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CREATIVITY GAME  
Theory and Practice of Spatial Planning

PUBLIC OPEN SPACES OF SMALL CENTRALISED  
SETTLEMENTS: RESEARCHING THE TYPOLOGY  
OF PUBLIC OPEN SPACES AND THEIR  
OCCURRENCE IN THE AREA OF SLOVENIA

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Mia Crnič

# JAVNI ODPRTI PROSTORI MANJŠIH SREDIŠČNIH NASELIJ: raziskovanje tipologije javnega ODPRTEGA prostora in njegove pojavnosti v prostoru Slovenije

## PUBLIC OPEN SPACES OF SMALL CENTRALISED SETTLEMENTS: researching the typology of public open spaces and their occurrence in the area of Slovenia

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### IZVLEČEK

Prostor Slovenije je dokaj gosto prepleten z mrežo središčnih krajev različne hierarhične stopnje. S tematiko vplivnosti središč, njihovih povezovanj, značilnosti, itd. so se ukvarjali že mnogi raziskovalci (Drozg, Ravbar, Vrišer, tudi Fister, idr.), ki so postregli z naborom različnih vhodnih podatkov in temu primernimi rezultati. Da neko naselje živi, mora imeti program, s katerim oskrbuje svoje prebivalstvo. Prav tako pa vsakršno naselje potrebuje s svojimi značilnostmi in sestavinami, tako na ravni zasnove naselja, kakor grajenega tkiva. S slednjim se je ukvarjal Fister, P. (1993), med tem ko je pri Vrišerju, I. (1998) prednjačila funkcija naselij in njihova vplivnost na gravitacijsko zaledje. Pri tem se pojavljata vprašanji, ali je moč najti zvezo med Fistrovo kategorizacijo slovenskega prostora z vidika značilnosti grajenega tkiva in Vrišerjevo razdelitvijo glede na program in njegovo pomembnost ter ali za vsa naselja, ki so razporejena po celotnem prostoru, obstajajo kriteriji razvrščanja, ki bi jih, glede na grajene in programske značilnosti javnih odprtih površin, lahko povezali v večje zaokrožene celote s podobnimi značilnostmi?

Kot osnova za raziskovanje opredeljenega problema je bila primerjava Fistrovega in Vrišerjevega modela. Dobljeni rezultati so bili iztočnica za nadaljnjo raziskovanje javnih odprtih površin, ki povezujejo grajeno tkivo v naseljih z drugo stopnjo središčnosti po Vrišerju.

### KLJUČNE BESEDE

javni odprti prostor, manjša središča, vzorec, tipologija, Slovenija

### ABSTRACT

The area of Slovenia is rather widely intertwined with a network of centralised areas of various hierarchies. Several researchers (Drozg, Ravbar, Vrišer, Fister, and many others), who used a variety of input data and received adequate results, have been dealing with the topic of the influence of centres, their connections and characteristics. For a settlement to exist, it has to possess a program for the provision of its citizens. At the same time such a settlement has its own characteristics and ingredients at the level of the design of the settlement as well as construction. Fister (1993) dealt with the latter topic while Vrišer (1998) focused on the functionality of settlements and their influence on the catchment areas. In this context the question arises as to whether there is a connection between the categorisation of the Slovenian area in regards to the characteristics of construction by Fister and classification in regards to the program, its importance and the question whether classification criteria exists which could be connected into larger rounded off units with similar characteristics in regards to the building and similar program characteristics of public open spaces by Vrišer.

The basis for researching the problem in question was the comparison of the model by Fister with the model by Vrišer. Acquired results formed the basis for further research of public open spaces connecting constructions in settlements with centres of second level by Vrišer.

### KEY-WORDS

Public open space, small centres, pattern, typology, Slovenia

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PROJECT  
DELAVNICA  
WORKSHOP

NATEČAJ  
COMPETITION  
PREDSTAVITEV  
PRESENTATION

DIPLOMA  
MASTER THESIS

## 1. INTRODUCTION

Natural conditions and historical development contributed largely to the development of numerous small and dispersed settlements in the area of Slovenia. Two million people live in almost 6000 settlements, nearly one half in the countryside. Due to the uneven distribution and density of the population, the topography of the surface, political and administrative division of land and historical development almost 600 settlements were formed with various hierarchies of centralisation (Vrišer, 1998, p. 308) supplying its own wide and narrow areas.

