

Identity Features of Spatial Structure in Small Cities, Towns and Villages in Dzūkija

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The identity issue of small Lithuanian cities, towns and villages is very relevant nowadays. The importance of the need to reveal valuable and unique territories in the largest Lithuanian cities has already arisen. However identity of spatial structure (despite the cultural heritage) is forgotten in small cities and towns. By discussing about peculiarities and exploring them just in the big cities, it is forgotten, that there are just few of them in Lithuania. Therefore the whole identity of the country cannot be determined just by the biggest ones – small settlements are the foundation of the Lithuanian identity. Due to this, the exceptional attention should be paid on them and their spatial structure.

The research results of spatial structure in Dzūkija's small cities, towns and villages will be presented in this article. Also the examples of settlements with different spatial structure will be revealed, by systematizing, comparing and summarizing data, which was collected from the literature and the site researches.

Keywords: *identity, spatial structure, settlements, urban development.*

1. Introduction

Inhabited place has to inform us not only where we are geographically, but it has to inform us where we are in our culture. Where we have come from, what kind of people we are, and by doing that, it needs to afford us a glimpse to where we are going in order to allow us to dwell in a hopeful present (Kunstler, 2004). Local identity has been discussed in various aspects of the topic more than once; the theory of identity has quite deep roots. Starting with Ch. Norberg-Schulz's definition of "genius loci" (1980), the unique identity is getting more and more valuable in today's competitive world (Lynch, 1960; Jacobs, 1961; Mumford, 1961; Alexander *et al.*, 1977 and etc.). Therefore we observe attempts if not to regulate, then at least to reveal peculiarities of the identity in the biggest Lithuanian cities (Zaleckis, 2002; Daniulaitis, 2003; Kamičiūtė-Virbašienė, 2003; Daunora *et al.*, 2004; Petrušonis, 2004 and etc.). However, big cities constitute a minority of settlements in Lithuania and have not a significant impact on the national landscape, which, according to the National Landscape Policy (LR Kraštovaizdžio..., 2004), is the foundation of national identity. It can be stated, that the biggest Lithuanian cities are more concerned about brand image, which can be easily transformed, adapted, recreated or managed in any other ways according to the needs, while the identity of small settlements are much more orientated to the lasting traditions, social relations and unique character. Therefore, this article will be concentrated exceptionally on small

cities, towns and villages and on their spatial structure. If talking about what has been already done in this field, it is necessary to mention a significant contribution of Miškinis, Bučas and Šešelgis. They have highlighted the questions which directly or indirectly touch protection of the local identity. The historical evolution of settlements and changes of its spatial structure have been analysed by Miškinis (1974, 1991) and Šešelgis (1988, 1996). The strong link between local identity and preservation of cultural heritage is noticeable in the works of both Bučas (2001) and Miškinis (2005). However comprehensive researches in widely spread territories were done quite a long time ago, and today's scientific works are mainly confined to analysis of single settlements and their spatial structure, or to researches of certain restrictive group of residential areas (e.g. researches of historical settlements (Miškinis *et al.*, 1999), researches of church villages (V. Karvelytė-Balberienė, 2010) and etc.). In this way, there is not any possibility left to obtain an overall view, what types of residential areas are predominant in Lithuania today, what dominate in a particular region and etc. It is important to mention, that here we are not talking about regional differences of individual architectural objects (such kind of works and researches is quite abundant (Lietuvių liaudies..., 1957, Šešelgis *et al.*, 1965, 1968, Andriušaitė *et al.*, 2008, 2012 and etc.). The general urban spatial structure, where the architecture is only one of many components, is meant here.

The research, which will be presented in this article, has been done as a part of the research project “Determination and preservation of the identity of spatial structure in Lithuanian cities, towns and villages” of the national science program “State and Nation: Heritage and Identity” financed by Research Council of Lithuania. Research subject which will be analysed here – is small settlements of one ethnographic region – Dzūkija (actually one administrative district – Alytus County). Not taking in account Vilnius Region, which had come under East Slavic and Polish cultural influences over the history. Also, according to the works of Čaplikas (2009), Ragauskaitė and Daugirdas (2010), this research territory has the strongest identity of Dzūkija’s consciousness (Fig. 1).

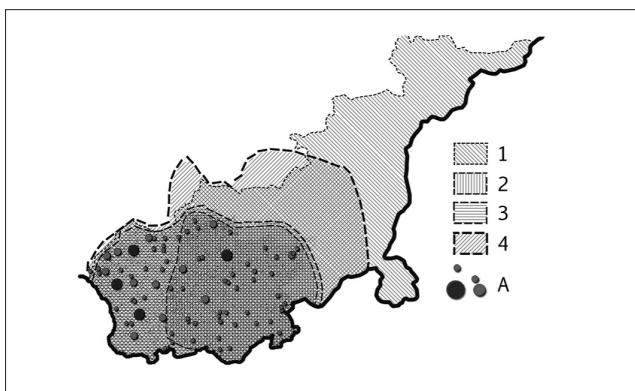


Fig. 1. The distribution of analyzed settlements in the region of Dzūkija’s consciousness. 1 – Territory under the auspices of the Council for the Protection of Ethnic Culture of Dzūkija region (Čaplikas, 2009); 2 – Core region of Dzūkija consciousness (Ragauskaitė, Daugirdas, 2010); 3 – Boundary of active expression of Dzūkian identity (*ibid*); 4 – Boundary of region of Dzūkian consciousness (*ibid*). A – Researched settlements in Dzūkija

At the early stage of research, the most important baseline information was collected for all settlements in Alytus district. These are:

- Information from Department of Statistics about the status of the settlement, its population and administrative centres (*Lietuvos statistikos...*, 2011);
- Information from Department of Cultural Heritage about protected sites and complex objects. (*Kultūros vertybių...*, 2013);
- According to V. Karvelytė Balberienė’s works, the villages with churches were distinguished. (*Karvelytė-Balberienė, 2010*).

