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SPONTANEOUSLY ABANDONED SETTLEMENTS IN SERBIA – PART 1

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Abstract: The paper presents the results of the field studies of spontaneously abandoned settlements in the Republic of Serbia. Out of 20 analysed settlements, 8 were listed as completely abandoned at the latest Census (2002), while others have been detected in the field, subsequent to the Census. The paper consists of two parts. In the first part, the spatial distribution of spontaneously abandoned settlements is analysed, as well as the components of their geographical position. Three main spatial units of the studied settlements are differentiated: (a) the area along the administrative border between central Serbia and the Autonomous province Kosovo and Metohija; (b) mountains Stara Planina and Bureš; and (c) the regions of Vlasina and Krajište. Three components of geographical position are analysed: mathematical-geographical, physio-geographical and administrative-political. Apart from these spatial components, geographical position is analysed in relation to historical circumstances that affected the genesis and evolution of the studied settlements.

Key words: abandoned settlements, depopulation areas, geographical position, Serbia

Introduction

The phenomena of rural depopulation and total abandonment of villages have been recorded throughout the world, especially in industrialized countries. Back in 1937, Toniolo stated as follows: "In lands of old civilization and dense settlement the progressive depopulation of mountainous areas, with the abandonment of fields and dwellings, is a well known phenomenon. The trend is particularly marked in the Alps, where scanty economic resources have forced the inhabitants to lead lives of hard labor and penury that are repugnant to the generation of today." (Toniolo, 1937, p. 473).

The starting hypothesis of the present study is that the unfavourable natural (mainly geomorphological) characteristics of the settlement area are one of the key factors of spontaneous abandonment; moreover, that this is one of the conditional factors of this process. During the field studies (2006-2009), monitoring and analyses were carried out simultaneously with data collection,

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which altogether enabled us to come up to one of the main aims of this study: detection of natural criteria of (un)sustainability of some rural settlements in Serbia.

Previous research

Beginning of scientific studies of settlements in Serbia is related to the work of Jovan Cvijić: back in 1896, he brought out the “Instructions for the study of villages in Serbia and other Serbian lands”, with the main guidelines for field data collection and processing. It is important to stress that these instructions cover both natural and social elements. In his capital work “The Balkan Peninsula” (1922), Cvijić gives a complex analysis and systematics of settlements regarding their position, development and functional characteristics. After Cvijić, the authors who dealt with settlement systematics were Kojić (1961), Stamenković and Bačević (1992) with detailed typologies of villages according to various criteria, while systematics of villages in Vojvodina region according to their micro-position were carried out by Čurčić (2000, 2004).

Having in mind that understanding of depopulation processes greatly depends on factors and circumstances of settlement genesis, research of this kind must also rely on the studies such as those given by Radovanović (1970, 1991), covering the issues of genesis and development of Serbian villages. Stamenković (2004, 2007) warns of the spatial aspects of demographic decline and settlement fragmentation, especially in mountainous regions. He gives the overview of settlements with small number of inhabitants in the 1991 to 2002 inter-census period, and stresses the increase in the number of so-called “dwarf settlements” whose population is under 49. According to the 1991 Census, there were 186 settlements of this category, while in the 2002 Census, their number augmented to 337. The same author introduces the term “settlements with minimum population” for those with up to 20 inhabitants. There were 104 villages of this kind in the 2002 Census (excluding the territory of Kosovo and Metohija), 91 of which were mountain villages, and 13 lowland villages.

One of the first detailed studies of a particular abandoned settlement is the work of Velojić (2000) about the Repušnica village on Mt. Stara Planina. Martinović (2004) wrote about the abandoned village Koritnjak on Mt. Suva Planina. Martinović and Šantić (2006) have studied the village of Gabrovnica on Mt. Stara Planina (Knjaževac municipality) with only five inhabitants in the year 2006 and very probable total abandonment in the nearest future. Specific example of the Vukojevac village in Kuršumlja municipality was presented by Milivojević *et al.* (2007). Development problems of mountain villages were shown by Malobabić (1998). Some examples of planned abandonment of

settlements were presented by Gatarić and Stamenković (2006). Demographic analyses mostly lack the evaluation of environmental factors, while some papers that do treat the natural factors (e.g. Dželebdžić, Jokić, 2003) cover only the general problems of mountain areas, without the analyses of specific characteristics of particular settlements.