Researching the topic of centralised settlements in Slovenia interested several researchers in the past, e.g. Vrišer (1968) on the network of centralised settlements in Yugoslavia, Kokole (1971) on the network of centralised settlements in Slovenia and many others, however, there has been a drop in interest to some extent in the present day. This is due to the changes in the socioeconomic status, politics and gradual depopulation from cities into suburbs and the nearby countryside, etc. Hence it is possible to expect that the actual situation is somewhat different today (Cigale, 2002, p. 44).

A research regarding the characteristics of Slovenian architecture or rather buildings and settlements was carried out in 1993 by Peter Fister et al. He states to have created an inventory of identity/quality inventories. He divided the area of Slovenia into 74 architectural landscapes and named them according to the name of locations from which patterns and guidelines for architectural identity were originating from. He found four centres of various sizes. He merged architectural landscapes with similar or identical characteristics into regions (14) with names corresponding to already established geographical, ethnological or other designations. In the search for ingredients which determine general and recognizable characteristics (termed by Fister as architectural identities) of designing architectural landscapes, farm buildings were primarily subject to observation. Since (farm) buildings were the main criteria for designing common characteristics and connecting those into larger groups with similar characteristics (hereinafter architectural landscapes) morphological content is certainly in the foreground (building typology, position, volume, fragmentation of architectural elements, etc.). He also focuses on settlements within components of individual architectural landscapes. The primary criteria determining the characteristics of individual settlements arise from morphology and topography (adapting to the relief, scheme, fragmentation of the building line, position, partly by vedute, etc.). As a result of rounding off the main components on the level of buildings and settlements, dialectological, ethnological and geographical regionalisations have to be taken into consideration (Fister, 1993, p. 5–33).

As opposed to research by Fister, which is based on building and settlement morphology as well as surface topography, Vrišer (1998) researched the area of Slovenia on the basis of influential areas of individual location and their role in space. The function of settlements has changed over the years; the last century especially lead to changes in regards to historical development, urbanization, industrialisation, increase in the standard of living, polycentric development, etc. These changes influenced the creation of locations with various hierarchical levels. Vrišer names 7 levels. Functionality of a location is the main criteria of the categorisation and importance of an individual centre:

- Centre of the First Level: complete or incomplete primary school, grocery store, inn;
- Centre of the Second Level: primary school, post office, medical practice, bank, police station, pharmacy;
- Centre of the Third Level: medical practice, cinema, hotel, several specialised stores and trades, library, subsidiary court, etc.;
- Centre of the Fourth and Fifth Level: secondary schools, hospital, theatre, etc.;
- Centre of the Sixth and Seventh Level: university, court house, opera, etc.

Individual centralised settlements are connected into greater influential areas. His definition of geographical influential areas arises from the location of centres of third or higher levels and thus shows their catchment force. In addition to the level of centralisation he also defines a corresponding level of influence. By and large he defines 15 influential areas, among those seven with the fourth level of influence (and corresponding to centres of the fourth level) and eight with the fifth level of influence (corresponding to centres of the fifth level or higher). A high level of connecting centres and influential areas is shown while defining two major influential areas comprising the area of Slovenia. The northeast area of the country falls under the influential area of Maribor (influential area of the sixth level) while the remainder belongs to the influential area of Ljubljana (highest influential area of the seventh level) (Vrišer, 1998, p. 308, 309).

