parish folks even now remember the Christmas evenings organized by the pastor V. Bush (1881–1964), as well as the moment at the end of the 1930s, when from the porch of the pastor's house the small troopers *mazpulcēni* of the parish were addressed by State President Kārlis Ulmanis.

Transformations and destiny. The Soviet period and subsequent years

In 1964, Valle Lutheran Church was forcibly liquidated and a hospital, telephone exchange, and other institutions found their place in the pastor's house. The technical condition of the building at that time was in a satisfactory condition. This is evidenced by the photo fixation of the 1960s – the roof repaired, scuppers in place, the window glazing and shutters in their place [9]. Over time, the above authorities left the house and the next year it stood abandoned. At first, the rain and snow caused the northern end to rot as during the kolkhoz times the slate roof was put only in the southern end. In 1995, the roof structure and exterior walls were in their places, although from the attic the sky could be easily watched. In a couple of years, in 2000, the exterior wall of the northern wall came tumbling

down, but the rafters and roof trusses still stood - the artisans of the past centuries did their work with honor. But in the winter of 2002, at that side of the building the roof came tumbling down - it partially collapsed, also tumbling down several inner walls. The southern end of the building was in a relatively better condition, but the rooms were demolished as well – the stoves abandoned, broken windows in some places, the doors, shutters disappeared, the roof began to leak. As concerns the pastor's house, something was done at that time. Activities started in the late 1990s, by involving the local communities' attention to this site. In 2000, surveying and the architectural historical research of the pastor's house were carried out [10]. In a year, the reconstruction and the development of the development concept followed [11]. These materials indicate that the room group of the parish council is selected to be the main center and core of the functional solution of the building, where the second type of use would be organizing banquets, seminars, round-table discussions, etc.. The research stresses the open nature of the pastor's house and accessibility for all, whom the parsonage atmosphere is close to the hearts. In the group of the rooms for meetings, space was left for the so-called Mancel's room, intended as a sort of the parsonage museum, the exposition of which among other stories would tell about G. Mancel. It is indicated that the Mancel's room should not be a sterile museum hall but a practically usable room located near the meeting room. The southern end of the building would serve as the pastor's dwelling. It was proposed to place an archive, Sunday school, choir rehearsal room, etc., at the northern end. On the attic floor of the building, the guest rooms were intended. Unfortunately, due to the lack of resources, the practical action did not take place. What can we view today? One side of the ancient building has completely collapsed, the other - the southern side is still stubbornly holding out against its own fate, but how much longer? Renovation of the building is still possible thanks to the measurements and a detailed photo fixation.

The building and the surrounding cultural and historical environment

The pastor's house was the main building of the pastorage and around it other buildings – the dwelling and household buildings. We can judge the situation of the building in 1922 by the *description of the Valle pastor's house, sextonate and the former Valle church tavern buildings* [12]. The following buildings of the parsonage are mentioned here: 1 *dwelling house*, 2 *outhouse of the dwelling house*, 3. *granary*, 4. *granary*, 5 *dwelling house*, 6,7 *outhouses of the dwelling house*, 5., 8. *fire-wood shed*, 10. *dwelling house*, 1.1 *cellar to the dwelling house*, 10. 12. *pigsty*, 13 *cattle yard* 14, 15 *pigsty*,



Fig. 8. The layout of the rectory land
[Source: Latvian State Historical Archive,
1679, f., 172. descr., p. 196.]



Fig. 9. The layout of the rectory land
[Source: Latvian State Historical Archive,
1679, f., 172. descr., 196.1.; 1]

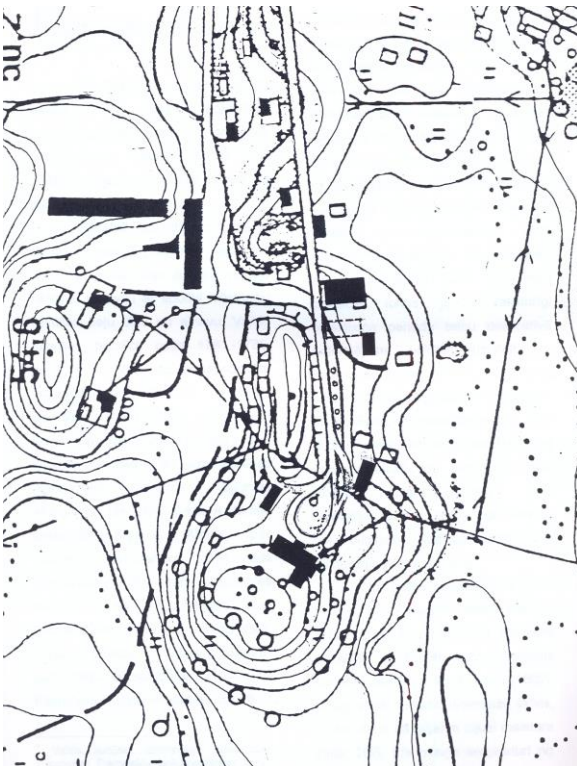


Fig. 10. Valle in the topographical plan of 1967
[Source: State Inspection for Heritage Protection of the
Republic of Latvia, Monument Documentation Center]

16 smithy, 17 kiln-house, 18 barn, 19 threshing floor. The same situation can also be seen in the same year's plan of the division project of the Valle rectory, the sextonate and the land of the Valle state-owned church tavern [13]. Unfortunately, the plan does not indicate which each building is. However, by its nature and location, as well as by other information it can be judged that, in general, the center building of the manor accounted for nearly seven buildings: the rectory, servant (lessee's?) house, two stone outbuildings, of which the largest one could be a horse stable and instead of the foundation adjacent to it – a cattle-shed (these buildings could also be named as a cattle-yard). At the other side of the courtyard, a post office is located opposite the servants' house, finding its place there already in the start of the 20th century. In 2000, there was a bread oven in this building and its planning was not significantly altered. It is presumed that the post office was housed in some other building, belonging to the rectory. Behind it, the barn of the rectory is located but the small log bath-house is recently built from the timber of an older building. Behind the pastor's house, on a small hill, foundations of a building can be traced, above the ground of which only a few boulders are visible. Was it the oldest pastor's house associated with the name of G. Mancel? Interestingly, those big trees are planted exactly around this place. According to its dimensions, it has been much smaller than the existing pastor's house.