The processes of spontaneous abandonment of rural settlements similar to those we face nowadays in Serbia, have been present in the countries of western Europe and north America mostly in the time of the Industrial Revolution, in the 19th and early 20th century (Toniolo, 1937; Watson, 1947; Saville, 1957; Beale, 1964). Collantes and Pinilla (2004) state that in the Spanish autonomous community of Aragon (particularly the parts located in the Pyrenees) a large number of villages became completely abandoned during the 20th century. One of the most detailed analyses of mountain areas abandonment process and cessation of agricultural activities in them, was given by MacDonald *et al.* (2000) on the example of 24 locations in 12 European countries. The process of rural depopulation was delayed in the areas where the processes of industrialization and intense development took part later. Thus, Lyrintzis (1996) states that on the Crete island in Greece, depopulation of mountainous areas reached its maximum during the 1960s, while in Poland, this process was also present in the period after the World War 2 (Gawryszewski, Potrykowska, 1988).

Complex geographical approach, taking into account both social and natural factors of rural depopulation, was applied in the analysis of spontaneous abandonment of settlements in Scandinavia (Ambrosiani, 1984). Similar processes caused by the combination of social factors and extreme ecological conditions (climatic and geomorphological-pedological) were studied on the example of Nepal (Haffner, Pohle, 1993). Detailed theoretical analysis of shortcomings of one-sided studies in comparison with those which cover both natural and social elements of mountain areas was given by Forsyth (1998), giving the actual examples from several various environments and social communities.

Methods of research

The input data obtained from field investigations and literature sources were processed using the inductive (scientific) method. The starting hypothesis is that the natural factors highly influence the process of spontaneous abandonment of villages in Serbia. The hypothesis was tested by the methods of

geomorphometrical analysis, field observations and geomorphological mapping. Cartographic sources (topographical maps 1:25.000 and administrative map of Serbia 1:300.000) and software packages Idrisi Andes and Global Mapper were used for geomorphometrical analyses. SRTM² digital elevation model was used for the inclination map. Methodology of determining the quantitative indicator of morphological isolation of settlements (coefficient of isolation; $K_i = (RRH \text{ m} / 100) \times K_r$) is actually one of the research results, and therefore explained in the second part of this article, which is to be published in the next issue of this journal.

The main data on population, taken from the publications of the Statistical Office of the Republic of Serbia (Census of Population, Households and Dwellings 2002), were updated in the field, with the data collected from the population of neighbouring villages or seasonal inhabitants of the studied villages. In data processing, the basic methods of descriptive statistics were used.

Criteria for selection of the studied settlements

According to Stamenković (2004, 2007), abandonment of settlements can be planned, spontaneous, or forced. One of the settlements listed in the 2002 Census has been subject to planned abandonment: Sakulja in Lazarevac municipality (due to coal quarrying), and therefore it is not included in this study. Forced abandonment was present in the area of Kosovo and Metohija in 1998 and 1999 (e.g. the village of Krligate in the municipality of Zubin Potok).

The study includes only the settlements which were spontaneously abandoned until the year 2009 (Tab.1). The literature references mention the spontaneous abandonment of the settlement Obornjača, situated in the municipality of Bačka Topola (Stamenković, 2004). However, Obornjača is not included into the present study, due to the fact that it was formally declared a separate settlement only in 1991, with only 2 inhabitants. Since the analysis points to a long-term evolution of the studied settlements, Obornjača was not eligible for the study.

For the reasons of safety, it was not possible to carry out the field research of spontaneously abandoned settlements in the region of Kosovo and Metohija. Moreover, the latest census data of this region date back to the year 1981.