Without the possibility to investigate all settlements thoroughly, selection was done for this research and 81 settlements out of 1131 were chosen for the further study. The list includes small cities (up to 5,000 residents) (4), small towns (12), church villages (23), villages which are centres of eldership (8) or have natural/cultural values (26).

2. Methods

The methods of the research include: analysis of the scientific literature, related with historical development of small settlements in Lithuania (and especially in Dzūkija region); field researches of elements of spatial structure in

Dzūkija’s residential areas; systematization, comparison, and generalization of the collected data.

Prior to conducting the field research, some of the information about the objects, selected for further investigation, was collected indoor (*i.e. administrative status of residential areas, population, dates of the first mention in written sources, preserved natural territories; protected cultural heritage sites, complexes and individual objects and other potentially relevant information*). During the stage of field research, photo fixation of the characteristic views of spatial structure (*silhouettes, panoramas, perspectives, localized images of investigated residential areas*) was done. The features of urban fabric of settlements and their surroundings were registered as well. Recorded elements can be grouped into natural (*terrain character (expressive, hilly, flat), location of settlements in relation to the hydrographic network (rivers, lakes, other water ponds), predominant function of the surrounding areas, which determines the visual connection with outside (forests, cultivated fields, meadows)*) and anthropogenic (*elements of planar-spatial structure and the outstanding individual objects, particularly affecting the identity of the settlement*). During the registration of planar-spatial structure elements, the attention was paid to: the type of planar structure, which is based on the grid of the main streets, the dominant building up (*type, height and materiality of building up*), public spaces of the settlement (*squares, their functional use and shape*) and green spaces in the settlements (*parks, small squares and other open green places*). By recording the individual objects, the major focus was on sacred buildings (*catholic churches, orthodox churches, mosques and synagogues*), homesteads of manors and on other bigger architectural objects or complexes (*cultural houses, administrative elderships’ buildings, outpatient clinics, water and wind mills and etc.*). The effect of individual objects on the overall urban fabric was assessed. Also the form, style and materiality of single buildings and structures were captured.

3. Results

The summary of field research results will be presented in this section. The research was done for the selected settlements in accordance with the methodology described above.

Perception of settlements in landscape. During the assessing of the silhouette of settlements, it was observed that about half of investigated settlements have good (25 (here and further in this section, the number of settlements will be indicated in parentheses)) or medium (21) visual contact with the outside. That means that cultivated fields and meadows dominate in their surrounding areas. Remaining settlements have poor visual connection with outside due to predominant wooded neighbourhood. The study also revealed that sacred buildings stand in almost every other residential area (42 out of 81). One fifth of researched settlements have sacred buildings dominating in the internal spaces (18). However residential areas with better visual connection to outside, distinguish with expressive silhouettes. In such cases sacral buildings dominate in both internal and external spaces (21) (Fig. 2)



Fig. 2. Silhouette of Rudamina town

Natural conditions. Individuality and expressiveness of townships' panoramas are influenced by the overall image of settlements, which belongs on the natural conditions as well. Therefore an overview of protected natural areas, terrain character and hydrographic network was done during the field research. Most of the surveyed residential areas are not protected for natural values (62), however some of them occurred in the territory of nature reserves (18) and national parks (12). Expressive relief was found out only in a few residential areas, and most of them are located, where the terrain is only a bit hilly or even completely flat. The field researches also showed that settlements located near water (rivers (36), lakes (22) and other water ponds (18)) dominate in the area. According to Miškinis, in such cases, water surface organically turns into a spatial composition of settlement (Miškinis, 1974).

Planar-spatial structure. According to the information of the Department of Cultural Heritage, there are 18 protected areas (protected rural villages, historic towns or their historical parts and etc.) in Alytus County. Talking about the main streets' grid, commonly found type was radial (30). Other types of street network were recorded nearly the same number of times: linear (18), mixed (13) and scattered (12). Since the investigation object is small settlements, it is quite predictable, that 1–2 storey houses dominate (73). This low-rise building-up areas are shaped by both brick and wooden houses (42). However, one third of settlements distinguish by wooden buildings (26).

There are not any squares in the urban structure in the most of researched townships (60). Though if the square is found, its function is for public needs (13) or for the motor vehicles traffic purpose (2). Dominant geometrical forms of squares are triangle (14) and quadrangular (5). Most of the settlements do not include planned green open places in their structure (42), only a small part of them contains small green squares (13), parks (9) or other greenery (9).

As it was mentioned, sacral buildings stand out in the spatial structure and silhouette of settlements. The majority of these religious buildings has two towers (19) or is without it (12). The historicism period architecture (15) dominates, though there are some folk form (9) churches as well. Wooden (16) (Fig. 3) and plastered masonry (16) (Fig. 4) religious buildings are the most common here.

Besides the manor houses or their fragments (10) were captured during the field research, as individual elements, which are significant for the identity of settlements.

Based on the field researches and on literature review, it was noticed, that three elements of urban structure have the deepest impact on shaping the identity of settlements. These are: *silhouette (external image)*, *plan structure (streets network)* and *public space (square usually)*.