Fister's and Vrišer's divisions of the area of Slovenia into smaller units have the research of individual influential areas in common. However, they differ regarding the main criteria influencing the results of their research. Fister prefers a farm building and its morphology (with the topography of the surface) while Vrišer's research is based solely on the function of settlements. As Vrišer states (1998), the image and role of settlements has changed over the years solely because of the changes of functions. Fister rules out the function of a location and solely observes changes in the form. He neglects relations between volumes, functions of individual buildings, etc. (with the sole exception of dominating features, which he describes according to the position in the settlement). He also excludes the fragmentation of open areas of individual settlements, which are not only morphologically determined but serve a purpose in the settlement which makes them the main connectors of construction (Goličnik Marušič, 2010). The development of locations throughout the history has definitely been influenced by the function of these locations which enabled their existence and development. Taking into account the classification criteria of locations according to Vrišer, Slovenia is split into manageable 15 influential areas, while the morphological method by Fister is less applicable since it splits the area of Slovenia into 74 influential areas (or rather architectural landscapes). This raises questions as to whether Fister's fragmentation can possibly be merged into larger closed groups of settlements according to Vrišer's functional provisions of individual influences and their corresponding areas, and which criteria is most suitable for the classification of settlements according

to their common characteristics: morphological or functional and whether a connection between them exists.

The reasons behind researching the typography of public open spaces of settlements are findings indicating that a system of sufficient quality summarising common characteristics and general categorisation for various areas does not exist. The results of the categorisation shall provide a link between the morphological and functional criteria and shall show which criteria type precedes the research of public open spaces. Two types of results shall be given. Of great interest is on the one hand the main criteria influencing the design of public open spaces and on the other hand the categorisation/typology of public open spaces of smaller centralised settlements. Categorisation of settlements will provide a basis for further research and set the guidelines for development and management of public open spaces.

## 2. MATERIALS AND METHODS

The starting point for the research of the problem in question is the Fister's model of classification of settlements into architectural location in regards to morphology and topography, and Vrišer's functional research (described in the introduction).

All stages of research share a common criteria for the selection of patterns. They namely deal with settlements that fall into the category of "small" centralised settlements. "Small" centres are very difficult to define and do not represent a criteria according to which their size could be established. The term "small" does not exclude or condition the meaning of provincial, urban, rural or tourist (Fikfak, 2009, p. 24). Thus while defining the term "small centres", the relationship between the centralised settlement and its catchment areas as well as its relationship toward neighbouring centres influencing and supplementing it, is of great importance.

"Small centres" can accordingly be defined with the following criteria:

- Are all settlements with the role of (municipal) centres, with less than 5000 inhabitants in its catchment area (SPRS, 2004) (this criteria also limits the creating of new municipalities (Official Gazette of the Republic of Slovenia, No. 44/96)),
- In addition to their centralised significance they also have administrative significance,
- The basic activities of the centre are the following: post office, primary school, petrol station, bank, general physician, pharmacy, police station (should the centre be located near the border), grocery store, inn (Cigale, 2002, p. 46),
- The exception in regards to their activities are centres in close proximity of larger centres; there is a division of function in such cases (Cigale, 2002, p. 53)
- Generally smaller than 3000 inhabitants (Criteria for designing cities (Gabrijelčič et al., 2004, p. 17)),
- Are typically provincial settlements (urban or semi-urban provincial settlements; "urban" as a way of life not as a sign of an urban city area), villages and tourist villages (Fikfak, 2009, p. 24),

- Fall into the 2nd category of centralisation according to Vrišer (Vrišer, 1998).

In the further stages of research where settlements were analysed in more detail, in addition to criteria mentioned above for the selection of settlements according to their size and function, a criteria of great importance was also public open space. It is namely the main criteria connecting construction with public spaces. As Jankovič (2011, p. 2, 3) states, the public areas are open to everyone and make socialisation, play, creating, etc. possible. They include traffic areas and other common areas, such as squares, platforms, parks, greens, embankments, etc.

Choosing the methodological approach depends largely on individual parts of the research which should not be strictly separated but instead intertwined and supplementing each other. The first and second step are based on the comparative method of the models by Fister and Vrišer, while the third and fourth steps aim to analyse and synthesise public open spaces in settlements all around Slovenia.

## 3. RESEARCH

### 3.1 Matching/Not matching

The results of both researchers are verified on the basis of matching or rather not matching: Vrišer's map of centralised settlements and influential areas of important centres from the year 1994 (Vrišer, 1998, p. 309) is overlapped by Fister's map of Architectural landscapes and regions (Fister, 1992, p. 246). In regards to the question whether Fister's classification can be merged into larger closed groups of settlements in accordance with Vrišer's functional provisions of individual influential areas, a comparative analysis of both maps was created: to what extent do influential areas coincide with architectural regions (does an appropriate architectural region fit inside one influential area or can one influential area hold several regions) and later on with architectural landscapes and as to whether within one influential area, landscapes from one or several architectural regions can exist.