² Shuttle Radar Topography Mission

The referent spatial unit of the settlement research was the statistical settlement area instead of the cadastral municipality (in many cases, these two units overlap spatially, but this is not a rule).

Table 1. Population in spontaneously abandoned settlements

settlement	municipality	population (census data)								field data 2006-09	year of abandonment
		1948	1953	1961	1971	1981	1991	2002	2006-09		
Repušnica	Knjaževac	369	333	297	149	12	6	0	0	1998	
Papratna	Knjaževac	495	447	342	201	84	32	13	0	2007	
Golešnica	Aleksinac	190	200	178	104	29	8	4	0	2009	
Prača	Dimitrovgrad	172	158	115	52	27	7	2	0	1999	
Verzar	Dimitrovgrad	360	302	211	135	75	32	9	0	200?	
Koritnjak	Niška Banja	171	157	106	17	12	8	0	0	2002	
Manastir	Niška Banja	122	118	101	27	6	2	2	0	2005	
Gornji Rinj	Bela Palanka	429	413	282	148	44	21	10	0	2009	
Javorje	Vlasotince	185	175	182	171	26	14	1	0	2007	
Ostrozub	Crna Trava	246	239	218	75	33	9	1	0	2007	
Kolunica	Surdulica	276	278	239	142	26	24	7	0	2006	
Pljačkovica	Vranje	82	73	64	58	26	33	0	0	199?	
Đorđevac	Bujanovac	159	158	146	186	81	65	0	0	2001	
Uzovo	Bujanovac	94	84	83	43	17	23	10	0	2009	
Gare	Preševo	290	282	238	220	90	110	0	0	1995	
Vukojevac	Kuršumlija	229	260	191	99	6	0	0	0	1985	
Tačevac	Kuršumlija	192	204	171	76	33	21	0	0	1999	
Rastelica	Kuršumlija	82	88	76	45	23	13	0	0	1999	
Smilov Laz	Novi Pazar	115	130	106	67	33	19	8	0	2005	
Poda	Sjenica	98	109	134	65	49	57	17	0	2008	

Sources: Census 2002 – population, households and dwellings. Population: comparative survey of population 1948-2002; data by settlements; and according to the field research.

Spatial distribution of spontaneously abandoned settlements

Unfavourable demographic trends affecting Serbia in the last decades encompass the spatial component as well. Natural population dynamics and migrations have lead to territorial re-distribution of population. Thus, mountainous and border regions have been differentiated as typical depopulation regions of Serbia. The basic demographic characteristics of these areas are low population density (below 20 people per km²), negative rate of natural increase (below -3‰), low index of population change (below 70.0), high index of population ageing (0.8) (Malobabić, Bakić, 2003). Long-term exposure of these areas to such demographic processes has lead to spontaneous abandonment of certain settlements.

According to the 2002 Census, there were 8 spontaneously abandoned villages in Serbia, as well as one with planned abandonment (Sakulja, Lazarevac municipality). During the field research, apart from checking the situation in the 8 mentioned villages, additional 12 villages have been found abandoned. The main reason for this difference is the abandonment in post-Census period (for the villages Smilov Laz, Papratna, Verzar, Gornji Rinj, Manastir, Javorje, Ostrožub, Kolunica, Uzovo, Golešnica and Poda). However, there were also the cases of certain “statistical invisibility”, resulting from the fact that data sources were based on formally registered place of residence. The example is the village of Prača in Dimitrovgrad municipality, which officially had two inhabitants at the 2002 Census, while actually the last inhabitant has left the village in the year 1999. People who lived there until 1999, had the officially registered place of residence in Prača also in 2002.

