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LAND OF DORNA. STUDY OF REGIONAL GEOGRAPHY
Abstract of the Ph.D. thesis

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Key words: Land of Dorna, region, system, functionality, mental space, attachment, perception, interrelationship, brand.

INTRODUCTION

The Land of Dorna is situated at the junction of the three historical regions – Transylvania, Bucovina, Moldavia and the distinctiveness of the landscape and the socio-economic characteristics have influenced the development and individualization of the entire territorial system over time.

The main purpose of this paper was to emphasize the basic characteristics of a functional type of territorial system so-called "land" and "projection territory". In order to accomplish this desideratum there have been proposed a series of *objectives* (demarcation of this region on the basis of a wide set of criteria; highlighting relations between the constituent subsystems of the region and the outer areas; identification of the main pillars of development in the region and implementation of some sustainable development strategies etc.). Also there has been applied a diachronic approach on the whole processes and phenomena that have occurred along the writing of this paper.

CHAPTER 1. EPISTEMOLOGICAL, THEORETICAL AND METHODOLOGICAL UNDERTAKING IN THE STUDY OF THE LAND OF DORNA

In the first instance there has been achieved a rational approach of a scientific research (fig. 1). Beginning with the assumption that the Land of Dorna is a complex territorial system, one can include the **epistemological** issues in the category of constructionism². Constructionism represents a semiotic paradigm that concerns the way in which human beings perceive life, understand the world around them (Gergen, 2005, cited by Sandu and Uşurelu, 2012, p. 31) and the process of creating their social reality (objective and subjective).

Taking into consideration the Land of Dorna, the interpretation of territorial reality has been fulfilled using General Systems Theory (G.S.T)³ that perceives reality as a system consisting of several interconnected subsystems. The systemic approach of this area of study concerns the analysis of the way in which only some elements contribute to the dynamics and development of a territory and highlighting the holistic approach at the same time.

The second probatory theory for this paper has been given by Social Identity Theory (S.I.T.)⁴. The central idea of this theory provides that in a certain moment a personal self (senses, feelings, perception etc.) can be interchanged with other individuals belonging to the same community (Boncu, 2004, p. 1).

Among the concepts that have been used during research one can mention:

- concept of region, which has been quite in the air in the scientific literature (Blache, 1910; Julliard, 1962; Mihăilescu, 1970; Donisă, 1977; Dauphiné, 1979; Ianoş, 1987; Cocean, 1997; Filimon, 2011 etc.) and has had different meanings over time (region - natural, homogeneous, geographic, functional, polarized, programming, projection etc.; territory; system etc.);

² The concept of constructionism was mentioned for the first time by Hacking, 1990 in his book called "The Social Construction of What?".

³ In 1968 Bertalanffy developed it in "General System Theory. Foundations development and applications".

⁴ Theory conceived by Henri Tajfel (1981) and afterwards developed by John Turner (1981) and others.

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- the concept of "land" has a multitude of meanings (politico-administrative, psychologic, geographic, ethnographic, mental space attribute etc.) and resemblances, when talking about geographic literature, to other countries as France (pays), Germany (land), Italy (paese) etc.. In the past few years, the most mentioned acceptation that has been used in the scientific literature is that of geographical mental space "whom a human community, and an individual in that community, integrates it into his own existential values through perception (l'espace perçu), experience (l'espace vécu) and imagination (l'espace conçu)" (Cocean, 2010, p. 64);

- the concept of perception. From a psychological point of view, perception materializes during the process of interaction between human beings and environment. Thus, "the whole internal content of seeing things and its structure is marked by the fact that these things are the results of individual activity" (Rubinstein, 1962, p. 113, cited by Zlate, 1999, p. 93). Geography operates with three perception filters – physiologic, psychologic and social ones (Drăguț, 2000, p. 76), which are the basic for creating the image of one community about the space of living;

- using the concept of attachment to place one can explain the connection between individual and place of living; also attachment represents a psychological process that helps creating the sensation of membership, stability and safety (Fullilove, 1996, p. 1516). On the other hand, the place of living stands for what we are and where we form our social relationships with the other members of community we belong (Low and Altman, 1992, p. 7);

- other concepts that are used to explain the relationship human-environment are the ones taken from utilitarian⁵, Cartesian⁶, democratic and humanistic⁷ concepts.

When looking at **methodology**, one can observe that during this research there have been used many *principles* such as spaciousness, causality, integration, historical principle, sustainable development, comparative advantage, ecological and sociological processes. Among the *methods* one can distinguish the ones of observation, semi-structured interview, sociological investigation, mental maps, triangulation, analysis, comparison, case study, G.I.S., graphical representation, synthesis, regional and chorematic.

In terms of implemented sources, in order to fulfil this research, there have been used a series of cartographic, graphic and photographic materials, articles written about the Land of Dorna and Bucovina, a series of scientific studies in the field and other research fields, data and information given by state institutions and also gathered during personal implication and other research methods.

⁵ Concept introduced by Bentham in the 18th century.

⁶ Concept introduced by Descartes in the 17th century.

⁷ Concept inspired by Rousseau in the 18th century.

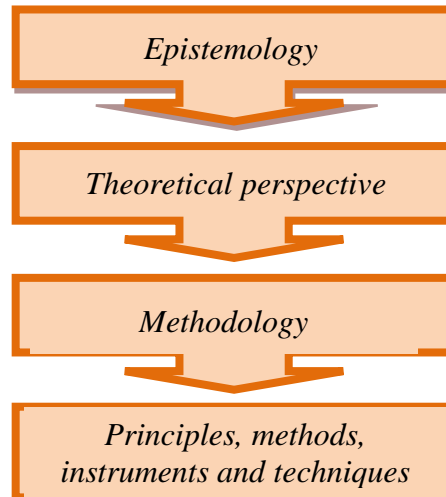


Figure 1: Logical sequence in completing a research project
(Source: Crotty, 2005, p. 4, with modifications)

CHAPTER 2. LOCALIZATION AND INDIVIDUALIZATION OF THE LAND OF DORNA

This chapter deals with the identification and individualization of the spatial limits of the Land of Dorna by using 5 criteria.