The above sites are surrounded by a small park, the driveway is decorated by an alley. The building of the center consisted of several water bodies, three together – not far from the southern end of the pastor's house behind the servants' house and at the roadside before the two outbuildings (the cattle-yard). The scenic expressiveness of the rectory is enhanced by the relief, some ancient trees and their groups. From the historical building, the servants' (lessee's?) house is an interesting building from the architectural point of view. The shape of its volume is similar to the pastor's house – with a steeply pitched roof, which ends are partly oblique, with a symmetrical node of the main entrance, etc.. The servants' house and the so-called post office are located on the opposite sides of the irregular courtyard of the pastor's house and connected by an oval-type road which leads to the main entrance of the pastor's house. The building situation of the Soviet era can be viewed in the topographical plans of 1967 [14]. Compared to the situation of 1922, very large and significant changes had not taken place. In the ruins, there is one of the cattle-yard parts and no longer – the small building behind the pastor's house on the hill. However, on the right side of the driveway, there are new household-type blocks, shifted off the road, not interfering the historic environment.



Fig. 11. Valle Lutheran Church in the landscape [Source: photo by author, 2000]



Fig. 12. The servants' (lessee's?) house [Source: photo by author, 2000]

It is very important to maintain the cultural environment and the landscape around the center of the rectory. Close to it, there are still many buildings, their groups, and places *ideologically* related to the parsonage. The first of these is the church – a hall type one with a narrow polygonal altar part and its annexed sacristy. In the 160s, the church (1781–1785, 1874) was ruined – the equipment plundered and burnt, unattended surroundings, a dilapidated tower. The parish has

regained their church in the start of the awakening. Now the building has been restored, a new roof is built, the surroundings are attended, in 2001 the church equipment – the altar, pulpit, benches and the organ-loft made by Riga Craft School are consecrated. Nearby the rectory, *Zvanītāju Bukas* is located - a farmhouse, the hosts of which for several generations have served at the church as bell-ringers. The producer *Alfrēds Amtmanis – Briedītis* (1885–1966) and his brother – the actor, and



Fig. 13. The farmhouse *Zvanītāju Bukas*
[Source: photo by author, 2000]

producer Teodors Amtmanis (1883-1938) have lived here. The dwelling house was built in the 1920s and the museum dedicated to the above-mentioned persons was opened in 1985. From the sexton's house or the sextonate, only its name has remained. The ancient wooden building disappeared during the Soviet era and the present buildings were built anew. In 1922, the sextonate's building comprised the following buildings: the dwelling house, granary, cattle-shed and kiln-house [15]. The Valle windmill is also not preserved – an essential vertical element of the rectory's landscape. It was located on the hill, on the other side of the road, opposite the church. The church tavern has also disappeared which in the land layout of 1922 is shown by a dotted line, so its foundations and fragments of the walls are still readable. The cemetery is also associated with the cultural and historical environment, which is located near the rectory, on the roadside. Red brick masonry goal posts with forged metal casements lead into the cemetery.

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INFORMATION ABOUT THE AUTHORS:

In 1979 **Jānis Zilgalvis** graduated from the Faculty of Architecture of the Riga Technical University. In 1990, he defended his doctoral thesis on the subject of the manor architecture of the second half of the 19th century and the early 20th century. Since then, he is the Head of the Architecture Department of the State

How will we characterize the landscape situation today? The church visible already from afar on the hill was the focal point, creating a definite area around itself with the building and a road network. The sexton's farmstead, the bell-ringer's farmstead, the church tavern were visible from it, the rectory was hidden by trees. A spatial structure of a definite planning was formed, where the functional necessity was the decisive one – a building for each need. From the road, view perspectives opened to these sites, except the pastor's house, located on the roadside which was rarely met in Latvia. Usually, it was located at some distance from it, surrounded by tree clusters. Today, this environment has generally been maintained.

Conclusions

The planning elements and the extent of the spatial structure of the pastor's house were typical to the Latvian rectory architecture. The building is one of the most representative samples of buildings of this typological group. Despite the fact that the building has partially remained, its recovery is possible by obtaining information in a timely manner. It is very important to preserve the cultural and historical environment and landscape. Each imprudent construction, which interferes with the perception of the cultural heritage prevents to feel them in their mutual interrelationships. The Valle parsonage and the environment around it have maintained its landscape quality and it is a value that should be approached with care and respected.

Inspection for Cultural Heritage. Since 2012 – a full member of the Latvian Academy of Sciences. Over 180 scientific and popular scientific publications and 18 books (some co-authored). The main lines of the research – the manor architecture and cultural history, sacral architecture, protection of cultural heritage.

In 2011, **Mārcis Zilgalvis** graduated from the Faculty of Architecture of the Riga Technical University. From 2005, he worked at a design bureau, participated at reconstructions and the construction of new buildings in the historical center of Riga. He has also participated in the development of architectural and artistic inventories. The main professional interests: identification of the architectural heritage, involving new buildings in the cultural and historical environment.