Including the field data obtained by July 2009, there are 20 spontaneously abandoned settlements in Serbia (Fig. 1). This number is relative, and not absolute, thus it should be regarded as a dynamic category. Regarding the spatial distribution of spontaneously abandoned settlements, three spatial units can be differentiated in Serbia:

- the areas along the administrative border between Central Serbia and the Autonomous province Kosovo and Metohija
- the area of Mt. Stara Planina and Mt. Burel
- the areas of Vlasina and Krajište

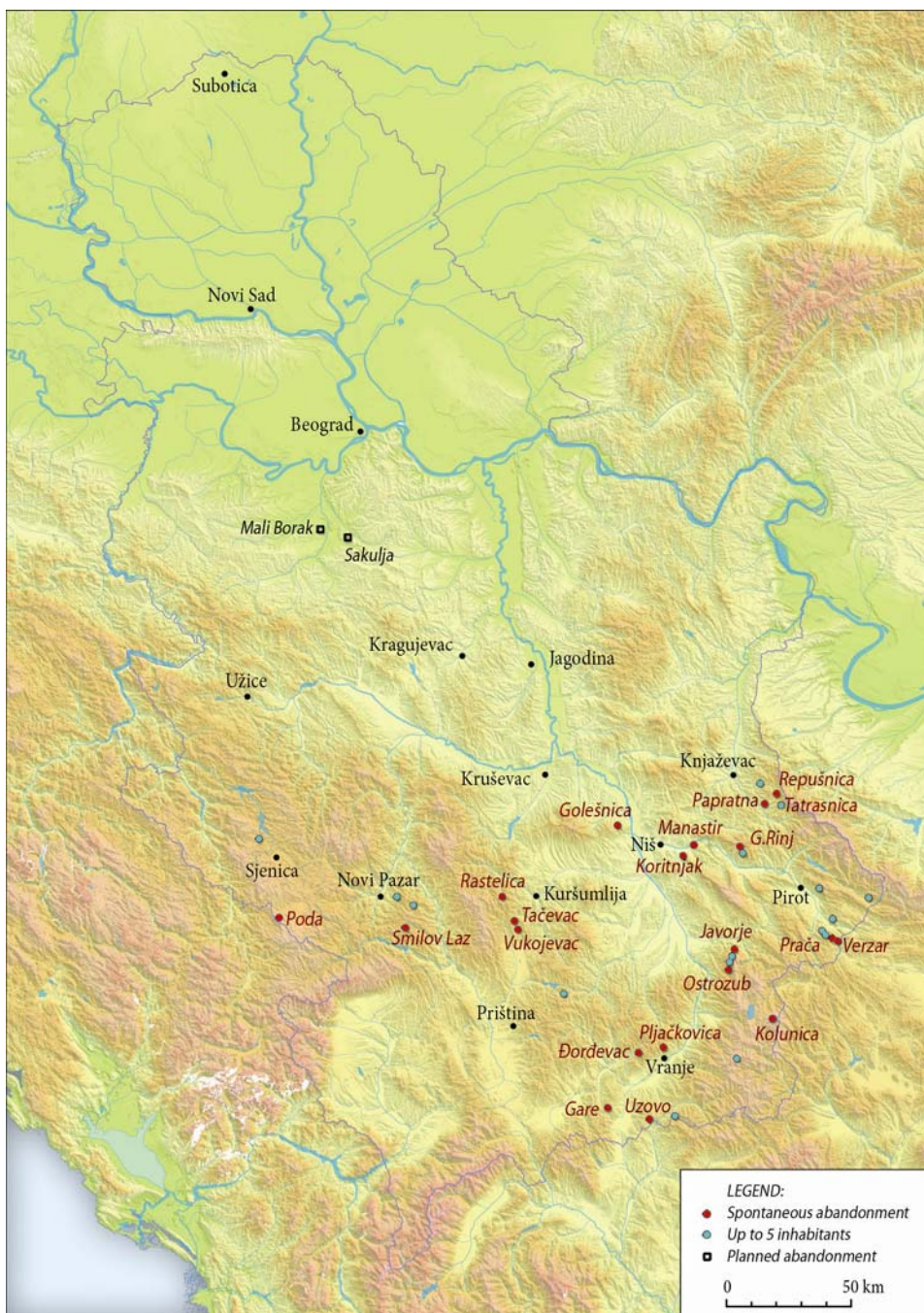


Figure 1. Map of geographical position of spontaneously abandoned settlements in Serbia