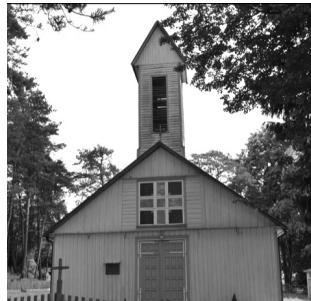


Fig. 3. Wooden, folk forms church with one tower in Gerdašiai



Fig. 4. Plastered masonry gothic style with baroque features church in Merkinė

The expressiveness of township's panoramas is determined by the common set of the elements, which also depends on the natural conditions and the churches, which dominates in the silhouette of settlements. Compactness of the residential area, types of plan and other local factors have a certain importance in this respect (Miškinis, 1974). On the basis of the field research, six dominant types of silhouettes were revealed in the Dzūkija Region (Fig. 5):

- *Silhouette is not perceptible due to wooded surroundings (S1);*
- *Silhouette of the settlement is without any visual dominants, formed by residential houses (S2);*
- *Silhouette of the settlement with visual dominant; sacral building is located in the central part of settlement (S3);*
- *Silhouette of the settlement with visual dominant; sacral building is located in the outskirts of settlement (S4);*
- *Silhouette of the settlement with visual dominant; sacral building is located distantly from the settlement (S5);*
- *Silhouette of the settlement is without any visual dominants; sacral building and houses form the homogeneous shape (S6).*

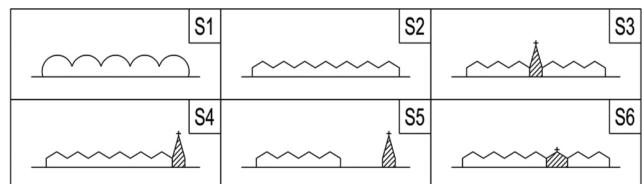


Fig. 5. Common types of silhouettes in Dzūkija Region

Another very important element of the urban structure is network of the streets. Based on the literature, three main types of street grids were identified: linear, radial and rectangular. What type of plan was developed in the settlement depended on the geographical – natural conditions and level of economic activity. The higher concentration of the linear plan settlements is found in Dzūkija and Eastern Lithuania, where were less economically developed Lithuanian areas (Miškinis, 1974). Eight dominant types of plan were revealed in Alytus County after the field research (Fig. 6):

- *Scattered plan (P1);*
- *Linear plan (P2);*
- *Radial plan (P3);*
- *Radial with square (P4);*
- *Rectangular plan (P5);*
- *Rectangular with square (P6);*
- *Mixed plan (P7);*
- *Mixed with square (P8).*

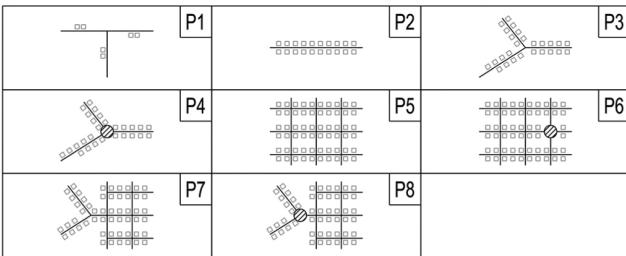


Fig. 6. Common types of plan structure in Dzūkija Region

The townships' squares also are the important elements of the urban structure. They are characterized by the size, shape and proportions of their plan. Markets and fairs were organised in the broader territories in the larger settlements. Such reliance between the size of commercial purpose space and the size of settlement's area is almost analogous to the reliance between the area of public centre and the size of the settlement (which describes the economic activities and their extent) (Miškinis, 1974). On the basis of the reviewed literature and results of the field research, four dominant types of squares were revealed in the Dzūkija region (Fig. 7):

- triangular (or close to this form) squares (A1);
- quadrangular (regular and irregular shape) squares (A2);
- other rarer forms (A*): extended street form square (a3) or complex form square (a4);
- several squares system in one settlement (A5).

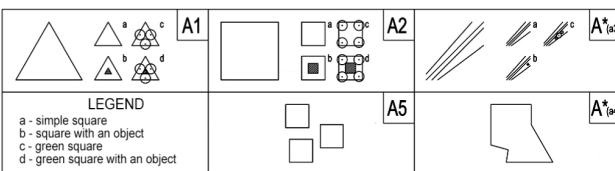


Fig. 7. Common types of squares in Dzūkija Region

However, single types of spatial structure elements (defined before) do not completely reveal the general image or identity of the settlement in Alytus County. Only combinations of these elements (the silhouette, plan and squares) allow us to highlight the peculiarity, randomness or representativity of spatial structure, to perceive the settlement as one indivisible whole. After systemization of collected data, 33 possible combinations (types) of elements of spatial structure were found out. It was noticed, that certain types are very similar to each other, therefore such types were combined into one group (in this way, some of the types were converted into subgroups). Finally, 19 amalgamated groups were sorted (Fig. 8).

The chart (Fig. 8) shows which groups of spatial structure are predominant in Alytus County (S1P1, S2P1, S2P2 and etc.). This suggests that townships with such spatial structure contain characteristics, which are common all over this district. Meanwhile, similar hypothesis could be proposed that rarely occurring groups (S6P7, S3P8A, S2P7 and etc.) should contain distinctive and unique settlements. Yet, it is necessary to verify this hypothesis. Characteristic features of each type, differences and similarities of typical and unique settlements will be discussed in the next section.

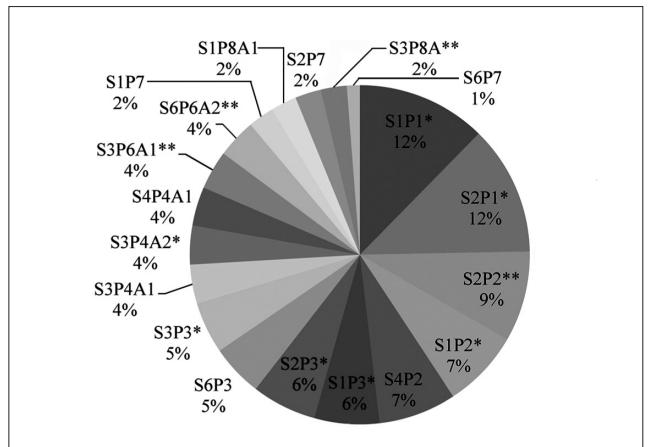


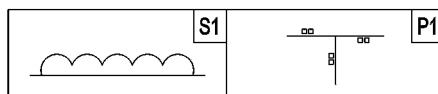
Fig. 8. The percentage distribution of spatial structure groups in Alytus County (* – one subgroup is included in these groups; ** – two subgroups are included in these groups)

4. Examples

Firstly, settlements with the simplest structure will be discussed. The homesteads are located chaotically here; fairly large distances are among them. Actually, this type of settlements is unlikely to be called as "having plan structure". Therefore **SCATTERED** village term will be used to define such type of settlements in this article. These are ones of the oldest and still surviving forms of rural settlements in Lithuania (K. Šešelgis, M. Urbelis, 1980). An interesting fact about such form of settlements is that they appeared at different times and was influenced by different conditions during the history. As for economic development of these settlements – it was very weak. Trade or craft activities were not a part of daily life here.