The first criterion involves the **landscape** and follows the natural limits of the region. The process of individualization has been enabled by the distribution of the main relief units under the shape of an amphitheatre (the eastern slopes of the Maramureş and Bârgău Mountains; whole mountain range Giumalău and Suhard Mountains; western part of Mestecăniş Ridge and the Bistriţa Mountains; the northern side of the Călimani Mountains; in the center is located the Dorna Depression and in the south-eastern part lying the Drăgoiasa-Glod Basin), the morphometric features of the landscape and the centripetal orientation of the hydrographic and transport networks that connect the main flows of matter, energy and information. An overwhelming influence on the formation of certain specific elements of the region have had the characteristics of climate, soil, fauna and flora elements, which were summary approached in this chapter.

The second criterion includes the **politico-administrative** and **historical** issues. Dorna's administrative component has varied across historical periods. Before the Habsburg Empire occupied this territory in 1775, the main form of organization of the Land of Dorna was of "*union of free village communities*" or "*district confederal communities*" [„*obştile confederale de ocoale*”] (Bălan, 1960, p. 26-27) with administrative-territorial divisions as follows: Dorna on Giumalău, Dorna, Dorna Candreni, Ciocăneşti, Iacobeni, Păltiniş and Şaru Dorna.

After the annexation to the Habsburg Empire, this territory was split into two parts. The *Bukovina side* integrated the following localities: Vatra Dornei, Ciocăneşti, Cârlibaba, Iacobeni, Dorna Candrenilor, Poiana Stampei, Poiana Negrii, the village of Şarul Bucovinei (now part of the village of Şaru Dornei), and Coşna (annexed to Transylvania). The localities that remained under *Moldavian administration* were Neagra Şarului, Şaru Dornei, Panaci, Păltiniş, Dorna Arini (Cernat, 2008, p. 67).

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Since 1918, the administrative-territorial division of the Land of Dorna has been in a continuous change. In 1918 this region consisted of the following villages: Cârlibaba, Ciocănești, Coșna, Iacobeni, Poiana Stampei, Dorna Candrenilor, Neagra Șarului, Șaru Dornei, Dorna (Dorna Arini) and the city of Vatra Dornei. In 1925, by Law no. 95 for Administrative Unification, the territory was reorganized into the communes of Ciocănești, Cârlibaba, Cârlibaba Nouă, Coșna, Dorna, Dorna Candrenilor, Iacobeni, Neagra Șarului, Păltiniș, Poiana Stampei, Șaru Dornei and the city of Dorna, (Țăranu, 2002, p. 54), which form a part of *the rural district of Dorna*.

Since 1929, the Land of Dorna (consisting of the communes of Ciocănești, Cârlibaba, Coșna, Dorna, Dorna Candrenilor, Iacobeni, Neagra Șarului, Păltiniș, Poiana Stampei, Șaru Dornei and the city of Dorna) has been a part of Câmpulung County until 1950, when the village of Crucea was added. In 1956, two more additional villages were added: Broșteni and Panaci.

At present, the Land of Dorna consists of the villages of Cârlibaba, Ciocănești, Coșna, Dorna Arini, Dorna Candrenilor, Iacobeni, Panaci, Poiana Stampei, Șaru Dornei and the municipium Vatra Dornei, that represents a polarizing centre for the territorial system. The whole unit is part of the territorial mesosystem of Suceava County and territorial macrosystem of the North-East Development Region.

Using *toponymic, anthroponymic and oiconymic criterion* in the study of the Land of Dorna, one can underline the through traffic character of the region, determined by its position at the crossroads of three major historical regions (Transylvania, Bukovina and Moldavia) and the presence of foreign civilisations in certain historical periods. All these features have led to peculiarities of dialect, popular clothes, traditional architecture, customs, traditions, occupations and local beliefs.

The most valuable pieces of information have been gathered by analysing place names, human names meanings and human settlements, which revealed both the age and persistency of Dornean communities in the studied territorial system and the indissoluble relation between humans and environment.

In order to demarcate this region by using **mental criterion**, we have appealed to the analysis of two main components. One of these was the *quantitative component* for data collection, which involved the sociological survey by using self-completed questionnaires. The research instrument was designed to capture three important aspects: affiliation to the dornean territorial system by the continuous habitation in the region (questions 1 to 5); mental limits and main characteristics that distinguish the dornean population from inhabitants of neighbouring regions and how they identify with the region (questions 6 to 10); ethnographical characteristics that contribute to the configuration of community identity in the Land of Dorna (questions 11 to 20).

The procedure that was used in this study included a multistage sampling and respondents over 18 years of age. In order to validate the sample there were 170 participants with different ages, residence (rural or urban) and various levels of educational training.

The *qualitative component* was based on two research methods, the semi-structured interview (research instrument being the interview guide and theoretical sampling) and mental maps (research instrument being blank maps). The 35 participants were selected from the 170 respondents in the previous step, the selection criteria taking into consideration the complexity of answering the questionnaires and willingness to participate in interviews and complete the mental map.