Kopsavilkums. Viena no savdabīgākām Latvijas muižu arhitektūras parādībām ir mācītājmuižas un viena no tām – Vallē. Mācītājmāja ir, domājams, 18. gs. beigās vai 19. gs. sākumā celta guļbūve, pārsegta ar stāvu divslīpju jumtu, kam gali daļēji nošļaupti. Ēkas zeltiņi izveidoti pildrežģa konstrukcijā. Tās guļbaļķu ārsienas sākotnēji bijušas krāsotas sarkanbrūnas, bet 1930. gados apšūtas ar dēļiem. Par Valles mācītājmāju vēsturiskās ziņas saglabājušās skopas. Pirmais mācītājs Vallē ap 1595. gadu bija H. Mollerius. Tālāk pastorāts saistās ar mūsu rakstu valodas celmlauzi un garīgās prozas dibinātāju, Tērbatas universitātes teoloģijas profesoru G. Manceli. Latviešu mācītāja vietu Vallē viņam piedāvāja Kurzemes hercogs Frīdrihs. Mancelis Vallē pavadīja piecus gadus. Te viņš nodibināja ģimeni, taču dzīvi traucēja poļu - zviedru karadarbība, un Mancelis pārceļas uz Sēlpili. Valles mācītājmāja ir vienīgā vieta Latvijā, kas netieši glabā atmiņas par šo vīru, kurš pārlaboja un papildināja pirmo latviešu dziesmu un evaņģēlija grāmatu, publicēja paša tulkotos Zālamana psalmus, uzrakstīja lielu literāru darbu *Ilgī gaidītā latviešu sprediķu grāmata - Lettische Postill*. Mancelis pārzināja laikmeta psiholoģiju, veidoja pats savu filozofisko pasaules uzskatu, pilnveidoja savas zināšanas latviešu valodā. 1964. gadā varmācīgi tika likvidēta Valles luterāņu draudze un mācītājmājā ierīkota slimnīca, telefonu centrāle un citas iestādes. Ēkas tehniskais stāvoklis šajā laikā bija apmierinošs. Laika gaitā minētās iestādes māju atstāja un turpmākos gadus tā stāvēja pamesta. 2000. gadā sagāzās ziemeļu gala dārza puses ārsiena. Ēkas dienvidu gals salīdzinoši bija labākā stāvoklī, taču arī šeit telpas tika izdemolētas – izgāztas krāsnis, vietām izsisti logi, pazuda durvis, slēgi, sāka tecēt jumts. Par mācītājmāju nevar teikt, ka šajā laikā nekas netika darīts. Aktivitātes sākās 1990. gadu beigās piesaistot vietējās sabiedrības uzmanību šim objektam. 2000. gadā tika veikta mācītājmājas uzmērīšana un arhitektoniski vēsturiskā izpēte. Pēc gada tai sekoja atjaunošanas un attīstības koncepcijas izstrāde. Šodien senās ēkas viena puse ir pilnībā sabrukusi, otra, dienvidu puse vēl spītīgi turas pretīm savam liktenim, taču cik ilgi vēl? Mācītājmāja bija pastorāta galvenā ēka un apkārt tai grupējās citas – dzīvojamās un saimniecības ēkas. Par apbūves situāciju 1922. gadā varam spriest pēc Valles mācītājmuižas, ķesterāta un bij. Valles baznīcas kroga ēku apraksta. Tajā minētas sekojošas pastorāta ēkas: *1 dzīvojamā ēka, 2 piebūve pie dzīvojamās ēkas 1, 3 klēts, 4 klēts, 5 dzīvojamā ēka, 6,7 piebūves pie dzīvojamās ēkas 5, 8 malkas šķūnis, 10 dzīvojamā ēka, 11 pagrabs pie dzīvojamās ēkas 10, 12 cūku kūts, 13 laidars, 14 laidars, 15 cūku kūts, 16 smēde, 17 rija, 18 šķūnis, 19 piedarbs*. Pēc ēku rakstura un atrašanās vietas var spriest, ka muižas centra apbūvi kopumā veidoja septiņas ēkas: mācītājmāja, kalpu (rentnieka?) māja, divas mūra saimniecības ēkas, no kurām lielākā varēja būt stallis un pie tās esošo pamatu vietā kūts, pagalma otrā malā iepretim kalpu mājai atrodās ēka, kurā jau 20. gs. sākumā iekārtots pasts. Minētos objektus ieskauj neliels parks, iebraucamo ceļu rotā aleja. Ļoti svarīgi ir saglabāt kultūrvēsturisko vidi un ainavu ap mācītājmuižas centru. Tā tuvumā joprojām atrodas vairākas, ar pastorātu *idejiski* saistītas ēkas, to grupas un vietas. Viena no tām ir baznīca (1781 – 1785, 1874). 1960. gados tā tika izpostīta – izlaupīta un sadedzināta iekārta, nekopta bija apkārtnē un pussagruvis tornis. Draudze savu dievnamu atguva atmodas sākumā. Tagad ēka ir atjaunota, uzlikts jauns jumts, sakopta apkārtnē, 2001. gadā iesvētīta Rīgas amatniecības skolas darinātā baznīcas iekārta. Netālu no mācītājmuižas atrodas *Zvanītāju Bukas*, lauku sēta, kuras saimnieki vairākām paaudzēm kalpojuši baznīcā par zvaniķiem. Šeit dzīvojis režisors A. Amtmanis – Briedītis un viņa brālis aktieris un režisors T. Amtmanis. Dzīvojamā ēka celta 1920. gados un minētajām personām veltīts muzejs atklāts 1985. gadā. No ķesterāta mājām saglabājies tikai to nosaukums. Nav saglabājušās arī Valles vēdzirnavas – būtisks mācītājmuižas apkārtnes ainavas vertikāls elements. Zudis arī baznīckrogs. Ar kultūrvēsturisko vidi saistīta ir arī kapsēta, kas atrodas netālu no mācītājmuižas, ceļa malā. Kā raksturosim ainavisko situāciju šodien? Pakalnā jau iztālēm redzamā baznīca bija tas *mezgla punkts*, kas ap sevi veidoja noteiktu teritoriju ar apbūvi un ceļu tīklu. No tās bija redzama ķesterāta sēta, zvaniķa sēta, baznīckrogs, aiz kokiem paslēpusies mācītājmuiža. Veidojās noteikta plānojuma telpiskā struktūra, kurā noteicoša bija funkcionālā nepieciešamība – katra vajadzībai sava ēka vai sēta. No galvenā ceļa uz šiem objektiem pavērās skatu perspektīvas, izņemot mācītājmāju, kas ļoti reti Latvijā atradās ceļa malā, parasti no tā attālāk koku pudura ieskāpumā. Šodien šī vide kopumā ir saglabājusies.