### 3.2 Comparison

On the basis of results from the previous point, a further comparative analysis followed (Table 1). In regards to the previous hypothesis that settlements can be merged into larger groups on the basis of functionality, the foundation for the creation these larger groups was represented by an influential area according to Vrišer (Table 1, column 1). In accordance with the previous step, there were several architectural landscapes – all belonging to various architectural regions – within one influential area (Table 1, column 2). A characteristic overview followed (as determined by Fister, 1993) for each architectural landscape at the level of settlements and farm buildings (Table 1, column 3). Based on this overview of main characteristics the column 4 in the Table 1 was created and it presents common characteristics of landscapes (even if located in various regions) regardless of its corresponding influential area.

INFLUENTIAL AREA ACCORDING TO VRIŠER	ARCHITECTURAL LANDSCAPES ACCORDING TO FISTER (1993, p. 42–225)		COMMON CHARACTERISTICS
	Architectural landscape	Characteristics	
KOPER	5, 7, 8, 9		
	5: Karst – Sežana (Architectural region Karst – Primorje)	Settlements: (a) gently sloping hills with central dominating features, (b) larger groups of buildings instead of individual farm buildings Farm buildings, buildings: (a) individual as part of irregular sets, storey, pitched roof, convex tiles, stone details (b) farm buildings in groups and around courtyards, at ground floor or storey, longitudinal ground plans, pitched roofs covered with convex or stone tiles.	<p><b>Table 1: Matching of certain influential areas by Vrišer with architectural landscapes at building and settlement level.</b></p> <p>Settlements: Irregular groups, buildings form a street line, accentuated dominating features, mostly on the edge.</p> <p>Farm buildings, buildings: Irregular line, longitudinal ground plans, gradual pitched roofs covered with convex tiles or stone detail.</p>
	7: Koper (Architectural region Karst – Primorje)	Settlements: (a) in dominant areas, in groups, (b) on a ridge or near older clustered centres, buildings parallel to the infrastructure Farm buildings, buildings: (a) individual buildings, longitudinal ground plans (1:1.8), storey, gradual pitched roofs covered with convex tiles, stone details, (b) clustered complexes, closed courtyards, elongated ground plan (1:3.5), gradual pitched roofs or single pitched roofs with convex tiles, stone details, (c) individual buildings in common street lines, storey, pitched roofs with convex tiles, stone detail.	
	8: Koštabona (Architectural region Karst – Primorje)	Settlements: (a) small cluttered settlements without dominating features on hills or slopes, (b) on ridges or slopes, along infrastructure forming street lines, dominating features on the edges. Farm buildings, buildings: (a) clustered complexes joined by connected buildings, gradual pitched roofs covered with convex tiles, stone detail, (b) buildings in short, irregular sets, storey, gradual pitched roofs with convex tiles, stone details.	
	9: Brkini and Markovščina (Architectural region Inner Carniola – Brkini)	Settlements: (a) undulating land, built clustered near the infrastructure, farm buildings spread unevenly, dominating features not very pronounced. Farm buildings, buildings: (b) merged complexes, single-story or storey buildings, longitudinal ground plans (1:1.6), pitched roofs covered with convex tiles, stone details.	
KRŠKO - BREŽICE	<b>48, 51</b>		
	48: Brežice (Architectural region Lower Carniola)	Settlements: (a) settlements located on faults and near infrastructure, clustered farm buildings, not pronounced dominant features, farm buildings hidden in the greens, (b) settlements located on flat land, along infrastructure, irregular in small groups, dominating features not pronounced Farm buildings, buildings: (a) Buildings in groups around open courtyards, near roads, longitudinal ground plan (1:1.4), single-story, wooden, plastered, pitched roofs covered with crown tiles, (b) Farm buildings are unified, square to the road, residential buildings elongated into commercial buildings (1:1.5 – 1:2), storey, pitched roofs covered with crown tiles.	Settlements: Clustered settlements, also scattered (however, buildings located relatively in close proximity to one another), along infrastructure, dominant features not pronounced or located outside of settlements.
	51: Podsreda – Bizeljsko (Architectural region Savinjsko – Kozjansko)	Settlements: (a) On the border of two cultures, along infrastructure, spread out buildings, farm houses hidden in greens, dominating features in certain parts of settlements or outside. Farm buildings, buildings: (a) Clustered and modest, longitudinal ground plan (1:2.2), steep pitched roofs covered with crown tiles, common hipped roofs, (b) Complexes in groups, longitudinal ground plans, steep pitched roofs covered with crown tiles and hipped roof.	Farm buildings, buildings: Longitudinal ground plan, clustered, modest without details, pitched roofs covered with crown tiles.
PTUJ	<b>61, 66</b>		
	61: Ptuj (Architectural region Drava)	Settlements: (a) on flat land, near infrastructure, regular, one-sided design, parcel oriented square to the road, dominating features not pronounced or non-existent, (b) on rising grounds or gentle slopes, near infrastructure. Farm buildings, buildings: (a) Farm houses in shape of the letter L or elongated buildings, narrow parts of the building square to the road, single-story buildings, single, double or multiple pith roof covered with shear tiles, (b) Buildings in groups, elongated ground plans (1:2.5), single-story buildings, pitched roof covered with shear tiles.	Settlements: On flat land, located near roads, parcels square to the communication axle, dominating features not pronounced.
	66: Ormož – Ljutomer (Architectural region Pomurje)	Settlements: (a) on flat land, regular settlements, one or two-sided design, linear settlements, parcels oriented square to the road, forming streets lines, dominating features rarely stand out. Farm buildings, buildings: (a) Regular with squared or parallel commercial buildings, elongated ground plan (1:2), single-story, steep pitched roofs covered with crown tiles or shear tiles.	Farm buildings, buildings: Longitudinal ground plans, the short side of the building next to infrastructure, steep pitched roofs covered with shear tiles.