As a result, 85.88% of respondents have ticked the territorial administrative units of Cârlibaba, Ciocănești, Coșna, Dorna Arini, Dorna Candrenilor, Iacobeni, Panaci, Poiana Stampei, Șaru Dornei and Vatra Dornei as belonging to the Land of Dorna. These units

had also been identified by us researchers on the basis of scenic, historical, political and administrative criteria. At the same time, 77.14% of the respondents have also indicated the limits of the region on the blank map and have included the same administrative-territorial units.

Among those who have included or excluded other localities in the Land of Dorna, most of them are between the ages of 18-39 years, with proper levels of education (high school or higher education) and live in urban areas. Other reasons that have influenced respondents' decision were their birthplace and their parents' native place; place until they feel comfortable due to frequency of driving to other cities and their distance from the place of residence; influence of administrative factors and media; level of attachment to their place of residence and the nearest localities.

In order to emphasize the main force lines and centripetal vectors of the "dornean" territorial system we have used **functional criterion**. The research method included sociological inquiry by using questionnaires that sought to identify their belonging to the "dornean" territorial space and the continuous presence in the region (questions 1 to 3), centres of attraction in the region and frequency of accessing them (questions 4 to 11). Application and sampling methodology has been the same with the one used in the quantitative component as to define mental space.

All in all, the results have shown that the city of Vatra Dornei represents a polarizing area for the studied region in terms of administrative, economic, health, education and law, thus becoming polarization centre rank I. Central villages of the communes serve as polarizing centres ranked II, with a local influence on the other consisting villages. External influence on the territorial system in the Land of Dorna exercises major cities such as: Suceava, Bistrița, Iași and in a lesser extent the city of Cluj-Napoca.

The basic force lines follow the main axis oriented West-East, secondary axis oriented North-South and tertiary axes located mainly in the South-Eastern part of the region.

CHAPTER 3. LANDSCAPE

The **paleogeographic evolution** of the Land of Dorna is in a close relationship to the evolution of the mountain system of Eastern Carpathians, which determined the petrographic, structural and tectonic complexity of the region. All these complex geographic phenomena and processes have led to the formation of diversified underground deposits (hydromineral, manganiferous, sulfur, peat and rock deposits) with economic importance.

Morphologically, the Land of Dorna consists of two intermountain depressions (Dorna and Drăgoiasa-Glod) surrounded by adjacent mountain ranges (eastern side of the Maramureș and Bârgău Mountains; the whole range of the Suhard and Giumalău Mountains; western part of the Mestecăniș Ridge and the Bistrița Mountains; northern side of the Călimani Mountain). The connection between the two structures is performed by piedmont structures and glacis. Links with neighbouring regions are achieved through four passes that border the "land": Prislop Pass (1413 m) to the north, Păltiniș Pass (1327 m) to the south, Tihuța Pass (1227 m) to the west, Mestecăniș Pass (1100 m) to the east. In addition we can mention the Bistrița gorge near Zugreni.

Morphometric characteristics of the region (altitudes between 747-2100 m; drainage density - 0.5 to 4.8 km/km²; deep drainage - 20-520 m/km; declivity – 0 to 40 °; slope aspects) have influenced other major components of the landscape and the main

anthropic activities of the community, resulting a series of local specificities: specific topoclimates, distribution of natural resources, use of land and resources, organization and distribution of human settlements in the territory.

Among the favourable factors of the relief one can mention the following: ones of sustaining and supporting human activities; defence and shelter; limit and barrier; source; transit; tourism and landscape. The restraining factors of the relief are geomorphological hazards (landslides, ravination processes, torrential floods, mudflows, etc.) and soil pollution.

From a climate perspective, the Dornean territorial system⁸ comes under the influence of temperate-continental climate of transition, mountain climate and climate subregion of the Eastern Carpathians (Bogdan, 1983 b, p. 280). Climate peculiarities can also be observed in the presence of the existing topoclimate within the territory (depression, slopes, mountain peaks and alpine crest, isolated heights ("bâțci"), valley corridors, clough etc.).

The favourable factors of climate component in the Land of Dorna can be listed as shelter, touristic character (which led to the development of skiing and climatotherapy) and ethnographic function (represented by traditional garment). Restrictive factors are represented by natural climate risks (heavy rain, strong winds and storms, frost and rime, ice coating and glaze, slush and thunderstorms, temperature inversions, avalanches etc.) and anthropic ones (air and noise pollution).

Water resources, including groundwater, deep water, mineral springs and surface waters, have played an important part in organizing this territorial system since ancient times. The role of water and the relationship between the "dornean" and this has been evidenced by the presence of well-established appellations ("Vinu pământului", "vatra zânelor", "apă acră" etc. - Țăranu, 1999, p. 17-18), and their multiple meanings in different concepts (Bible, rituals, healing processes, mythology etc. - Kernbach, 2004, p. 37).

The presence of numerous hydro mineral deposits (Coșna, Dorna Candrenilor, Izvorul de Est, Păltiniș, Poiana Negrii, Șarul Dornei, etc.) and their chemical composition (carbon dioxide, arsenic, sulphureous waters, ferruginous etc.) have influenced the development of some traditional activities, such as balneoclimatic spas and mineral water bottling sector, which are also maintained in our days.

Convergent nature of surface water hydrographic network, represented by the four river basins (Bistrița Aurie, Bistrița, Dorna, Neagra), which are tributaries of the Bistrița river Basin and the watercourses Sărata and Vișinearca discharging their water in Ukraine, and their characteristics⁹ made possible the capitalization of these resources within a region with a high hydrographic potential called the Land of Dorna.