The preservation of the uniqueness of the cultural landscape in farmsteads of Zemgale

Aija Ziemelniece, *Latvia University of Agriculture*

Abstract. Knowing that the diversity and quality of the European landscapes are an essential resource for ensuring people's quality of life, strengthening the identity of areas and activation of the economic activity, in Florence, on October 20, 2000, the Member States of the Council of Europe adopted the European Landscape Convention, the main objective of which is to promote the protection, management, and planning of the European landscape. To this end, the Convention provides that the States should establish and implement their landscape policies through taking specific measures set out in the Convention: identification and assessment of the landscape, identifying the targets of the landscape quality, training of professionals and raising the public awareness of the value of the landscapes [12]. Thanks to the strictly specific target of the Convention, within the framework of the Latvian domestic policy it is possible to carry out a range of tasks to address the problems related to the preservation of the heritage of the cultural landscape and passing it on to future generations.

Keywords: farmstead, uniqueness of the landscape, picturesqueness, field landscape, agro-load, sight lines, scale, transformation processes, form creation.

Introduction

The base of Zemgale is built on the agricultural area of the national significance and the rural area with a mosaic-type structure of the landscape. Intensive agriculture has been developed in the agricultural areas of the national significance and nearby, the area is dominated by an open landscape with arable land which in some places is stopped by forest clusters, serving for reducing the load of the wind erosion and restricting the dust flow. In turn, in the rural areas of the eastern part of the Zemgale region, the arable land intersperses with forest areas which are identified by the relief, the development [6].

The planning of the cultural heritage and protection of the rural landscape in Latvia is more focused on the maintenance of manor ensembles, alleys, and parks, as well as the countryside churches. In turn, the rapid financing in agriculture has contributed to a slow disappearance of the historical image of individual farmsteads. In the rural landscape, individual farmsteads lay a great impact on the landscape aesthetics which maintains the identity and scale of the rural landscape in Latvia. Therefore, in order to implement what is laid down in the Convention the distancing and the architectural form creation of the protective zones, the proportion of landscape spaces and the new agricultural building should be carefully assessed that plays an important role in preserving regional features. Particularly markedly it is attributable to the landscape of the Zemgale Plain which is characterized by long sight lines and

panoramas. Based on the above situation, it is important to keep the historical proportion of the expression language of the elements of the composition.

The individual farmstead of Zemgale as a part of the rural landscape space begins to rapidly lose its significance and expressiveness. It is promoted by intensification of the agricultural load at the start of the 21st century that applies to the growth of the areas of cereals, the increase of the load of the agricultural industrialization and the slow disappearance of farmsteads in the landscape space. Therefore, long-term solutions for the Latvian landscape policy have been moved forward in the Latvian Sustainable Development Strategy "Latvia 2030" (adopted by the Saeima on June 10, 2010), which states that in order to maintain the typical Latvia's unique natural and cultural landscape which constitutes prerequisites for the quality of people's living environment:

1. Public support should be ensured for multi-functional and productive rural areas, for the preservation and creation of the cultural landscape;
2. The typical and unique landscapes in Latvia should be identified, their inventory should be carried out and proposals for the landscape management and monitoring of processes should be developed;
3. The society should be educated and involved in the landscape management;
4. The requirements and conditions for the spatial plans which provide protection of the locations of landscape interest should be specified [12].

The contemporary Latvian landscape is a man-made cultural heritage with preserved cultural and historical elements. Currently, the decisions of the State and the local government, as well as each landowner with their decisions and actions change the rural landscape and its quality. The principles and objectives of the rural sustainable development are based on the solutions for the adoption of appropriate legal, economic, and political decisions related to the environmental protection and the preservation of its identity in the rural areas.

The aim of the research is related to the study of the landscape space of Zemgale farmsteads and the assessment of the agro-load on an individual farmstead.

The assignments of the research are related to summarizing of a number of factors, so proving that the farmstead is the most important part of the cultural heritage of the rural landscape and to getting recommendations on the establishment of the protective zone around them.

Materials and Methods

Thanks to the unique fertility of the soil of the Zemgale Plain, it is not typical to have virgin lands in this region. At the start of the 21st century, the EU funding has contributed to the growth of agro-load where for the purpose of profit making, lands with individual farmsteads are purchased, then dismantled, bulldozed, and plowed up.

According to the reclamation and land-use planning regulations, it is important to determine the optimal size of the fields. In the Zemgale sandy loam, loam, and loamy areas, the area of the arable land may not exceed 60-80 ha to prevent the wind erosion load [9].

In the research, the **comparative method** is used – collecting map materials, historical research, expedition materials and photos. The **graphical -analytical method** is based on the presentation of the research data in the graphical material, thus visualizing the collected information in a number of sketches.

At the start of the 21st century, through entering of the European aid funding in agriculture, the productivity of fields is intensified. The Zemgale loamy soils are with the highest yield rate in the country and they are focused around Bauska, Dobele, and Jelgava municipalities. To the present day, the fertility of the natural base and its legacy constitute a very significant contribution to the managers of this land and the national economy. During the human farming, the Zemgale clay fertility has historically been reflected in the rich design of manor building complexes and the shape of farmsteads. Such use of the uniqueness of the natural base has contributed to the creation of picturesque landscape spaces in Zemgale. The scale

of the historical building and brittleness of the forms are attributed not only to the centers of the manor building but also to the farmsteads around them.

The historic farmstead building is characterized by 2 periods:

- the establishment of old farms in the 70–90s of the 19th century when a rapid buyout of lands from manors started in the area of the governorate of Kurzeme;
- construction of new farms in the 20s-30s of the 20th century – as a result of the agrarian land reform the manor land was redivided.