S1P1. Non-perceptible silhouette. Scattered plan.

Gerdašiai, Žiogeliai, Bulotiškė, Gegutė, Dubaklonis, Rudnia (in Marcinkonai eldership), Glūkas, Dubininkas. All representatives of this group are small villages (1–38 inhabitants). Silhouette of these settlements is not perceptible from the outside, because they are surrounded



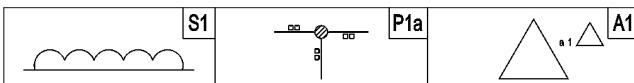
by forests. Clear urban structure is not developed in the majority of these settlements due to unfavorable geographic or economic conditions. Others are representatives of rick (*lt. kuperiniai*) villages (Žiogeliai (Fig. 9), Bulotiškė).



Fig. 9. Žiogeliai rick village

Terrain is mostly hilly; almost all villages have strong connection with water. Nearly all settlements of the group (except Glūkas and Bulotiškė) are the part of the protected areas (most of them are located in Dzūkija National Park, some are in Veisiejai Regional Park and

few of them were found in the nature reserves). Dominant type of building-up areas – disordered homesteads, formed by low-rise wooden residential buildings. There are cozy, wooden, folk forms churches built in Gerdašiai and Gegutė. They perfectly fit to small-scale rural layout. Rudnia and Žiogeliai are exceptional protected rural settlements in the terms of urban development. There is ethnocultural reserve established in Žiogeliai. None of the discussed villages has the public space in their spatial structure. Still there are such cases in Alytus County. Therefore, subgroup **S1P1A1** was extracted. Small settlements with scattered plan

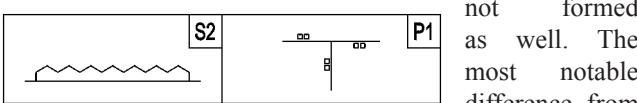


structure and minor squares (triangle form – in the considered cases) get into this subgroup (*Lynežeris, Rudnia (in Kaniava eldership)*). These villages are defined as subgroup because existence of the square does not change the whole spatial structure entirely. In other respects representatives of the subgroup are similar to the group.

S2P1. Silhouette without dominants. Scattered plan.

Obelija, Gulbinėkė, Poteronys, Arminai I, Balkūnai, Kružiūnai.

Representatives of this group are also small villages (6–106 inhabitants), where the clear planar layout is



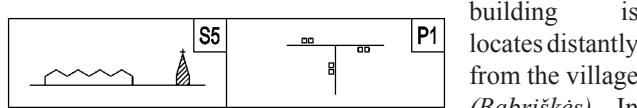
not formed as well. The most notable difference from

the previous group is that here cultivated fields dominate in the neighbourhood, making a good visual contact with the outside surroundings. Character of building up areas – disordered homesteads; wooden low-rise residential houses are prevailing. Terrain is slightly hilly in the most of villages; only Arminai stands with expressive relief. Close water connection was found in nearly all villages (located near to lakes, rivers etc.). Obelija village is noteworthy as a part of protected territories of Meteliai Regional Park and Meteliai Landscape Reserve (Fig. 10).



Fig. 10. Obelija village in the landscape

Fragments of manor residency are also remained in this village. All villages (included in the group) do not have sacred buildings; however there was a subgroup **S5P1** formed. This subgroup covers settlements where the sacred building is located distantly from the village (*Babriškės*). In



such cases, sacral dominant is perceived as single object, not as element of the settlement. The reasons of this situation

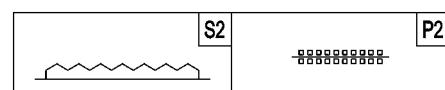
can be various: natural barriers, burnt part of village, village relocation and etc.

*Further settlements with clear and simple planar structure, will be analyzed – it is **LINEAR** settlements. Activity of trade and crafts was weak in these settlements. Although there were some residential areas even with strong economic situation but settlements spontaneously developed by a linear plan due to inconvenient and limited construction point of view of the territory, determined by natural conditions (lakes, rivers and etc.)*

S2P2. Silhouette without dominant. Linear plan.

Daugirdai, Delnica, Avižieniai, Šlavantai, Mikalčiūnai, Čižiūnai, Verstaminai, Dargužiai.

Eight villages are in this group. It is spontaneously



formed or remained after the Valakas land reform in an

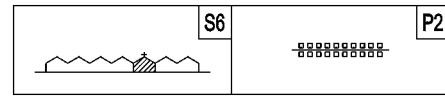
orderly manner formed villages. Villages are well overviewed in the environment, with dominant flat relief. Couple of villages has expressive relief like Šlavantai, Verstaminai and hilly relief – Čižiūnai. Most villages of the group are located close to the rivers, lakes or streams though there are no water pools in other settlements. It could be emphasized that three preserved villages are distinguished: Daugirdai, Dargužiai, Čižiūnai. Clear linear plan configuration of Čižiūnai is noticeable from Fig. 11.