### 3.3 Sampling public open spaces

Further research (step 3) was based on determining public open spaces in a settlement. Sample selection increased and included the entire area of Slovenia. The observed patterns were represented by three locations of all 15 influential areas, since previous research showed that settlements may be merged in regards to their influence of functions.

Observing settlements on the basis of morphology of open spaces, or more precisely: where construction connects and intertwines. According to previously determined criteria for pattern selection, three locations from its own influential area (in regards to the map by Vrišer, 1998, p. 309) and all in all 48 samples from all over Slovenia were chosen. Based on orthophotographs the design of public open spaces (traffic surface and other common surfaces, such as squares, platforms, parks, greens, embankments) and how these appear in space were observed. Two patterns emerged: linear and star-shaped.



Figure 1a: Designing public open spaces in the influential area of Koper. Source: Internet 1



Figure 1b: Designing public open spaces in the influential area of Kranj. Source: Internet 1



Figure 2a: Designing public open spaces in the influential area of Novo mesto. Source: Internet 1

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DISCUSSION  
RECENZIJ  
REVIEW  
PROJEKT  
PROJECT  
DELAVNICA  
WORKSHOP  
NATEČAJ  
COMPETITION  
PREDSTAVITEV  
PRESENTATION  
DIPLOMA  
MASTER THESIS



Figure 2b: Designing public open spaces in the influential area of Nova Gorica. Source: Internet 1



Figure 3a: Designing public open spaces in the influential area of Jesenice. Source: Internet 1



3b: Designing public open spaces in the influential area of Postojna. Source: Internet 1



Figure 4a: Designing public open spaces in the influential area of Krško-Brežice. Source: Internet 1







Figure 4b: Designing public open spaces in the influential area of Celje. Source: Internet 1



Figure 5a: Designing public open spaces in the influential area of Trbovlje. Source: Internet 1



Figure 5b: Designing public open spaces in the influential area of Ravne na Koroškem – Slovenj Gradec. Source: Internet 1



Figure 6a: Designing public open spaces in the influential area of Velenje. Source: Internet 1

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ČLANEK  
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DISCUSSION  
RECENZIJA  
REVIEW  
PROJEKT  
PROJECT  
DELAVNICA  
WORKSHOP  
NATEČAJ  
COMPETITION  
PREDSTAVITEV  
PRESENTATION  
DIPLOMA  
MASTER THESIS