Along the *administrative border between Central Serbia and Kosovo and Metohija*, 6 villages have been spontaneously abandoned in the last two decades. These villages are Gare (Preševo municipality), Đorđevac (Bujanovac municipality), Vukojevac, Tačevac, Rastelica (Kuršumlja municipality) and Smilov Laz (Novi Pazar municipality). The village of Mala Braina (Medveđa municipality) is also situated in this zone and, having only four inhabitants, it is threatened by abandonment.

The area of *Mt. Stara Planina and Mt. Burel*³, above the altitude of 600 m a.s.l., has traditionally been an emigration area. The process is the most intense in Knjaževac and Dimitrovgrad municipalities. In Knjaževac, two settlements have been abandoned: Repušnica and Papratna. In Dimitrovgrad municipality, there are Prača and Verzar on Mt. Burel. Judging by the present number of inhabitants, the similar outcome can be expected in the villages of Basara (2 inhabitants) and Milojkovac (5) in Pirot municipality, Boljev Do (3), Grapa (2), Planinica (5) in Dimitrovgrad municipality, and Drvnik (5) and Tatrasnica (5) in Knjaževac municipality.

Vlasina and Krajište have been subject to excessive emigration over the last several decades. Among the spatial consequences of this process, there are three spontaneously abandoned villages: Kolunica (Surdulica municipality), Ostrožub (Crna Trava municipality) and Javorje (Vlasotince municipality). This region hosts several more villages threatened by abandonment: Barje (4 inhabitants) in Bosilegrad municipality, Bistrica (3) in Crna Trava municipality, Kozilo (5) in Vlasotince municipality, and Rajčevce (4) in Trgovište municipality.

Geographical position of spontaneously abandoned settlements

Anisotropy in qualitative and quantitative geospatial characteristics implies the need for a thorough analysis of geographical position of spontaneously abandoned settlements of Serbia. Geographical position of these settlements is both a spatial category (which is relatively constant) and historical category (which is highly changeable).

³

Mt. Burel is situated south of Dimitrovgrad, extending in meridional direction. The highest peak of this mountain is Basara (1028 m). Valley of the river Gaberska Reka divides Mt. Burel to eastern and western part and hosts the state boundary between Serbia and Bulgaria. The mountain is situated in Dimitrovgrad municipality and hosts two abandoned settlements – Verzar and Prača, with two more to face the similar outcome – Grapa and Planinica.

Spatial components of position

Relevant spatial components of position of the studied settlements are: mathematical-geographical position (geographical position in a strict sense), physio-geographical position, and administrative-political position.

Mathematical-geographical position, as an absolute component of position, is of particular importance for the process of settlement re-location. In Serbian literature, this process is called “*pomeštanje*” and explained by Kostić (1970) on the example of settlements in the basin Belopalanačka Kotlina. In this process, due to small migratory distance, the settlement is not formally abandoned, but re-located within the same statistical settlement area or cadastral municipality. One of the typical examples is Pljačkovica, situated in cadastral municipality Vranje II. The settlement was initially positioned in the source area of the Mrtvica brook, at the elevation of 1200 m a.s.l. In early 1960s, the population started to move to lower elevations (to 760 m a.s.l.) towards the area called Pržar, which is a suburb of the town of Vranje (Stamenković, 2004). Regarding the fact that the new location lies within the same statistical area, the initial settlement is not formally abandoned, although the process of spontaneous abandonment is present. The motive of re-location in this case was more favourable physio-geographical position. Similar motives of re-location were detected in other parts of Serbia (Kostić, 1970). Therefore, only the mathematical position is changed, but administrative position and population remain. Such processes can be “statistically invisible” if analysed only through census and administrative data.