⁸ Because of the characteristics of the main climate elements and phenomena (mean annual temperature - 0.4 to 5 °C; average air pressure of 23 mb/100 m; relative air humidity of 82% in depressions and over 90 % in mountainous areas; average annual rainfall between 650-1200 mm; calm between 50-60 %; average annual wind speed of 2.2 m/s in depressions and over 8 m/s in the mountains; average number of winter days [$T_{max} \leq 0$ °C] of 60 days/year in lowland areas and over 100 days/year at altitudes above 2000 m; average number of days with frost [$T_{min} \leq 0$ °C] between 160-180 days/year in lowlands and over 220 days/year in the high areas; average number of frosty days when temperatures drop below -10 °C is of 40-60 days/year in lowlands and 70 days/year in the highlands; average number of summer days [$T_{max} \geq 25$ °C] is of 15-30 days/year in lowlands and 10-15 days/year in high areas; mean annual frequency of temperature inversions is of 107 days/year; average annual number of days with rainfall is of 70-80 days/year; average annual number of days with solid precipitation is of 58 days/year in lowlands and over 220 days/year in the highlands; snowpack remains on the ground approximately 105 days/year; average number of sunny days is of 300 days/year in low areas and 200 days/year in high zones etc.).

Among the hydraulic systems and economic activities developed on the basis of water hydraulic force within the Dorean territorial system one can mention: rafting activities, lumbering, milling, fishing etc.

As for the other components of the natural landscape, water resources have managed to fulfill both favourable and restrictive functions. Among the favourable functions one can mention the coordinating role of surface water network in determining human distribution and the main axis of communication; development of some traditional economic activities; food resource; tourist and landscaping character etc. Among the restrictive factors one can mention hydrological risks represented mainly by high waters and floodings and polluting human activities (mining, concerns that pollute, discharge of domestic and industrial wastes etc.).

The complexity and variety of **fauna and flora** in the Land of Dorna, plus other elements of the natural environment, have led to the establishment of some **natural protected areas** of national (national parks, nature and scientific reserves etc.) and international interest (belonging to the Natura 2000 Network and Ramsar). Most of the times, their limits overlap and come under several types of protected areas. Among the protected areas that are found in the Land of Dorna one can mention: the Călimani National Park, the Pietra Țibăului Geological Reservation, the Codrul Secular Giumalău Forest Reserve, the Cheile Zugrenilor Complex Reservation, Botanical Reservation Tinovul Șaru Dornei, Twelve Apostles Geologic Reserve, Tinovul Mare - Poiana Stampei Botanical Reserve, the Jnepeniș Scientific Reserve with pinus cembra, Tinovul Găina - Lucina, Bistrița Aurie, Rarău - Giumalău, Tinovul Mare - Poiana Stampei etc..

Regarding **soil** distribution and potential, within the dorean regional system there have been identified several soil types corresponding to nine classes with varying degrees of fertility that have influenced agriculture and land development. The largest share of land is occupied by Cambisols (49.31%) and Spodosols (31.26%), which fall into the category of soils with low fertility and are suitable for coniferous and mixed forests and grassland areas. Then follow Andosols (7.02%), Protisols (6.5%), Chernisols (2.1%), Luvisols (2.06%), Hydrosols (1.33%), Salsodisols (0.38%) and Umbrisols (0.04%).

Depending on distribution, quantity and quality, the **biopedogeographic resources** have met both favourable and restrictive conditions in the development of the studied region. Favourability can be indicated by the following functions: shelter, food, economic, tourism, landscape and scientific ones. In terms of restrictiveness one can observe forest density and distribution, low and average soil fertility, soil pollution, land degradation by deforestation, destruction and extinction of flora and fauna species by irrational land exploitings and excessive hunting.

CHAPTER 4. HUMAN COMPONENT AND SETTLEMENTS

Human resource is one of the most important and dynamic component in the dorean territorial system, providing specific information about the evolution of the system in a certain period of time and future directions of development.

Between 1910-2011, numerical evolution of population in the Land of Dorna recorded both periods of demographic increase and decrease due to a series of political, administrative, economic reasons etc. Maximum population number was recorded in 1992,

⁹ 90 % of streams have their origin in the region; average density of the hydrographic network is of 1.34 km/km²; superficial rain – snow feeding of 40-60 % and underground water supplying of 10-35 %; average liquid discharge at the six stations ranging from 4.2 to 24.8 m³/s, etc.

reaching 50,814 inhabitants, while nowadays their number decreased to 37,894 inhabitants.

After analysing some socio-demographic indicators (table 1) one observed that, for the period 2004-2012 compared to the one between 1995 and 2003, the values had a general decreasing trend, except for some of the indicators.

Table 1: Values of socio-demographic indicators for the period 1995-2012 (data processing according to the National Institute of Statistics – Tempo online)

Nr. crt.	Indicator name	Values	
		1995-2003	2004-2012
1.	Population average growth rate	-0,04%	-0,17%
2.	Average birth rate	10,64‰	8,74‰
3.	Average fertility rate	41,21‰	32,31‰
4.	Average mortality rate	11,93‰	12,11‰
5.	Average infant mortality rate	20,70‰	16,29‰
6.	Average natural balance of population rate	-1,17‰	-3,37‰
7.	Average natural population growth rate	-1,17‰	-3,35‰
8.	Average immigration rate*	0,30‰	0,42‰
9.	Average emigration rate*	0,40‰	0,52‰
10.	Average rate of migration balance*	-0,10‰	-0,09‰
11.	Average migration growth rate*	-0,16‰	-0,26‰
12.	Average rate of general demographic balance *	-1,46‰	-2,43‰
13.	Average rate of population ageing	69,13‰	91,44‰
14.	Average demographic dependency ratio	799‰	692‰

* Note: values calculated for the periods 1995-2001 and 2002-2009

Concerning the analysis of population structure by sex, the highest rates were held by female population, a fact emphasized by the average index of feminity rate (103.80%) for the period of time between 1995-2012. Population structure by age indicates a downward trend of the three age groups: population of adult age (15-59 years) had the largest ratio (63.37%) from 1995 to 2012; then followed the elderly age group (over 60 years) (19.03%) and the young one (0-14 years) (17.60%).