Figure 6b: Designing public open spaces in the influential area of Maribor. Source: Internet 1



Figure 7a: Designing public open spaces in the influential area of Ptuj. Source: Internet 1



7b: Designing public open spaces in the influential area of Murska Sobota. Source: Internet 1



Figure 8a: Designing public open spaces in the influential area of Ljubljana – north of rivers Ljubljanica and Sava. Source: Internet 1



Figure 8b: Designing public open spaces in the influential area of Ljubljana – south of rivers Ljubljanica and Sava. Source: Internet 1



### 3.1 Width of public open spaces

In the fourth step the preceding steps were supplemented. On the basis of acquired patterns, the width of each pattern was observed in the first phase while the next phase dealt with width of public open spaces regardless of occurring patterns.

## 4. RESULTS

This section presents general findings on the basis of a research of characteristics of settlements with the second level of centralisation according to Vrišer (1998) from the standpoint of public open spaces and morphological characteristics. Overlapping maps of settlement classification according to

INFLUENTIAL AREAS ACCORDING TO VRIŠER (1998, p. 309)	ARCHITECTURAL REGION (1993, p. 246)
Koper	Karst – Primorska, part of Inner Carniola – Brkinska
Nova Gorica	Soško – Vipavska, Idrijsko – Trnovska, part of Upper Carniola
Postojna	Inner Carniola – Brkinska
Jesenice, Kranj	Upper Carniola
Ljubljana	Ljubljanska, Ribniško – Kočevska, part of Lower Carniola
Novo mesto	Lower Carniola, Belokranjska
Krško - Brežice	part of Lower Carniola, part of Zasavje, part of Savinjsko – Kozjanska
Trbovlje	Zasavje
Celje	Savinjsko – Kozjanska, part of Dravska
Velenje	Savinjsko – Kozjanska
Ravne na Koroškem – Slovenj Gradec	Carinthia
Maribor	Part of Carinthia, part of Dravska
Ptuj	Part of Dravska, part of Pomurska
Murska Sobota	Pomurska

Table 2: Merging/overlapping of maps on the basis of architectural regions. Remark: 'part of' refers to the fact that an architectural region is only partly represented.

morphologically-typological criteria (Fister) and functional criteria (Vrišer) concluded that the borders of individual complete areas are not harmonized and that there is considerable fragmentation according to the method by Fister. Solely the influential area of Murska Sobota by Vrišer coincided with the architectural region by Fister. In other examples several architectural regions are joined into one functional influential area or the other way around – one architectural region is divided into two influential areas.

INFLUENTIAL AREAS ACCORDING TO VRIŠER (1998, p. 309)	ARCHITECTURAL LANDSCAPES ACCORDING TO FISTER (1993, p. 246)
Koper	Koper, Kaštabona, Kras – Sežana, Brkini z Markovščino
Nova Gorica	Brda, Nova Gorica, Vipava, Trnovska planota, Idrija, Cerklje, Tolmin, part of Bohinj
Jesenice	part of Bohinj, Mojstrana, Radovljica,
Kranj	Kropa, Tržič, Jezersko, Kranj, Železniki, Škofja Loka, Žiri
Ljubljana	Tuhinj, Kamnik – Domžale, Lukovica (črni Grabenj), Moravče, Litija, Ljubljana Moste, Ljubljana Barje, Ljubljana Vrhnika, Ljubljana Polhov Gradec, Ljubljana Šentvid, Višnja Gora, Ribnica, Kočevje, part of Bloke, Logatec, part of Planina - Cerknica
Postojna	Postojna, Pivka, Ilirska Bistrica, part of Planina – Cerknica,
Novo mesto	Metika, Novo mesto, Kostanjevica, Trebnje, Šentrupert – Mokronog, Suha Krajina, part of Kočevje
Krško -Brežice	Brežice, Podsreda –Bizeljsko, part of Sevnica
Trbovlje	Trbovlje, part of Sevnica
Celje	Podčetrtek – Kozjansko, Rogatec, Šmarje – Celje, Laško – Celje, part of Sevnica, Žalec – Celje, Vojnik, part of Slovenska Bistrica, part of Gornja savinjska dolina
Velenje	Velenje, part of Gornja savinjska dolina
Ravne na Koroškem – Slovenj Gradec	Ravne – Dravograd, Slovenj Gradec, part of Pohorje, Vuzenica
Maribor	Part of Pohorje, Ruše – Maribor, Pesnica - Maribor, Lenart, Fram, part of Slovenska Bistrica
Ptuj	Part of Lenart, Ptuj, Ormož – Ljutomer
Murska Sobota	Gornja Radgona, Murska Sobota – Lendava (Ravensko + Dolinsko), Cankova - Domanjševci