Both of these periods have marked a substantial change in the structure of the rural landscape:

The 80s of the 19th century – the driveway and creating tree lines or alleys along them, so bringing a new scale in the rural landscape;

a) In sandier places, tree lines or windbreaks were planted for roads to protect them from snowstorms. It brought a new accent in the rural landscape.

b) The roads built in the loamy soil were mainly without tree plantations to ensure drying of the road by the wind in springs and the sunlight for its faster drying.

c) The yard of the individual farmstead with the size of 40x50 m is acceptable as a conventional point of the center which consists of the yard with the circumferential building and the household zone enriched by the architectural form creation, coloring, scale, transparency, shelter from the wind, smells. The exploitable land consisted of around 0.2–1 ha where crop rotation was changed, fallows created, plowing them up anew. Such land management formed a mosaic “canvas” of the landscape space which was based on the color change of seasons. It was accompanied by the winding character of the countryside roads that “repeated” the nature of the natural base - bents of the small rivers and forest edges, shrubland.

d) The building scales of the farmstead building of the 19th century are different from the building of the 20s–30s of the 20th century. The scales of the dwelling house, the stockyard, hay barns are larger. It is based on the fact that for the management of the large areas of old farm lands (60–120 ha), farm laborers were needed for the accommodation of whom additional dwellings were built. Beside larger buildings, a larger yard and a vegetable garden were started.

In the 80s of the 19th century up to 30s of the 20th century, the so-called new farms are created under the impact of the agrarian land reform and by dividing the land new homes were built:

a) On the western side of the farmstead for screening the western winds, windbreaks were planted both line-type and cluster-type ones;

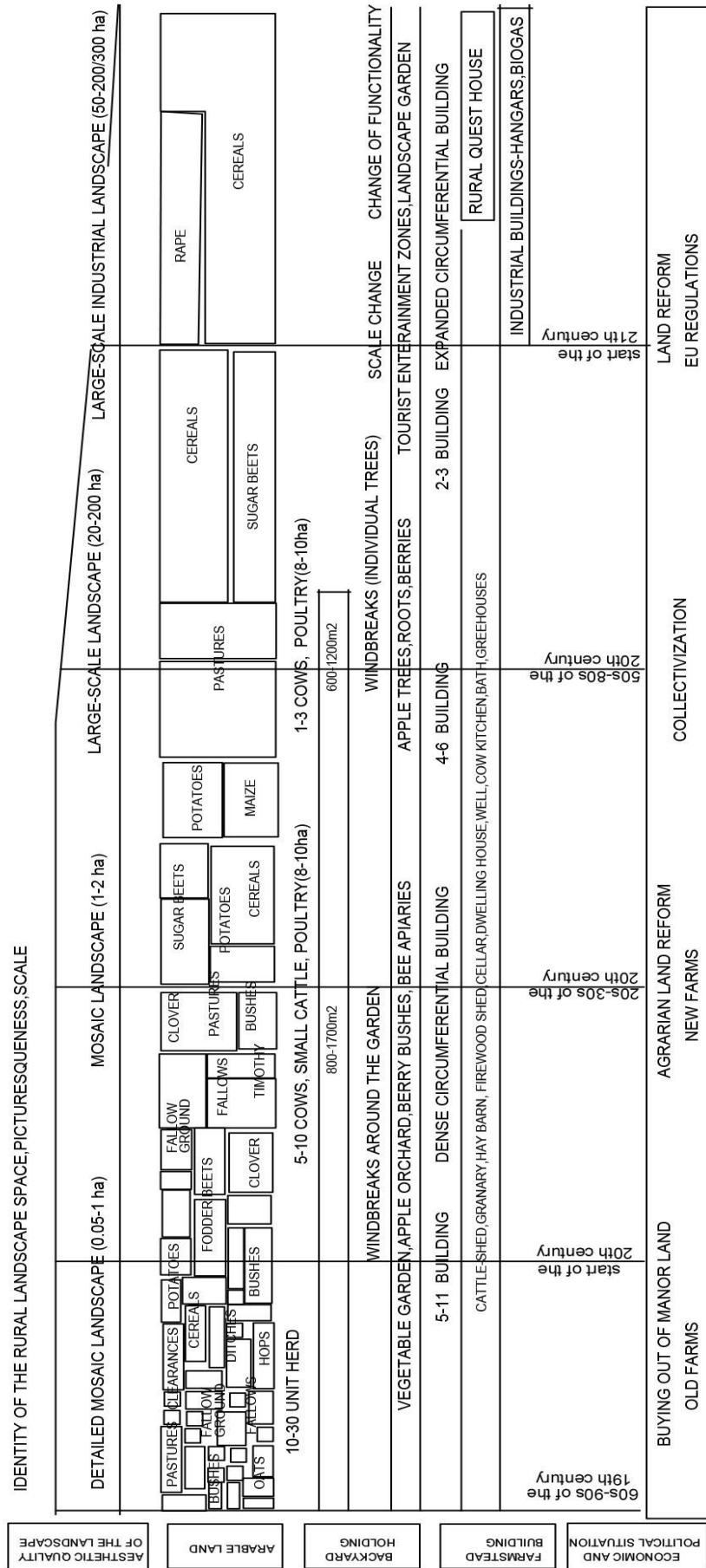


Fig. 1. Identity of the rural landscape of Zemgale [Source: authors scheme, 2016]

b) Compositionally, the windbreaks were the highest point of the building location of the farmstead, creating a shaded area that was used as a small grazing area for the flock in the backyard area;

c) Like with the old farms, also in the new farms the dwelling and household buildings were located around the backyard.