Despite historical events (143 years under the occupation of the Habsburg Empire, followed by the Austro-Hungarian one) and the influences brought by the local inhabitants, the Land of Dorna recorded homogeneous values concerning ethnic, religious and linguistic groups (in 2011 96.68% of the population was represented by Romanians, 92.16% were orthodox and 97.76% of the population spoke Romanian).

In 2011, the structure of population by marital status revealed that the highest ratio was represented by married people (48.10%), indicating the role of family and individual in the dornean society and their traditional lifestyle.

Regarding the professional structure of population, one can observe an improvement of the above mentioned values of the analyzed indicators for the years 2002 and 2011. Thus, the activity rate of the population had increased from 45.21% in 2002 to 48.13% in 2011, while unemployment rate has decreased from 13.62% (2002) to 8.41% (2011). From the total amount of active population, employed population rate had increased from 86.38% in 2002 to 91.59% in 2011.

As a result of the above discussed issues, it is obvious that the population in the Land of Dorna is affected by the ageing process, with no alarming levels yet, placing this region among those with a relatively balanced development. Socio-economic structure

analysis has also emphasized the balanced character of the region, but with the emergence of two types of areas: dynamic areas including here the communes with high levels of attractiveness and areas that are in a stage of economic reconversion and revitalization of activities, but with lower levels of attractiveness.

In the Land of Dorna, territorial distribution of human settlements has been influenced by physico-geographical factors, magico-religious beliefs, politico-administrative and socio-economic activities, all of them developing on the basis of human needs.

The average density of settlements is of 3 settlements/100 km², which is below the national average of 5.5 settlements/100 km² (Nicoară, 1999, p. 138). In terms of their size, the largest ratio (54, 55%) includes small rural settlements with a population between 100-500 inhabitants.

The actual typology and habitational features of settlements are complex and diversified in the Land of Dorna. Thus, in terms of physiognomy, settlements may be in a regular shape (Cârlibaba, Iacobeni, Sunători, Vatra Dornei etc.) or irregular one (Ciocănești, Șaru Dornei, Sărișor etc.). As regarding texture, one can find linear settlements (Valea Stânei, Gura Haitii, Botoș etc.), tentacular texture (Ciocănești, Dorna Arini, Panaci etc.) and complex texture specific to the Municipium Vatra Dornei (integrating features of different types of textures after embedding some localities such as Argeștru, Roșu and Todireni). Taking into consideration the structure of settlements, one can identify nucleated (gathered) structures (Cârlibaba, Iacobeni, Vatra Dornei etc.), scattered (Poiana Negri, Sărișoru Mare, Cătrinari etc.) and dispersed ones (Valea Bancului, Argeștru, Neagra Șarului etc.).

In terms of **quality of life** (including the analysis of some indicators for drinking water supply, sewage infrastructure, power supply, thermal energy supply, degree of connection to telecommunications, educational infrastructure, health infrastructure, etc.) one can observe levels above national average. In time, the only problems that remain to be solved by local authorities are to connect all houses to technical infrastructure systems.

CHAPTER 5. ECONOMIC COMPONENT IN THE LAND OF DORNA

After 1990, the transition to a market economy has conditioned some changes by the disappearance of important economic sectors in the region (such as mining) or limitation of other ones (exploiting peat deposits, hydromineral waters for recreation, manufacturing leather clothing pieces etc.). At the same time other profitable activities have been developing (telecommunications, financial activities, real estate etc.).

In 2012, in the Land of Dorna were 1,203 firms with a total of 4826 employees. Among these, 705 concerns were specific to the field of services with 2129 employees, 355 companies were in the secondary sector with 2472 employees and the primary sector was represented by 143 firms with 225 employees.

These aspects demonstrate that a large part of the population is still faithful to old traditional occupations such as those in wood processing industry and food industry (especially the production of dairy and bakery products). These two above mentioned sub-sectors are those that play a significant part in the regional economic sector. On the other hand the high rate of personnel in the tertiary sector of activity is justified by the development of trade sub-sector.

In terms of land distribution one can observe high percentage of areas covered by forests (71.13%), which are above the values in the whole county (53.23%), followed by grass lands and meadows (25.22%) and other categories of lands (3.65%). This distribution

explains the everlasting traditions in the dornean community regarding both wood processing and livestock.

As concerning both anthropic influence on the lands in this region and the analysis of specific indicators (agricultural density, physiological and ecological density), one can notice that the human activities exerted on the territory and its resources were not so intensive in the Land of Dorna (except for agricultural density values). This situation has been seen as a positive thing in terms of sustainable land conservation, and also a negative aspect due to the population decline.

Landscape characteristics of the region have imposed restrictive conditions for the development of **plant cultivation** that represents an economic sub-sector for subsistence. **Animal breeding** is the main activity of the inhabitants. In terms of total number of farms with livestock species, the ones specialized on cattle breeding dominate the dornean regional system. At a regional level, one can observe that the inhabitants have chosen agricultural practices for family unincorporated farms¹⁰, to the detriment of legal personality¹¹ ones. There predominate small farms, instead of european financed¹² ones (above 40 heads), which are reduced in number.