In defining the *physio-geographical position*, geomorphological characteristics are particularly stressed, considering the fact that relief modifies climatic elements and hydrological characteristics. In spatial planning, two types of settlements are distinguished on the basis of physio-geographical position: mountain settlements and valley settlements (Malobabić, Maričić, 2004; Dželebdžić, Jokić, 2003; Gešev *et al.*, 1998). The basic criterion for the status of mountain settlements is the elevation above 600 m a.s.l. Geographers usually determine this position by morphogenetic characteristics of relief in a settlement, i.e. its microlocation (Cvijić, 1922; Radovanović, 1966; Stamenković, Bačević, 1992; Dinić, 2007). However, microlocation characteristics cannot show whether certain morphosculptures which host a settlement (or are situated between a settlement and a municipal centre) have a function of bonding or isolating (see terminology of Cvijić, 1922). In evaluation of locations of abandoned settlements, one should consider not only the location of buildings, but also the location of agricultural areas (Stamenković, Bačević, 1992).

The analysis of geomorphological position of 20 studied settlements and their areas showed a homogenous structure characterized by morphologically isolated spatial units – amphitheatral source areas of mountain brooks (80% of settlements) and V-profiled valleys (10 % of settlements), with continual inclinations exceeding 20%. Two villages (Gornji Rinj and Poda) are positioned at the bottoms of karst dry valleys, within a variety of surface karst forms. Hydrologically, the areas of analyzed settlements belong to the 1st order river courses, according to Shreve classification (except the villages Rastelica and Papratna), with a very unbalanced water regime. The water courses are not of permanent character and are prone to flash flooding. Physio-geographical attributes have led to the formation of humic soils (rankers) and mountain chernozem soils. Due to the described physio-geographical structure, the studied areas represent a very vulnerable ecological system. In combination with a certain degree of anthropopression, these areas are subject to excessive hillslope processes (rockfalls, landslides, erosion, flash floods), which stress their unfavourable conditions. The elevations of settlements range from 370 to 1400 m a.s.l., indicating that the hypsometry is not of particular importance. Its role is significant only in combination with slope inclinations. One of the examples is the village of Koritnjak, positioned between 580 and 630 m a.s.l., but with average slope inclinations exceeding 25% (in the statistical settlement area). Another example is Pljačkovica village close to Vranje (Fig. 2).



Figure 2. Position of Pljačkovica in relation to Vranje: an example of extreme relative height (topographic prominence, Rh)

Table 2. Geomorphological position of settlements

settlement	geomorphological position			height	
	macro*	meso	micro	a.s.l.	relative
Repušnica	mountain	source area (<i>see text</i>)	valley side	680-720	430
Papratna	mountain	V-shaped valley	valley side	440-500	280
Golešnica	mountain	source area	valley side	480-580	230
Prača	mountain	source area	ridge	780-815	330
Verzar	mountain	source area	valley side	700-825	300
Koritnjak	mountain	source area	valley side	580-630	350
Manastir	mountain	source area	ridge	370-430	180
Gornji Rinj	mountain	karst dry valley	dry valley bottom	800-860	550
Javorje	mountain	source area	ridge	750-850	500
Ostrozub	mountain	source area	valley side	1120-1210	550
Kolunica	mountain	source area	valley side	1300-1460	600
Pljačkovica	mountain	source area	valley side	1140-1160	700
Đorđevac	mountain	source area	valley side	920-1080	500
Uzovo	mountain	source area	valley side	520-560	200
Gare	mountain	source area	valley side	780-860	350
Vukojevac	mountain	source area	ridge	780-860	390
Tačevac	mountain	source area	ridge	815-875	420
Rastelica	mountain	V-shaped valley	valley side	890-950	550
Smilov Laz	mountain	source area	valley side	1200-1250	750
Poda	mountain	karst dry valley	dry valley bottom	1350-1400	350