Historically, the arable land is located in a ring around the farmstead which over the centuries has changed its scale. With the development of the technical capabilities, the dimensions of the exploitable land are evolving. The economic boom and the technology up to the start of the 20th century have changed not only the visual appearance of the farmsteads but also have created landscape mosaics around them. It is characterized by several interconnections of an economic significance and creating the transformation of the landscape space:

Shrubs or the so-called fine firewood that served for stove and oven heating with the highest heat transfer. In the 70s–80s of the 20th century, in the farmsteads, with the refusal from ovens and linking them to heating networks of solid fuel, shrubs in the farmstead disappeared, they were cut down for the arable land.

For the maintenance of subsistence farms even in the 50s–60s of the 20th century, the main crops were cabbage, potatoes, fodder, and sugar beets which on the field scale were the largest in terms of cultivation areas for vegetable growing. With the centralization of the production of food, such nature of plantations already disappeared in the 80s of the 20th century.

The start of the continuous amelioration in the 60s of the 20th century, the construction of a new ditch system, cutting out of multiple tree groups and shrubs slowly contributed to the development of the large farming,

Disappearing of small countryside roads, road straightening and widening from the 70s of the 20th century to provide the access of the heavy-duty agricultural machinery to the arable land.

The wave of construction of big farms in the 70s–80s of the 20th century which brought a strange scale;

The arrival of the EU investments in the turn of the 20th/21st centuries promotes the development of the large farming which is attributable to livestock farming and grain cultivation, especially after winding up sugar refineries.

The attraction of the EU investments for the construction of biofuel stations to promote the development of clean technology at the start of the 21st century.

The development and boom of the above agricultural farming slowly began to reduce the historically functional significance of farmsteads. From the 80s of the 20th century, in the Zemgale Plain, there are dominating areas of arable land with



Fig. 2. An old farm of the 80s-90s of the 19th century. The dwelling house and the stockyard (ruins), Lestene Parish [Source: photo by author, 2016]



Fig. 3. The dwelling and household building of an old farm around the yard, Platone Parish [Source: photo by author, 2016]



Fig. 4. The winding section of the disappeared countryside road along the former Vimbu Inn location at Vecsvirlauka [Source: author scheme and google material, 2016]

far, broad sight lines that miles away are not hidden by tree clusters, houses, forest compartments. With the start of the intensive continuous amelioration and the creation of giant fields in the 60s–70s of the 20th century, farmsteads were dismantled which allowed creating fields where technical resource consumption was reduced at the expense of maneuvering and bypassing.

Results and Discussion

The cultural heritage – in the spatially broader sense – the cultural and historical landscape – creates an accumulated totality of resources, received as the heritage from the past and set apart from the property ownership is a value for the whole society.

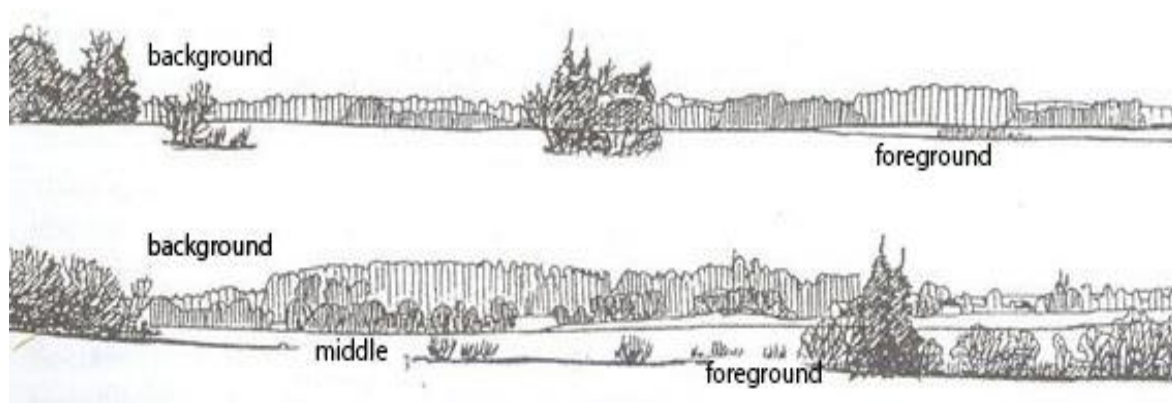


Fig. 5. Separate groups of shrubs and trees contribute to the creation the mosaics of the rural landscape [15]

The strategy of the sustainable development of the Zemgale Planning Region lays down the main guidelines for preserving, protecting and developing the natural, cultural, and historical heritage:

- to promote conservation, restoration, and recultivation of the natural landscape, to preserve the biological diversity;
- to promote conservation of the landscape, cultural, and natural heritage and sustainable use for the development of tourism;
- to promote the accessibility of the cultural heritage, to promote traditional materials, traditions, ecological values;
- to promote the accessibility of information on the value of the natural landscape and heritage, their economic importance, conservation, and improvement opportunities;
- to create and develop new cultural and historical values;
- to document the intangible cultural heritage [6].

Having considered the information referred to in the document and on its basis, the research looks at the issue in depth in order to achieve the desired results, mentioned above.

Guidelines for sustainable rural development:

- to contribute to community development and strengthening of the local identity;
- to enhance local initiatives and employment in the countryside, diversifying the agricultural production, developing fruit growing, organic farming, fishing, rural tourism, etc., and strengthening and developing craft traditions, promoting the development of the business environment in the rural areas;
- to contribute to the availability of services for rural residents;
- to contribute to the preservation of the structure characteristic for the settlements (farmsteads, villages) of Zemgale;
- to provide conditions for the preservation of the rural identity and characteristic features of the building;

- to ensure the availability of public rivers and lakes for recreation and tourism purposes, including the necessary improvement measures;
- to prevent declining of the landscape diversity and aesthetic quality in areas of landscape interest or in territories, including – the loss of good panoramic views due to afforestation of agricultural lands;
- without reasonable needs not to plan transformations of agricultural and forest lands to other ways of land use;
- to promote afforestation of the unused or low-value agricultural lands in areas where the forest is required for environmental reasons and after years will carry out the functions of environmental protection [6].