The high percentage of cattle in the livestock structure explains the specialization for dairy products and creation of a regional brand (LaDorna), which is recognized both on national and international market.

Another specific brand of the studied region is *organic farming*, which is supported by high percentages, above the county ones (1.31% and 0.48%), of certified organic farmlands (9.55%) and those in conversion process¹³ (3.17%) from the total exploited agricultural surfaces¹⁴. As a result of the analysis there have been observed an overlapping between the communes with the largest areas of certified organic lands or in conversion and those with the highest number of farms and organically reared livestock.

¹⁰ Represented by individual farming, sole or family proprietorships.

¹¹ Represented by privately owned companies, institutions/research stations and centres, schools of agricultural sciences or other profile.

¹² Were implemented through SAPARD programmes such as Farmer, Leader or Europe in 2000, according to the consultations with local authorities.

¹³ According to Government Emergency Ordinance no. 34/2000 and Government Decision no. 917/2001 surfaces in conversion are those switching from conventional to ecological status, in order to achieve a viable and sustainable agrosystem. This process is conducted in accordance with national and international environmental standards in a given period as follows:

- 2 years for annual field crops;
- 3 years for perennial crops and plantations;
- 2 years for grassland and fodder crops;
- 12 months for beef cattle;
- 6 months for small ruminants and pigs;
- 12 weeks for dairy animals;
- 10 weeks for poultry (meat or egg production), bought at the age of 3 days;
- 1 year for bees, if the family was bought from conventional apiaries.

¹⁴ According to NIS "utilised agricultural area is the total area of farmland used by an establishment of agricultural activities, surface that can be located both in the locality where the farm is and in other places."

The agricultural sector is supported mainly by individuals between 55-65 years old and over, who gained their experience on farming practices from the experience of their ancestors and passed on from generation to generation.

Regarding farm activities (crop cultivation and livestock), in the Land of Dorna there are highlighted three types of areas: ones sustaining the development of this sector represented by the communes of Dorna Candrenilor, Dorna Arini, Panaci and Șaru Dornei; areas oriented towards other economic branches, in which agriculture has little importance (the communes of Cârlibaba, Ciocănești, Iacobeni), and those with mixed profile, formed by the communes of Coșna, Poiana Stampei and the municipium Vatra Dornei.

The **secondary sector** of activity is dominated by manufacturing (87.42%), followed by construction (10.52%), production and distribution (water, sanitation, waste management and decontamination activities) (1.17%) and mining (0.89%). In turn, the manufacturing industry includes food industry (41.18%), wood processing in various forms (38.36%) and beverages industry (16.84%). A famous traditional activity in the region was the mining industry that lost ground after 1990. Currently, this activity is maintained in three localities (Ciocănești, Poiana Stampei and Vatra Dornei) through stone exploitation.

Regarding the **services sector** the highest ratio of employees is involved in trade sub-sector (48.14%), followed by hotels and restaurants (19.63%), social activities (15.97%), transport and storage (8.60%) etc.

The variety and specificity of natural and human resources in the dornean territorial system have established the spatial organization and **tourism** in the region. One can also add the distribution of the main axes of communication to direct tourist traffic flows, physical aspect of the accommodation facilities and quality of services.

Natural tourism resources have contributed, by their uniqueness, to the creation of a heterogeneous landscape that always attracts a steady number of tourists. Altogether, these resources have led to the development of balneo-climateric tourism and resorts, winter sports, fishing, recreation, extreme sports (rafting and canoeing), leisure tourism, scientific tourism etc. Hydromineral resources are also used in the bottling industry, this sector being developed and represented by the largest brands in the Land of Dorna (Dorna, Bucovina, Poiana Negrii, Aqua Carpatica).

Regarding *anthropic tourism resources*, these are found under various forms in the region, from small hand-made objects (painted and decorated eggs, wooden pots, ladles, crosses etc.) to various buildings with local or national significance (Casino of Vatra Dornei Baths, Gavril Candrea House, Ion Ivan Household, etc.). One can add intangible resources that are part of the ethnographic heritage of the region. This includes traditions, customs, costumes, folk architecture, traditional activities, festivals etc. that were perpetuated and maintained over time, elements that give a unique value of the whole region.

To assess the *potential and tourist appeal* in the Land of Dorna we applied the methodology presented by Ciangă, Dezsi and Rotar in the paper called "Aspects of estimating tourism potential and materials of the North-West part of Romania" (2002, p. 81-90). The analysis has identified three categories of territorial-administrative units as follows:

- those with *the highest tourist potential* (50 points) represented the municipium Vatra Dornei with a score of 56.5 out of 150 points, value obtained due to high natural tourism potential, assisted by average anthropic tourism potential; these two components were backed up by a complex tourist infrastructure available to tourists;

- those with *a high tourism potential* (31-50 points) including the communes of Poiana Stampei (42.5 points), Dorna Candrenilor (41 points), Dorna Arini (38 points),

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Șaru Dornei (36.5 points), Coșna (35, 5 points), Iacobeni (32.5 points), Cârlibaba (32 points) and Panaci (31.5 points); their values are primarily due to natural tourism potential, followed by the existing tourism infrastructure. Many of these have no elements that are liable to be included in the category of anthropic tourism potential;

- those with *average tourist potential* (16-30 points) are common to the Ciocănești commune with a score of 30 points. Also, in this case, the natural component is the most representative, followed by the tourist infrastructure, the anthropic one missing.

Besides the existing natural and anthropic resources, the Land of Dorna has an important tourist infrastructure represented by tourist accommodation facilities for different categories of tourists, a material basis for cures and leisure, transport infrastructure that facilitates access to various key points in the region, as well as a varied public alimentation sector. All these elements influence tourist demand and uniqueness of tourist traffic in the Dorna region, distinguishing all types of tourism.