*defined by morpho-structural relief elements

Administrative-political position is defined by the position of the settlement in relation to the municipal center or state boundary. The positions of the studied settlements in relation to the respective municipal centers were either periurban or peripheral. *Periurban* position means that a settlement lies within 5 km distance from the municipal centre (e.g. Pljačkovica, 3 km from the centre of Vranje; or Koritnjak, 1.3 km from Niška Banja and 9.5 km from Niš). The main characteristic of such a position is a large height difference: 350 m in the case of Koritnjak, and as much as 700 m in the case of Pljačkovica. It is very important to analyse the positions of these settlements in the context of “stages of mutually connected development of a town and a network of surrounding settlements” (Veljković *et al.*, 1995). According to this author, the town of Niš is in the transitional phase between the stages III and IV, meaning that the settlements situated closest to the town, as well as those with favourable position for

communications, are becoming more attractive and thus more populated. “Moving out from these settlements becomes highly reduced or even stops” (Veljković *et al.*, 1995). However, in the case of Koritnjak⁴, the positive developmental effect of Niška Banja and Niš is lacking. This points to the conclusion that even the favourable social and economical factors were not sufficient to overcome the natural handicap of Koritnjak for the needs of permanent residence.

As opposed to periurban position, if the settlement is located along a municipal boundary, its position is considered *peripheral* (Malobabić, 1998). Of the total number of spontaneously abandoned settlements in Serbia, 81% are positioned on municipal boundaries, and out of that number, 35% are also on the state boundary. Three abandoned settlements are located on the border between Serbia and Bulgaria: Repušnica, Verzar and Kolunica. Along the borders with Macedonia and Montenegro, there are Uzovo and Poda, respectively. Out of the total number of abandoned settlements, 6 are situated along the administrative border between central Serbia and Kosovo and Metohija. Between 1999 and 2001, 5 km wide demilitarized buffer zone called the Ground security zone was established along the administrative border. Subsequent to creation of such a security vacuum, the scarce Serbian population abandoned Tačevac (2 inhabitants in 1999) and Rastelica (3), while the Albanian population abandoned Đorđevac (6 inhabitants in 1999). Abandonment of the remaining three villages was not the consequence of this security factor (Milošević *et al.*, 2008).

Historical components of position

Geographical position can be regarded also as a historical category. Thus, it encompasses the chronological analysis of changes in relations between settlements and the social, political and economical processes and factors in their surroundings.

The present territory of Serbia is historically polarized, with Pannonian Serbia on the north and Balkanic Serbia on the south. These historical units have been subject to various cultural-civilizational, political and economical processes. Foreign military operations and forced migrations in Balkanic Serbia were physically channelled through the valleys of Morava and Nišava Rivers. This negative geostructure, presenting the contact between the western Europe and

⁴ Koritnjak has never got the installation of electric power, although the regional overhead lines are passing just above the village. For more information about Koritnjak, one should refer to Martinović (2004).

the East, had a transmission function. As stressed by Radovanović (1989), such geostructures “form a very complex system of geotectonically and physio-geographically guided directions and zones of strong centripetal and opposite divergent characteristics. They are natural geographical constants facilitating the spread of all kinds of movements; atmospheric, biological, and those most various, originating from human activities, civilizations, undulations...”.

In the 15th century, the area of Serbia fell under the occupation of the Ottoman (Turkish) Empire, which lasted until the 19th century. The occupation caused a discontinuity of social-economical, cultural and ethno-demographical development of Serbia, with destructive consequences – opening of large civilizational and historical-geographical vacuums (Radovanović, 1989). The period of the Ottoman government considerably influenced the genesis and evolution of Serbian settlements. The settlements which were formed during this period are the consequence of the interaction of natural elements and geographical environment complex, population and social-historical processes. The areas along the Nišava and Morava Rivers were the first to be struck by Turkish military actions.

Due to existential and material insecurity, a large number of people abandoned these areas. Part of the population migrated across the Sava and Danube Rivers (to the Hungarian and, subsequently, Austro-Hungarian monarchy), and a considerable part of the remaining population withdrew to higher mountainous areas, which became the main recipient for former inhabitants of the valleys.