The change of the political and economic situation in the country is best read in the individual farmsteads where each type of farming has left its mark on the building architecture and landscape. Most notably it applies to the architectural language where the application of building materials, form creation of buildings, roof slopes, building dimensions, distancing, etc., are readable.

One of the objectives of “Latvia 2030” [5] spatial development perspective is to maintain the originality of Latvia – the diverse natural and cultural heritage, typical and unique landscapes. To that end, as one of the areas of the national interests which require complex solutions and targeted state policy, areas of outstanding natural, landscape, and historic sites are defined that need to be identified, preserved, wisely managed, and efficiently used. “Latvia 2030” states that the landscape quality is a prerequisite for the quality of people’s living environment and an important potential of the sector of the national tourism, so for preserving the landscape, the State aid is required [12].



Fig. 6. The historical road bed to the rural homes retains its original width between the fields. Jaunsvirlauka Parish [Source: photo by author, 2013]



Fig. 10. The pasture with a herd near the former Īslīce Manor [Source: photo by author, 2014]



Fig. 7. The fragments of the building from the 80s of the 19th century are supplemented with the silicate brick masonry in the 60s of the 20th century. The former stockyard at Kulpju Manor, Jaunsvirlauka Parish [Source: photo by author, 2013]



Fig. 11. A seamless field in the place of the former Lauku Manor [Source: photo by author, 2014]



Fig. 8. Clay molding with stone joining elements in the corners. Jaunsvirlaukas Parish [Source: photo by author, 2013]



Fig. 9. The old cattle-shed has retained its rubble masonry, mortar finish, and the vertical plank pattern in the attic. Lestene Parish [Source: photo by author, 2013]

A small part of the Zemgale individual farmsteads still retain the construction traditions of the 30s of the 20th century where a number of conditions of functional significance are clearly defined. The southern part of the individual farm was built coloristically most colorful, the expression of which was highlighted by: the construction volume of the dwelling house with a colorful front garden of planted flowers, so compositionally forming the lowest point not to reduce the sunlight. Flowers in the flower garden were picked for summer cemetery festivals and family honors.

- Nearby, the vegetable garden. Placement of the kitchen windows was to be directed towards the side of the road to see who was coming, so this side was chosen for a vegetable garden because it was possible to see over it.
- On the eastern side, a stockyard was usually built so that the prevailing westerly winds could bring the cattle-shed smells away from the yard. An apple orchard started behind the cattle-shed, so providing a comfortable taking of manure to the fruit garden. In addition, the “heat” of the vapor often protected apple trees from frost during the blossoming period. On the northern side of the stockyard, fields started and in springs during the manure cleanup, for carts it was the shortest way between the cattle-shed and the field. The manure cleanup smells were not taken into the yard by the prevailing westerly winds.



Fig. 12. The arable land up to the windbreaks, Lestene Parish [Source: photo by author, 2016]



Fig. 13. The arable land “ring” around the individual farmstead Džūkste Parish [Source: photo by author, 2016]

- On the western side, windbreaks were planted to protect the yard from the wind force of the Zemgale Plain. Linden trees were most frequently planted as windbreaks which were also good for those farmers who kept beehives. Since the linden trees were shaded on the side of the evening sun, on hot summer days it was possible to find a good shade for pasturing the flock.

At the start of the 20s of the 20th century, threshing machines were started to be used in farms for grain threshing. At the end of July, the harvested cereals should have had to dry in the wind before the autumn. Therefore, cereal barns were built which

were located at roadsides, sometimes even at a distance from the individual farm. It was a reliable guarantee that in autumn it would be possible to get to the barn through the wet loamy roads with the threshing machine as it was popularly called. Such a big, gray clapboard barn architecture made the landscape of Zemgale particularly romantic which reaffirmed the fact of the land fertility and the high yields. Today, the beautiful grain barns with gates of logs on both sides of the barn - only rarely are met. The gray clapboard barns with a pitched shingle roof were a peculiar symbol of wealth and pride for the Latvian peasants. It was already noticed at a distance from the road.



Fig. 14. Buildings of the large-scale production at the 21st century in the yard of farmstead Platone Parish [Source: photo by author, 2016]



Fig. 15. The wooden heritage of the farmstead Platone start of Parish [Source: photo by author, 2016]



Fig. 16. Grain barn by the roadside Vircava Parish [Source: photo by author, 2016]



Fig. 17. The building of the historical individual farm in the 30s of the 20th century and at the start of the 21st century. Along with the yard – the arable land [Source: photo by author, 2016]



Fig. 18. Nearby the individual farmstead of the new farm, the agricultural production of the start of the 21st century has grown with an exaggerated scale of buildings and roads, Jaunsvirlauka Parish [Source: author scheme and google material, 2016]

If in the 60s–70s of the 20th century in the scenic compositional construction of Zemgale's individual farmsteads, the traditions of the historical creation of the individual farm were still readable, then in the turn of the 20th/21st centuries the retained scale of the form creation of the wooden or brick architecture and the game of individual elements are noticeable only rudimentary. The same is true for the fruit garden, flower garden, berry places and the old well where all the elements together formed multifacetedness and coloring. Surveying the individual farmsteads of Lestene, Jaunsvirlauka, Platone, Vircava Parishes, it is possible to mark several character points of changes in the individual farms:

- The individual farmsteads have retained their historical appearance, they are not rebuilt but as a result of mismanagement the constructive condition of the building is critical, the orchard has gone extinct. The historic compositional structure of the farmstead is clear and understandable;
- The building of the individual farmstead has undergone reconstruction or alteration without sacrificing the context of the architectural and landscape space. The historical scale of the yard and the orchard are retained;
- Alterations of the building have been carried out for the individual farmstead, new construction volumes are brought in, the orchard is gone with the arable land breaking into instead and reducing the historical distancing between the home and the fields.
- The introduction of a new building scale next to the historic scale of the individual farmstead, constructing hangar type warehouses with a wide parking lot and a driveway for the agricultural machinery.
- The windbreak and orchard abandoning, creating an accurate linear hedge lines around the building, so visually acquiring a dotted conifer group with the roof of the dwelling house a little over it.