The analysis of specific indicators showed that, for the period between 1990-2012, there was a tripling of the number of *tourist facilities and accommodation capacity*, along with an upward trend in the number of arrivals and overnight stays.

Among the types of tourism practiced in the Land of Dorna one can enumerate: *recreation tourism, curative tourism, cultural tourism* and the *polyvalent* one.

Mountain tourism is encouraged by natural resources and the landscape of the region. Tourists are given the opportunity to practice mountaineering, fishing, hunting and other exciting activities such as Nordic walking, climbing, rafting, zip line, ice climbing, paragliding, cycling tourism, mountain biking, wildlife observation etc.

CHAPTER 6. DORNEAN CULTURAL SYSTEM INDIVIDUALIZED BY ETNOGRAPHY

The specific features of the dornean cultural system have been achieved by the blending of spiritual and material components over time, aspects that can be found in the residents' behaviour, house architecture, popular costumes, customs, occupations, etc. Thus, in a limited area of 1605 km² there have been individualized four ethnographic subzones overlapping the four river basins of the region:

- the first subzone belongs to the Bistrița Aurie basin and includes the communes of Cârlibaba, Ciocănești and Iacobeni;

- the second subzone overlaps the basin of Dorna river and covers the communes of Poiana Stampei, Coșna, Dorna Candrenilor and the municipium Vatra Dornei;

- the third subzone belongs to the basin of Bistrița river and overlaps the Dorna Arini Village;

- the fourth subzone belongs to the basin of Neagra river and includes the communes of Șaru Dornei and Panaci.

Material-culture values of the studied system are highlighted by traditional architecture, national costumes and traditional activities.

Traditional architecture is in accordance with the natural aspects of the region, using mainly materials from local resources, construction lines are simple and the ornamental motifs are associated with sacred and mystical meanings.

Typical households in this area have open courtyards, but also closed and fortified districts. House plans include rectangular and one-story houses (2 to 2.20 m), built on stone slabs, logs or wooden soles at ground level, and paved with wood (Bănățeanu, 1975, p. 72) .

Semi-floor or multiple levels houses (eg. semi-floor house and open balcony framed in fretted board; semi-floor house with balcony in the middle and front porch; house with several floors etc.) were built mainly after Second World War.

In this region one can see a unique architectural element in the whole country specific to *Ciocănești village and museum*, where the houses are decorated with traditional motifs on the facade. Particular attention regarding traditional architecture was also given to religious items (wooden churches, architecture inside churches, shrines and funerary monuments), wells, natural springs and technical installations.

The second specific features of the region are *folk costumes*, which maintain intact elements of Dacian and Illyrian¹⁵ clothing. Besides the above mentioned items, local folk costumes also retain a series of archaic patterns of stitches, fabrics and meaningful embroidery with the same colour.

Among the characteristics that distinguish the traditional garments in the Land of Dorna one can mention: waistband with beads [brâul cu mărgel], astrakhan hat [căciula de astrahan], homespun peasant trousers [ițari], homespun skirt where prevails dark red colour (Panaci red) [catrința unde primează roșul închis - roșu de Panaci], marquise chemise [cămașa de marchizet], girdle of wool [brâul de lână] etc.

Traditional economic activities are represented by:

- crafts related to food processing (processing: wheat, dairy, meat and fats; fruit products, vegetables, herbs, honey);
- crafts involving wood manufacturing (work in forest; carpentry; joinery; clapboarding; making musical instruments, objects of decoration);
- crafts based on iron processing (producing horseshoes);
- crafts involving the processing of leather and fur (leather dresser, cobbling, peasant's sandal maker, furrier and fur processing);
- crafts specialized in processing fabrics (spinning and weaving, natural dyeing, cutting, sewing and embroidery);
- traditional crafts of eggs painting;
- the art of painting on glass, wood and painting church murals.

Among the traditional occupations that are no longer practiced in the region one can include: floating, mining, coal exploitation etc.

Cultural and spiritual values that have influenced the behaviour and way of life of inhabitants in the Land of Dorna and have rooted in their way of being are retrieved in faith, mythology, traditions and customs.

Traditions and customs that are still found in the dornean territorial system include:

- traditions and habits specific to *life cycle* (cycle of birth - bathing tradition filled with magic incantations, symbols (power of red and white colour; fir branch etc.), beliefs, songs etc. ; wedding rituals - raising barriers on the groom's way by placing fir branches across the road; gift provided by the groom to his bride in the wedding tree; dances with a roasted chicken etc. ; death cycle - open window, candlelight, fir identified with the cosmic tree, mourning dirges, blowing the alphorn, flute, etc.);

- customs and practices in *folk calendar* (**spring** – trinket worn in honour of March the 1st, the Days of "Babele", washing the bell in water etc.; **summer** – Midsummer Day; "Nedeile" were associated with religious holidays such as St. Peter's Day - June the 29th, Holy Apostles - June the 30th, St. Mary's Day - August the 15th, etc., and pastoral traditions as St. Ilie's Day - July the 20th etc.; **autumn** – the Lucinului Feast,

¹⁵ Illyrian clothing differs from the Dacian one regarding shirt embroidered items, woven homespun skirt, shirt sleeve in the case of female costume; a peculiar element is also the presence of waistband and diamond pattern (Florescu, 1969, p. 284).

the Autumn "Filipi", St. Andrew's Day etc.; **winter** – Saint Nicholas Day, evening sittings, Saint Ignatius Day, traditional dances on New Year's Eve);

- *folk creations* including here folk ballads, doina, shouts, laments, different types of songs (popular dance song, threnodies, outlawry, satirical and lullaby songs etc.) and legends (the Legend of Dragoș, the Legend of Dorna, etc.). Many of these creations are included in popular dances in this region (the Great "Hora", "Sârba", "Bătuta", "Țărăneasca", "Ursăreasca", "Coșnecuța", "Bătrâneasca", "Coasa", "Arcanul", "Trilișeștiul", "Ciobănașul", "Cărășerul") and have been passed on to younger generations through local folk ensembles ("Coșnecuța" Folk Ensemble, vocal Group "Flori de pe Dorna", the "Songs and Dances" Ensemble, the "Golden Bistrița" Folk Ensemble, the "Bujor de munte" Folk Ensemble, the "Cetina Călimanilor" Folk Ensemble etc.).