New natural conditions that affected the population resulted in agricultural transformation from crop-livestock farming to half-nomadic cattle breeding. This form of cattle breeding was relatively mobile and thus adaptable to frequent Turkish military actions. It was also in accordance with the natural resources of the mountains, considering their phytocenological characteristics and the condition of natural isolation. In Serbia of that time, a large number of pigs could be fed with acorns in vast oak woods of central Serbia. As the presence of the Turkish Empire in these areas lasted for more than four centuries, newly formed settlements and restructured agriculture were not of temporary, but of permanent character. As a consequence of continual economical and inhabitation processes in mountain areas, spontaneously formed settlements were permanently introduced into the environment. Among the presently abandoned

villages that were formed in this way, typical examples are Papratna⁵, Pljačkovica, Koritnjak, Repušnica, etc.

Another historical process that influenced the development of settlements in central Serbia was a successive broadening of Serbia during the 19th century. Meridional expansion in southward direction, with typical characteristics of a frontier region, resulted in political instability and insecurity of the area. After the Congress of Berlin, ethnocentric migrations took place. These migrations confirmed and strengthened the changes in population structure which occurred in the war-affected areas during the previous period. The changes led to religious and ethnic homogenization of border areas in the whole country. Thus, this kind of migrations can be characterized as homogenizational.

Serbian-Turkish war in 1877-1878 resulted in changes of ethnic and religious structure of the areas assigned to the Principality of Serbia according to the Treaty of Berlin. The changes were additionally strengthened by unsuccessful attempt of repatriation of Albanians from the regions of Toplica and Gornja Jablanica, post-war emigration of the remaining Muslims, and finally, beginning of planned colonization of Serbs in Toplica and Vranje counties. In this period, three planned settlements were formed: Vukojevac, Tačevac and Rastelica (Fig. 3). The authorities of the Toplica county were persistent in the attempts to inhabitate the border area towards Turkey, along the right bank of the Toplica River and left bank of the Kosanica River. The purpose of these plans was the introduction of some kind of border officers, in order to prevent the illegal crossing of Albanians to Serbia (Jagodić, 2004).

After the Congress of Berlin in 1878, when the southern border of Serbia was defined, south-western part of the Vranje basin remained under the Turkish administration. The barrier character of the border caused divergent political, ethnic, economical, cultural and demographical processes. Ethnic homogenization took place in previously mixed society. In the area that remained in the Ottoman Empire, the villages Đorđevac and Gare, previously inhabited by Serbs, got the Albanian population. Serbian population from the village of Donji Stajevac (which also remained at the Turkish side of the border), moves to the village of Pljačkovica, in northwestern part of the Vranje

⁵ Primary location of Papratna was Orničeje in the valley of the Trgoviški Timok River, south of Gornja Kamenica along the present regional road Pirot-Zaječar (Velojić, Radovanović, 2007). Before the Congress of Berlin and inclusion of Pirot county to Serbian territory, Papratna was situated at the border with the Ottoman Empire.

basin. The established ethnic border, determined by the political border, exists even nowadays, as a certain “history scar”.



Figure 3. Map of the studied settlements in relation to the historical borders of Turkey and Serbia, in the period 1878-1913 (present border of Serbia is marked as a thick black line).

The areas geologically represented by the Tertiary volcanism lithologies were attractive as mining areas since the Middle ages. Thus, they influenced the genesis of settlements. This economical factor triggered the development of a certain number of settlements in Serbia, e.g. Smilov Laz on Mt.Rogozna and Kolunica on Mt.Milevska Planina. The ore was melted *in situ* – melting plants were built close to the mining areas, in small river valleys, in order to use the water power in ore processing (Simić, 1951). Considering the micro-position, such settlements are mainly positioned on concave morphological units, as in the case of Kolunica. In the valley of the brook Kolunički Potok, where the settlement is positioned (the three hamlets), ore melting remnants were identified during the fieldwork. This undoubtedly indicates that mining was the primary economical activity of this area.

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