Fig. 11. Čižiūnai village (Linear plan structure)

Moreover, religious, public buildings were not constructed in rural areas. Predominant building-up type – disordered homesteads. Furthermore, there is mixed and free plan structure. Also, houses stand side or oriented by shorter facade to the street in Daugirdai, Čižiūnai villages. Dominant height is one – two storey wooden or masonry buildings. Half of villages in this group have mostly wooden buildings. None of the settlements contains square. There are just two residential areas with formed green areas – Verstamina and Dargužiai.

This group (S2P2) contains two subgroups **S6P2** (*Paveisininkai*) and **S6P2aA1a** (*Rumbonys*). Paveisininkai is linear plan settlement. Comparing with group this subgroup



differs because of silhouette due to towerless non-

dominating wooden church in territory. Rumbonys – settlement of linear plan with wooden tower-

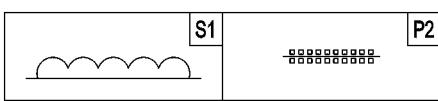


less church in the center too. However, it differs from S6P2 subgroup for its triangle planted square.

S1P2. Non-perceptible silhouette. Linear plan.

Mizarai, Latežeris, Kašėtos, Puvočiai.

Four small villages get in to this group; there population ranges from 14 to 47. Though planar structure of villages



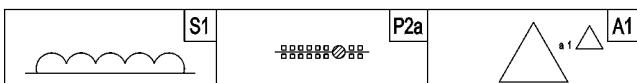
is similar to previous group (with linear plan), but

visual connection with outside is minimum comparing with (S2P2) group. Concerning settlements situated in the wooded territories it is impossible to perceive and overview the territory from outside. Kašėtos, Puvočiai ethnographic villages are settled in Dzūkija's National Park close to water pools with expressive or hilly terrain. Emphatically distinguished linear village Latežeris and preserved Kašėtos settlement (Fig. 12). Talking about public objects (religious, public buildings), they were not built in these territories. Furthermore, paying attention to preserved objects, water mill is protected in Mizarai, as well as factory building complex is preserved in Latežeris. Predominant building-up type – disordered homesteads in villages. Houses oriented by shorter facade to the street in Mizarai while houses directed by side in Latežeris. One – two storey wooden buildings are dominant in settlements. However, there are no square in these townships.



Fig. 12. View of Kašėtos village

S1P2aA1 subgroup (*Zervynos*) is assigned to this



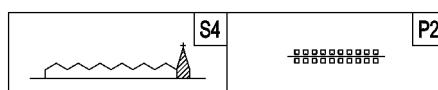
group too. The difference between group S1P2 and subgroup S1P2aA1 is triangle square in planar structure.

Zervynos is protected as linear settlement increased in Dzūkija's National Park.

S4P2. Silhouette with sacral dominant. Linear plan.

Liškiava.

This group differs from earlier discussed groups because of dominant sacral object in linear planar structure of outside silhouette. The baroque church cupola rises



among low-rise built-up areas and dominates inside and

outside of spaces. Liškiava village with church gets in to Dzūkija National Park and Liškiava Cultural Reserve. Moreover, the settlement is located close to river, on the very expressive terrain (Fig. 13).



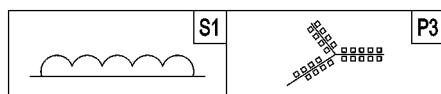
Fig. 13. View of Liškiava settlement
(foto : <http://foto.delfi.lt/picture/1343987>)

Further, it will be deeper discussed about spontaneously formed settlements, but with more complex planar structure. There are settlements with **RADIAL** type of planar structure. Such type of townships is spread in undulating and rugged territories. There are bigger villages and townships with prosperous crafts, trade and other economic activity.

S1P3. Non-perceptible silhouette. Radial plan.

Dubičiai, Margionys, Matuizos, Naujieji Valkininkai.

All these groups' representatives are medium-sized settlements and large villages (58–1201 inhabitants). Clear



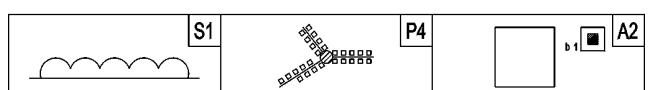
planar structure is formed in all settlements. Terrain

is

flat and hilly. Surroundings are forested therefore visual connection with outside practically does not exist. Most villages are located close to water pools. Building up is various: houses directed by side in Dubičiai, Margionys, Matuizos, free plan characterized in Naujieji Valkininkai, plan elements of disordered homesteads could be noticed in every researched settlement. Predominant height – one - two storey (in small villages – wooden, in bigger settlements – masonry) living houses.

Margionys village listed into Dzūkija National Park and Kapiniškės Landscape Reserve territories. Furthermore, the barn theatre is established in one wooden building in this settlement. The wooden church with two towers is in Dubičiai.

Although any of this group do not have square in the center, but one subgroup **S1P4A2b** is distinguished

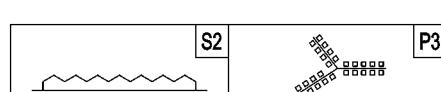


with square which does not have a decisive impact on the overall rural urban structure (*Kapčiamiestis*).

S2P3. Silhouette without dominant. Radial plan.

Švendubrė, Aštrioji Kirsna, Noragėliai, Tolkūnai, Kriviliai.

The difference between previous group is that the settlements' visual connection with outside is strong in this group (S2P3). Surroundings character is cultivated fields and meadows – this group silhouette of settlements is clearly perceptible. The members of this group – medium- sized villages (60–358 inhabitants). Natural conditions are different



in rural areas. The settlement with expressive

terrain

is
Švendubrė, listed in Raigardas landscape Reserve territory. Also, certain part of Švendubrė' settlement is preserved as historical linear village with 120 homesteads (Fig. 14).