Conclusions

In the countryside landscape of Latvia, a thorough monitoring of the respect of the protective zones of the manor ensemble areas is successfully started, so slowly regaining a small portion of the expressiveness of the historical landscape space. The next step is to be taken in the field of conservation of the unique individual farmsteads in the conditions of the modern big industrial farming. This task is more difficult because the scale is more subtle and more sensitive than for manor ensembles surrounded by the park area, ponds, a greater historical building area, the driveway and the front yard. The elements referred to in the manor building create a definite character of the compositional structure. In turn, the compositional structure of the farmstead is created by the circumferential building of houses of different functional significance. It can be denser or thinner together with the apple orchard, vegetable garden, bee apiary, etc.. The individual farm - as an important component of the cultural heritage of the rural landscape space requires a thorough survey and research work, as well as preparing of the project documentation. As one of the key considerations is public awareness and education. At the start of the 21st century, the above beliefs, customs, and symbols have faded in the landscape both visually and functionally. But the Convention and the development of the region of

Zemgale documents provide to identify, study, systematize and make changes to the legislation.

1. In order to retain the farmstead of Zemgale as the most significant component of the heritage of the rural cultural landscape, the protective zone of the landscape should be created around it, after assessing distancing of the sight lines to determine the belt width. Within the protective zone, large-scale arable lands are not allowed but a small plot mosaic structure is welcome. For each farmstead, the size and nature of its structure are differently defined and this may not be common to all of them.

2. It is recommended to prevent large-scale household building near the historical farmstead. The distancing of the new warehouse or production building should be assessed in sight lines for each site separately.

3. It is unacceptable to widen, straighten the historical driveway of individual farms and have hard surfaces. The same applies to the inner yard zone.

4. Consider the inclusion of a separate area of the parish in the reserve zone with a smaller or a larger number of farmsteads in it which could acquire the status of an open-air museum. In this case, a mutual interest should be arisen by adjusting tax benefits and attracting funding for the restoration of the historic building.

5. Within the above framework, it is possible to develop the infrastructure of the rural tourism and eco-tourism, ensuring the possibilities of renewing the identity of the area of the Zemgale Plain.

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INFORMATION ABOUT THE AUTHOR:

Aija Ziemeļniece – bachelor degree in architecture (1979), PhD degree in Architecture science (1999) *Transformation processes of Zemgale rural culture landscape*. Professor at the study programme Landscape Architecture of Latvia University of Agriculture (since 2000). Author the several project of restoration and reconstruction in Latvia. Member of Latvia Society of Architects, Expert in science of architecture of Latvia Academy of Sciences. The main lines of research – the manor architecture and cultural history, protection of cultural heritage. E-mail: aija@k-projekts.lv

Kopsavilkums. Politiski ekonomiskās situācijas maiņa Latvijā vislabāk ir nolasāma lauku viensētās, kur katrs saimniekošanas posms ir atstājis savu pēdu ēku arhitektūrā un ainavā. No 19.gs. otrās puses gredzenveidā ap viensētām izvietojās lauksaimnieciski izmantojamās zemes, kuras gadsimtu gaitā ir izmainījušas savu mērogu. Attīstoties tehniskajām iespējām, mainās apsaimniekojamo platību lielums. Ekonomiskais uzplaukums un tehnoloģijas līdz 20.gs. sāk ap viensētām veidot sīkmozaīkveida ainavu. Gan pēckara gadu kolektīvizācijas vilnis, gan intensīvs Eiropas atbalsta finansējums lauksaimniecībai 21.gs. sākumā ir kāpinājis zemes apstrādes intensitāti. Zemgales māla augsne ir ar augstāko ražības koeficientu valsti, un tā koncentrējas ap Bauskas, Dobeles un Jelgavas novadiem. Zemes auglība un tās mantojums veido ļoti nozīmīgu pienesumu tautsaimniecībai. Vēsturiski tas ir atspoguļojies bagātīgā muižu apbūves kompleksu un lauku sētu izveidē.

Latvijas lauku ainavas kultūrmantojuma un aizsardzības plānojumi ir vairāk vērsti uz muižu ansambļi, to aleju un parku, kā arī lauku dievnamu teritoriju uzturēšanu. Starptautiskā finansējuma ienākšana lauksaimniecībā ir veicinājusi jaunu aramzemju platību palielināšanu, aramzemi veidojot cieši gar vēsturisko sētas vietu. Lai īstenotu Konvencijā noteikto, ir likumdošanā jāizvērtē aizsargjoslu, ainavtelpu proporciju un jaunās lauksaimnieciskās apbūves distancējumu no vēsturiskajām viensētām. Īpaši tas ir attiecināms uz Zemgales līdzenuma ainavu, kurai ir raksturīgas tālas skatu līnijas un panorāmas. Tāpēc ilgtermiņa risinājumi Latvijas ainavu politikai tika izvirzīti Latvijas ilgtspējīgas attīstības stratēģijā „Latvija 2030”, kurā ir noteikts saglabāt Latvijai tipiskās unikālās dabas un kultūrvēsturiskās ainavas, kas veido priekšnoteikumus iedzīvotāju dzīves vides kvalitātei. Ja 20.gs.60.–70. gados Zemgales viensētu ainaviski kompozicionālajā uzbūvē vēl bija nolasāmas vēsturiskās tradīcijas, tad 20./21.gs. mijā tikai fragmentāri ir pamanāma koka vai ķieģeļu arhitektūras saglabātais mērogs un atsevišķi elementi. Tas pats ir attiecināms uz augļu un puķu dārzu, ogulāju vietām un veco aku. Apsēkojot Lestenes, Jaunsvirlaukas, Platones, Vircavas pagastu viensētas, ir atzīmēti vairāki viensētu izmaiņu raksturpunkti.