Most of the traditions and customs, which are related to major traditional activities carried out by the community in the Land of Dorna, are under the influence of *magic and religious practices* and *superstitions*. Among popular superstitions that were identified during field research one can enumerate: ghosts, fairies, "sânca", charms etc.

CONCLUSIONS

Chorematic method has revealed that the natural flows in the Land of Dorna are oriented from the upland towards the lowland, because of the relief distribution under the form of an amphitheatre, which in turn directs and guides the whole hydrographic system. Also, all anthropic flows converge toward the depression, a situation that is caused by the distribution of the main axes of communication and the river system.

In the dornean territorial system, polarization centres are represented firstly by the municipium Vatra Dorna (the main centre), followed by second rank centres represented by the nine head villages in each commune, which coordinate the other localities. Thus, one can observe the aureolar model defined by Brunet in his scientific paper called "La composition des modèles dans l'analyse spatiale" (1980, p. 258).

The main development axis has a west-east direction, located along the Dorna river and one section of the Bistrița Aurie river, also covering the main roads and rail transport. Thus, all three major historical regions (Transylvania, Bukovina and Moldova) are linked together.

Continuous flows of matter, energy and information have encouraged socio-economic development of the main localities situated in the region – municipium Vatra Dornei (1st rank), Poiana Stampei, Dorna Candrenilor and Iacobeni (2nd rank). In Vatra Dornei and Dorna Candrenilor localities there are activities specific to tertiary sector, the indicators about the quality of life also recording high values, which make this area have a positive tropism with trends of continuous development. On the other hand, the area situated in the proximity of the Poiana Stampei unit has a structure of balance. This can be explained by the predominance of the secondary sector of activity, followed by the tertiary one, and of course by the low values of influence of the main polarizing centre in the region.

To the North one can observe the secondary axis that connects this region with the Maramureș County through the Prislop clough. This axis follows the stream of the Bistrița Aurie river and the national road 18. Thus, the individual units Cârlibaba and Ciocănești, which are crossed by this axis, have recorded negative tropism despite good infrastructure and connections with the outer regions and other localities inside this region. This can be explained by low levels of socio-economic indicators due to mining industry restructuring (low activity rate, high rate of unemployment, ageing problems in the case of the

Ciocănești village, high migration values). One can add a reduced influence of the municipium Vatra Dornei over this area, the existence of the frontier that blocks cross-border trade and the weak economic reconversion capacity of the area.

Tertiary axes with local significance are situated in the south-eastern and western side of the Dorna's region, gathering the following units: Dorna Arini, Panaci, Șaru Dornei and Coșna. The reduced connectivity with neighbouring regions and some localities situated inside the region has played a difficult part in absorbing flows of matter and energy, to which we can add low levels of overall balance (especially on natural balance) and increased values of ageing. Thus, the areas in the proximity of these axes have a negative tropism (except for the unit Dorna Arini – situated near the city of Vatra Dornei and having an opening to the east through the Zugreni Gorge). In recent years, because of the investments that have been made, one can observe that the Șaru Dornei and Panaci units tend toward a future state of balance.

Regarding the relations with neighbouring regions, the Land of Dorna experiences polarization influences from the cities of Suceava, Bistrița, Iași and in a lesser extent from the Municipality of Cluj-Napoca.

After data analysis, one can highlight the steady state of the dornean territorial system and main organization of geographic space: the aureolar (determined by the intensity of polarizing centres), the centripetal (determined by the presence of the main polarizing centre whose force attracts fluxes) and axial (determined by the presence of development axes and their hierarchy) (Brunet, 1980, p. 258-259).

The Land of Dorna has all the features of a geographical mental space called "land" with similar attributes like other entities of this type, which form the "backbone of Romanian territoriality" (Popa, 2000, p. 91), and proper attributes that confer self identity to the territorial system.

The characteristics of the functional space area assert as levers meant to transform it into a "project area" and serve and sustain the development of the dornean community. The main step towards this goal is to develop brand names which will assign to the dornean region the same position as in the case of well-known regions. Among possible brands one can include: ethnographic, ecologic and balneotherapeutic brand.

From this point there can be implemented the most appropriate measures for future directions of development. Recommendations for regional development policies have been made throughout this study, as a first step in providing the necessary scientific support to local authorities.

The purpose of the study and the main objectives of research have been achieved throughout this paper. At the end it can be said firmly that the application of General Systems Theory and Social Identity Theory in the analysed region has managed to provide us information regarding the characteristics of a system, the interrelations that are set within different components, the psychological identity of the dornean community, the relationships established between them and the characteristics that distinguish them from the inhabitants in other regions.

In conclusion, the Land of Dorna has proved to be a balanced territorial system, with high levels of natural and anthropic potential that can propel the region in terms of socio-economic. The main advantage of this system will remain the keeping of identity and social cohesion of the Land of Dorna.

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