Table 3: Merging/overlapping of maps on the basis of architectural landscapes. Remark: 'part of' refers to the fact that an architectural region is only partly represented.

Table 2 shows that several architectural landscapes can be merged within a single influential area according to Vrišer. Three adequate samples of influential areas (Ptuj, Koper and Krško-Brežice) were gathered with their corresponding architectural landscapes (Karst – Sežana, Koper, Koštabona, Brkini and Markovščina, Brežice, Podsreda – Bizeljsko, Ptuj, Ormož – Ljutomer). Samples were gathered so that one influential area by Vrišer contained architectural landscapes from various architectural regions. This pattern selection enabled a greater diversity of input data and made possible to analyse whether settlements could be merged into groups with identical characteristics in regards to functional influential areas. The results indicated that architectural regions and landscapes by Fister (which belong in an architectural region or represent landscapes from various regions) could be merged into functional influential areas by Vrišer. There were no deviations within individual landscapes, what confirms the theory that settlements may be categorised according to characteristics of buildings and characteristics of the function of the entire settlement. The results of the first two steps, moreover, showed that the system of Vrišer's influential areas may be a start of a classification according to which settlements (and consecutively buildings) could be classified into closed systems with common or very similar quality with the focus being on the function and not the shape.

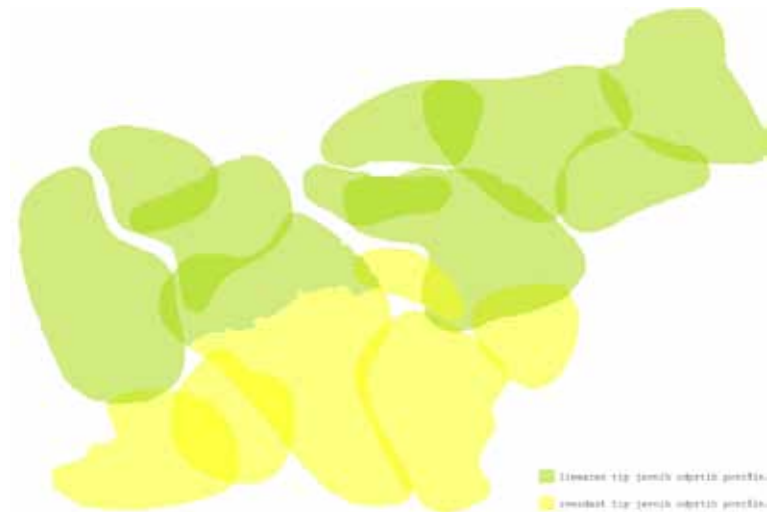
Among all patterns in question (altogether 48 patterns) two patterns of public open spaces which define and connect construction emerged – namely a pattern of linear and star-shaped settlements. The linear pattern shapes the public open spaces longitudinally, in a straight line or in a curved line. The star-shaped pattern on the other hand shapes a location as small groups of individual buildings among which star-shaped open spaces occur (Figure 9).



Figure 9: above – linear patterns, below: star-shaped patterns in public open spaces.

While observing dispersal of both patterns in space, a clear border is noticeable between the north and south part of Slovenia. The border moves from east to west through the middle of the country, through Ljubljana. For settlements north of Ljubljana a linear pattern of public open spaces is typical while settlements lying south of Ljubljana exhibit star-shaped patterns of public open spaces (Figure 10).

Figure 10: Division of Slovenia regarding the occurrence of the star-shaped and the linear pattern of open spaces.