Fig. 14. Švendubrė village (preserved linear plan structure with homesteads)

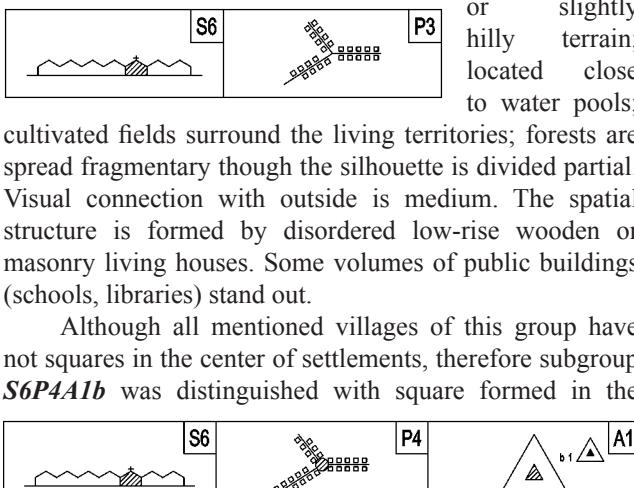
There are predominant wooden living houses, oriented by side to the street. In other villages terrain is flat or slightly hilly. Building up – disordered homesteads, dominant low-rise wooden and masonry living buildings. Water pools are concentrated in Kriviliai and Aštrioji Kirsna. In the latter settlement, water pools organically merge to the whole manor territory.

S6P3. Silhouette without dominant (sacral building non dominant). Radial plan.

Krikštynys, Panočiai, Kabeliai.

These group members are very similar to the previous ones, but the spatial structure of settlements of this group is refilled with sacral building, it dominates just in internal space. All members of this group are medium-sized villages (168–284 inhabitants). Natural conditions are similar: flat or slightly hilly terrain; located close to water pools; cultivated fields surround the living territories; forests are spread fragmentary though the silhouette is divided partial. Visual connection with outside is medium. The spatial structure is formed by disordered low-rise wooden or masonry living houses. Some volumes of public buildings (schools, libraries) stand out.

Although all mentioned villages of this group have not squares in the center of settlements, therefore subgroup **S6P4A1b** was distinguished with square formed in the



settlement. On the other hand, it does not influence the whole urban structure of settlement (*Šventežeris*) (Fig. 15).



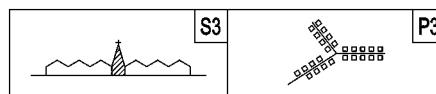
Fig. 15. Square of Šventežeris settlement

S3P3. Silhouette with sacral dominant. Radial plan

Krokialaukis, Ūdrija, Kučiūnai, Rudamina, Nemunaitis.

Villages of this group differ from mentioned ones, because of its dominant sacral buildings in silhouette of settlement. The settlements are medium-sized (153–385

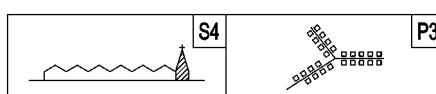
inhabitants). The biggest population is in Ūdrija and Kučiūnai, though these settlements have not town status. Natural conditions are similar to before mentioned settlements: terrain



– flat and hilly. Water pools do different impact to settlements:

Kučiūnai and Rudamina are not surrounded by water, but lake is in Ūdrija neighborhood or pond is in Krokialaukis, Nemunas River is close to Nemunaitis settlement. Rudamina settlement is distinguished – there are mounds and manor buildings located in surroundings.

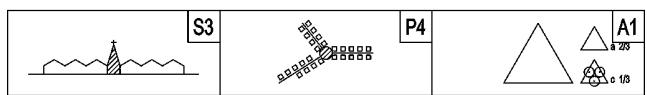
In all analyzed cases the church is in the center of settlement. On the other hand, other variations are possible too, like subgroup **S4P3**, where church dominates at the



periphery of settlement (*Ryliškiai*).

S3P4A1. Silhouette with sacral dominant. Radial plan with triangle square.

Miroslavas, Nedzingė, Valkininkai.



These three townships are medium-sized settlements having 229–382 inhabitants. This group has radial plan with triangle square without greenery (*Miroslavas* (Fig. 16), *Nedzingė*) and with greenery (*Valkininkai*). The squares function is public or infrastructure in church villages and in towns. Moreover, historical part of Valkininkai town is preserved. Also, silhouette is expressive due to church with two towers or without it and stands out from earlier mentioned group's view. Talking about natural conditions, Valkininkai and Nedzingė are located close to streams. The hilly relief is in Miroslavas and Valkininkai, flat terrain is in Nedzingė.

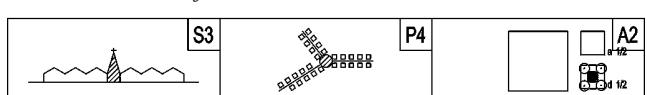


Fig. 16. Miroslavas settlement (radial plan structure)

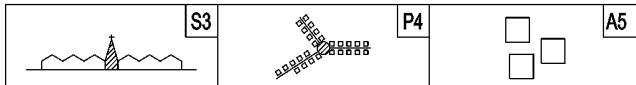
Dominant houses is low-rise wooden buildings, type of building up – disordered homesteads or houses stand side or oriented by shorter facade to the street. Furthermore, folk form manor complex is settled in Nedzingė.

S3P4A2. Silhouette with sacral dominant. Radial plan with rectangle square.

Alovė, Veisiejai.



Population of these settlements is 507 (*Alovė*) and 1430 (*Veisiejai*). This group differs from the group mentioned before: its shape of the square – rectangle without greenery (*Alovė*) and with greenery (*Veisiejai*). Planar structure and silhouette are the same as they were in S3P4A1 group. Viesiejai town gets in to Veisiejai National Park and Urban Reserve. Both settlements have strong connections with lakes, stand on expressive terrain. Dominant type of building-up – mixed plan structure, low-rise buildings. **S3P4A5** subgroup gets in to this group too. The

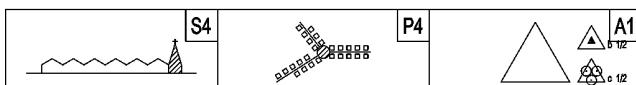


representative of it – *Lazdijai* city. The population in Lazdijai 4531. It differs from the group due to its quantity of squares. There is a main public square of Lazdijai presented in Fig. 17. The settlement is located close to water pool, terrain is flat. Dominant height of buildings to five storeys. Church with two towers characterizes in silhouette.