Observing the width of public open spaces it became clear that they were wider in the northeast of the country and exceptionally also in the influential area of Kranj (Figure 11). These results can be compared with influential areas by Vrišer, since wider public areas coincide with the influential area of Maribor while narrower are found in the influential area of Ljubljana.

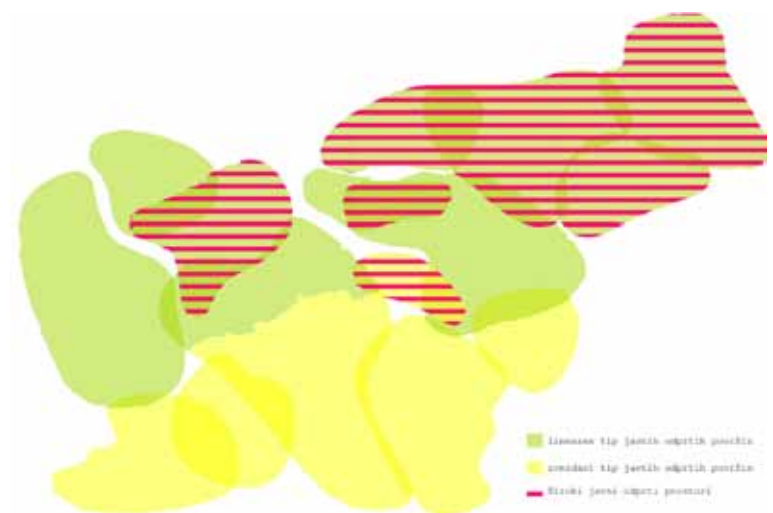


Figure 11: Narrow and wide public open spaces.

## 5. DISCUSSION

In the last couple of years the function of settlements has changed drastically. Once focused on agriculture, the settlements have markedly changed since the invasion of middle-class mentality (Drozg, 1998). New demands for programs which once did not exist (new social programs, higher standard of living, higher standards of teaching and health institutions, different mentalities, etc.) brought about changes in the planning and designing of settlements. A village was once an agricultural community based on self-sufficiency whereas today it serves mostly as a sleeping settlements where services are offered (ibid.). Spatial planning is thus adapted to the functions or rather services, which are connected to the economy and socio-economic structures (Drozg, 2002, p. 20). Planning settlements means linking buildings, morphological elements and all ingredients that suit the demands of citizens (ibid.). The importance of functions for the planning of the settlements can also be seen while comparing architectural regions with influential areas. Architectural regions which are based solely on geographically closed areas can be summed up into influential areas, since among the latter the criteria of function, which had one of the most important roles in the development of settlements, is prevalent (Table 2).

The reason that only two patterns of public open spaces appear (linear and star-shaped) in Slovenia can be found in the design of settlements. As Drozg (1998, p. 300) notes, the regional unity of settlement type can be discerned from their corresponding location in regards to natural conditions, limiting factors and visual exposure of the settlement. Since limiting factors are similar in the entire region, the position and ground plan design of the settlement are also similar (precisely there).

The results of the research regarding the arrangement of linear and star-shaped pattern of public open spaces also coincide with the following findings:

- Types of urbanization in the first half in 1990s (Ravbar, 1998, p. 311): northern part of the Slovenian area is taken over by urbanized countryside with a dispersed population (the results of the research also showed that there is a prevalence of star-shaped open spaces), while the southern part represents urbanized countryside with condensed population. This map of urbanization can also be used to analyse where wide and where narrow open public spaces are prevalent.
- Type of colonisation (Drozg, 1998, p. 299): the northern part is represented by dispersed settlements and the southern part by nucleated settlement, confirmed by this research.

## 6. CONCLUSION

As is the past, in the future settlements shall also be divided into groups on the basis of their function which they have in the network of settlements. Notwithstanding the wide dispersal of colonisation and prevalent small settlements in Slovenia, they can be merged into typical closed groups on the basis of program equipment of the settlement and its functional value for providing for its citizens in the catchment areas. Topographical and

morphological factors are of great importance for the categorisation of settlement from the standpoint of vedute, greens, orientation, infrastructure in public spaces, etc., and therefore these should be the object of further research which will enable us to draw new conclusions in this field.

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