Fig. 17. Square of Lazdijai city

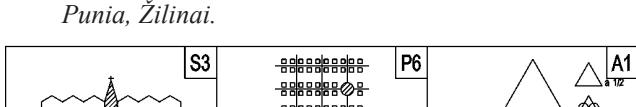
S4P4A1. Silhouette with sacral dominant in the periphery of settlement. Radial plan with triangle square. Butrimony, Merkinė.



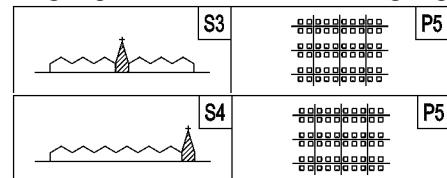
S4P4A1 group differs from other groups for its silhouette, because the church dominates in the periphery of settlement. Towns have radial plan, triangle square, where object stands in its center (*Merkinė*) or square is green (*Butrimony*). Merkinė town is located in Dzūkija's National Park and Nemunas River Landscape Reserve. Merkinė's terrain is expressive, though Butrimony is quite flat. The dominant height is one-two storey buildings in Butrimony, until five storey buildings are in Merkinė.

Moreover, economically developed settlements will be discussed, where crafts and economic activity prospered. It is **RECTANGULAR** plan townships. Most of them are settled in flat territories. When regular gothic planning tendencies came, new settlements were started to develop in this way and even growing historical settlements were turned to rectangular plan regardless its old structure. The most of them were planned according to the standard schemes and natural conditions were often ignored.

S3P6A1. Silhouette with sacral dominant. Rectangular plan with triangle square. Punia, Žilinai.

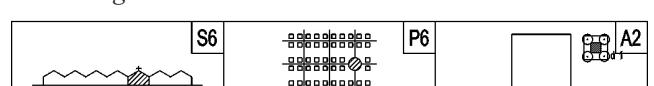


These groups' members have rectangular plan structure with triangle square. For example, Žilinai has a green square. Talking about silhouette, churches with two towers distinguish in panorama. The population of Punia is 392 and 600 of Žilinai. Punia's church village gets into Nemunas Loops Regional Park and Punia Landscape Reserve. Punia's settlement terrain is expressive, but quite flat relief is in Žilinai. Both settlements are located close to water pools. Disordered homesteads type of building up prevails. Also, there is constructed low-rise one-two storey wooden and masonry buildings. **S3P5 (Meteliai)** and **S4P5 (Santaika)** subgroups are also attached to this group. These subgroups stand out from group because elements of its plan structure – there is no square. **S4P5**



subgroup has different silhouette because of the church, which is not in the centre, but in periphery of settlement. **S3P5** subgroup (*Meteliai* church village) has hilly terrain it is located in Meteliai Regional Park and Meteliai Landscape Reserve. The settlement is medium-sized, population of 195. Meteliai spreads close to lakes.

S6P6A2. Silhouette without dominant (sacral building non dominant). Rectangular plan with rectangular square. Daugai.



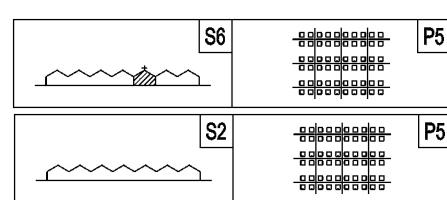
Differently than earlier mentioned group this one has contrary silhouette – it has not vivid dominants in town, tower-less church does not shows up in silhouette. Planar structure – rectangular with quadrangular planted square. Historical center of town is preserved. Daugai town is located on the hilly terrain, close to huge lake (Fig. 18). The building up – disordered homesteads with free plan.



Fig. 18. Daugai town view

The height of buildings – one to five storey, dominant materiality of houses is wood and bricks in the settlement.

S6P5 (Šeštokai) and **S2P5 (Teizai)** subgroups are assigned to this group too. Differently, these subgroups have



not a square and religious building – non dominant in panorama, while **S2P5** subgroup has

not sacral building at all (*Teizai*).

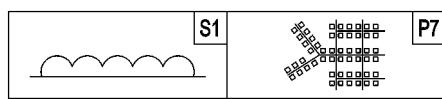
Currently the last groups and subgroups will be glanced over – there are **MIXED** plan structure formed in

settlements. Basicaly, in most cases there were economically strong, flourishing settlements which were replanned during land reforms or new plan parts were adapted. On the other hand, earlier plan fragments were kept in settlements.

S1P7. Non-perceptible silhouette. Mixed plan.

Viečiūnai, Marcinkonys, Senoji Varėna.

All these group members are middle – sized villages (640–1708 inhabitants). Surroundings is wooded territories and the settlements are not perceived from the outside, but the planar structure is developed rather complex. Terrain is flat; there are no water pools in Viečiūnai, but relief is hilly and river and water ponds exist in Marcinkonys and Senoji Varėna. Generally, Viečiūnai settlemet differs from group because

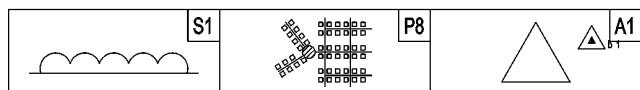


of its historical evolution – it is spontaneously grown up

workers' settlement close to spinning factory durig Soviet period and it has not exclusive or preserved peculiarities. Meanwhile, Marcinkonys settlement gets in to Dzūkija's National Park territory, Senoji Varėna is cut by Merkys Ichthyological Reserve. Although urban point of view both settlements (*Marcinkonys and Senoji Varėna*) are not preserved, both are old historic villages having valuable historic buildings. Moreover, sacral buildings are constructed and dominate in internal space in both settlements. Marcinkonys stands out because it is one of the biggest villages according to occupied large area in Lithuania.

S1P8A1. Non-perceptible silhouette. Mixed plan with square.

Musteika, Perloja.



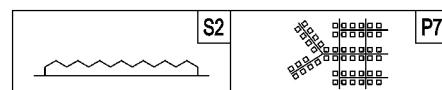
This group differs from discussed (S1P7) group because of formed public space in the mixed plan structure. Both analyzed cases have triangle squares with dominant objects in their centers. Musteika is small village (61 inhabitants), which enters into Dzūkija's National Park and Musteika's Ethnocultural Reserve Territory. Wooden building up is predominant. Mixed plan structure was encouraged by spontaneous development here: close to radial plan other versions of planar structure connected during the history.

Perloja settlement is much bigger (586 inhabitants), having territorially unified, but with different types of conditioned plan structure. The central part of the town – radial plan, quite consistently and organically evolves to Soviet period (probably) planned rectangular block layout. Moreover, the church is constructed in the central part of town. Terrain is hilly, river Merkys passes through periphery.

S2P7. Silhouette without dominant. Mixed plan.

Vydeniai, Miklusénai.

The villages of this group quite different assessing their size, historical development. According these conditions variations of mixed plan have been formed. Vydeniai – village planned during Valakas land reform, settlement



was enlarged during Soviet period and

gained mixed plan structure due to this process disordered homesteads building up with houses constructed by shorter fasade to the street is predominant. Moreover, wooden and masonry low-rise living houses dominate there. Miklusénai – suburban territory of Alytus with mixed but organic planar structure. Disordered homesteads building up is predominant and one – two storey wooden and masonry living buildings are basic.

S6P7. Silhouette without dominant (sacral building non dominant) Mixed plan.

Būdvytis, Seirijai.

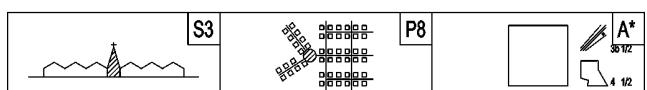
This group is similar to earlier one (S2P7) due to its silhouette, plan structure, but there are sacral buildings in this group of settlements. On the other hand, religious buildings do

not dominate in silhouette.
Būdvytis is a

medium-sized village (171 inhabitants). Besides, without church there are mansion fragmets left. Seirijai is bigger settlement – town with a population of 788, having more public objects, there is stud as well. Natural conditions are similar in both townships: terrain is flat and hilly, located close to water pools, cultivated fields and meadows are spread in surroundings. Spatial structure is comparable – dominant type of building up is disordered homesteads, wooden and masonry one – two storey living houses.

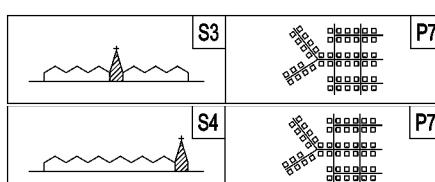
S3P8A* Silhouette with sacral dominant. Mixed plan with square.

Simnas, Leipalingis.



Members of this group differ from previously mentioned because of the churches scale and their importance of outside's silhouette. Sacral dominant clearly stands out in silhouette. Cultivated fields and meadows surround settlements – visual access from the outside is very good. Generally, natural conditions are similar: terrain is hilly settlements located close to the lakes. Both settlements are similar in size, about 1500 inhabitants, though Simnas has city status, while Leipalingis – township. Talking about urban structure – disordered homesteads and free plan building up are dominant in both settlements. Also, one – two storey low-rise wooden and masonry living houses are mostly founded. Both townships have parks. It is important to notice, that Simnas is preserved as cultural monument for its spatial structure and Leipalingis is distinguished by manor complex. Also, there are formed public open spaces– squares in the analysed cases. The type of Simnas square is extension of the street and the square in Leipalingis has complex form.

Moreover, some variations are included for this group without square **S3P7 (Krosna)** and **S4P7 (Pivašiūnai)**. The latter subgroup has sacral object not in the centre of town but in the periphery.



5. Generalization and conclusions

1. Small settlements, according to the National Landscape Policy, are the foundation of National identity. Besides, according to the literature analyses, small Lithuanian settlements are keeping more traditions, social relations and unique character than the big cities. Therefore, the disclosure of identities features of small settlements is particularly relevant.

2. Based on results of literature analyses and empirical researches, there were noticed that from many assessed components the crucial influence, shaping the identity of settlements in the Alytus County, has three main elements of urban structure: *silhouette (external image), plan structure (streets network) and public space (square usually)*.

3. After researches of settlements there are types of these three main elements distinguished in Alytus County: six predominant types of settlements silhouette (depending on their perception of the environment, the presence or absence of dominants and their position); eight variations of plan structure (depending on the network of streets and the presence or absence of squares) and four variants of squares (depending on their forms and quantities in settlements) in Alytus district.

4. Single elements of urban structure do not reveal identity of settlements fully; due to this fact, 33 possible combinations of individual elements were formed. These combinations would show typicalness of Dzūkija's region, and the specificity of unique settlements.

5. After percentage repartition, there were noticed that dominant groups are: S1P1, S2P1, S2P2 and etc., this leads to assumption that they are typical of the whole Dzūkija's region. Meanwhile, rarely occurred groups like S6P7, S3P8A, S2P7 and etc. could be assigned as unique settlements.

6. The starting point for a new discussion could be not just revealing of the features of the identity, but creation of the guidelines for preservation of the identity of small settlements. In general, the identity of the settlements forms the urban structure, natural elements, complexes of buildings and individual objects. However, in each individual case significance of formants varies.

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