# From fence to wall? Changes of mental space of border zones in Eastern Europe

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Paper to be presented at 57th ERSA Congress, "Social Progress for Resilient Regions", 29 August – 1 September 2017, Groningen, The Netherlands

Draft version 28/02/2017, not to be quoted

Keywords: Hungary, fence, borders zone, mental map, identity

#### Introduction

The definitions and classifications lead up to the concepts of cross-border space generally constructed in the 1990's, particularly in the works of Ratti and Renard. The spatial organization of cross-border regions is generally represented in schematic maps, including more or less objects (border line, rivers, roads, railroads, canals, cities and other settlements, etc.) and flows (capital, labor-power, tourists, migration, etc.).

The mental or cognitive representation of space is not a new form among the regional geographical research methods. Since 1960, the year of publication of Lynch's work on visual form at the urban scale, the cognitive mapping used largely not only in the USA, but across the world. These maps represent the subjective mapping of the real space around a human. All cognitive characteristic belong to the mental mapping which give us the possibility to collect, class, and store space related information and if necessary evoke and redevelop them. Drawings of people reflect percept elements of theoretical schematic maps, they can include elements of space, objects, but also flows can be expressed through these representations. While schematic maps are generally multifocal and complex, these drawings can be even very simple.

After the 2015 and 2016 world events, the geopolitical situation of the world is radically changed. New hot spots were created, including the European migrant crisis and its local manifestations. Fence building on the Serbian-Hungarian border turns the actual research relevant. The research aim is to present first results of this new situation, how the border-image was changed by the inhabitants during the last 15 years. The paper highlights the changes of mental border perception in this period, by proving that general view did not change essentially, but the structure of the picture turned to actual events.

The main goal of the fence building (over the physical obstacle) was to sign clearly the closeness of the border for outsiders and demonstrate security for those who are on the inner side of the fence. The main hypothesis of the research is that the closeness of the border appeared in the mind of local population, but their security perception did not increase significantly.

The rest of the paper is constructed by the following. In Part 1, we summarize the theory of real border functions and border perception with a critical view on the applicability of the theory on Eastern European condition. Part 2 will be devoted to the methodology of questionnaire surveys executed in data collection, while in Part 3 we summarize the results of the pilot study on Serbo-Hungarian and Romanian-Hungarian border sections and compare these results to previous ones. A general conclusion is given at the end.

## 1. Theoretical background

We analyze here a set of schematic maps, one of the more detailed in the literature. Renard and Picouet published their maps in 1993, so some elements are subject to update (see Székely 2013 for a vicennial one). This set of maps separate 4 stages of development from the almost closed border to a symmetric and fully open situation.



Figure 1: Dysfunction of borders

Source: Renard, J.-R – Picouet, P. (1993)

In the stage of dysfunction of borders, border line *a priori* separates the territory A (less developed) from territory B (more developed). Urban centers are present on both side of the border. The urban center of territory B has an important role of the dynamism of this border area. The road axes are mostly parallel with the borderline, border crossing possibilities are rare. The *objects* of this map are the typical targets of the first-stage cross-border cooperation projects: amelioration of traffic channels (roads, canals, maybe railroads) and building common capacity of waste-water treatment.

The second level is a filter-border (see Figure 2). On the schematic map, we can see that the single urban center of territory A is in recession, the population density near the border area is weak. Around the dynamic urban centers in territory B we can observe the modern phenomenon of periurbanization. On the highly-developed territory B, two urban centers are present; the more intensive urbanization magnifies the asymmetry effect of the territory. The cross-border shuttle between the two territories is active; in territory A, the unemployment is high. The new *objects* of the map are the cross-border shuttles.



Figure 2: Asymmetry of border

Source: Renard, J.-R – Picouet, P. (1993)

Figure 3: Strongly dynamic border space



Source: Renard, J.-R – Picouet, P. (1993)

Figure 4: Meta-morphism of contact



Source: Renard, J.-R – Picouet, P. (1993)

The third level of cross-border cooperation (see Figure 3) is a strongly dynamic border space on the interface of two territories. In that case the cities are next to each other in the border zone (classical type of twin cities). The cities are quite dynamic on both side of the border because of the flows of people and capital towards the border zone. The flow of agricultural products concern both side of the border. Level of development is similarly high on both sides of the border, but physical proximity of actors (cities, enterprises) is important in the cooperation. The integration reached the level where investments are bilateral, production is specialized, but balanced. The new *objects* of the duty-free zone with industrial parks. The border should be open to have the possibilities of moving capacities of enterprises into these parks. At this level, the infrastructure is supposed to be complete; the balanced level of employment does not require a large volume of daily commuting.

The fourth stage is the most integrated territory, where the border lost completely its function, it is present only as a landmark. This border zone is a widespread bilingual zone without obstacle before the commerce, the services and the personal contacts. The urban poles are situated in the border area; between them the flow of consumers and services is high. The cross-border diffusion poles assure a good base of cooperation between the territory A and territory B. The family relations and cross-border friendships are also strengthened in that integrated cross-border region.

This map is perfectly symmetrical; the most important *new elements* are the cross-border information sources (nowadays, common web sites and social networks).

We can see on this set of maps that only a very high level of *social and economic integration* can eliminate the break effect of borders: a common language (or perfectly bilingual zone), fully integrated economic functions and same living standard are necessary conditions for a metamorphism. In Western Europe, we can find two examples: the metropolis of Lille (with a cross-border region in Belgium) and the triborder zone of Luxembourg-Belgium-France. Eastern European border zones are in typically in the second phase of development (asymmetry) but we can find some examples of first and third stage territories.

## 2. Methodology

The border may sometimes function as a true barrier in a cognitive sense, information about events on one side of the border reaches the other side rarely, or not at all. As Figure 5 shows, by van Houtum (1998) the border has a crucial role in the cognition.

The formal knowledge about the other side of the border is limited, even if the media and personal contacts give some fix points for the cognition (the role and weight of these types of communication has changed in the last decade mainly for young population). Newspapers and television programs focus primarily on the country or region in which they are made. In the case of shopping and recreation, the border may have a positive effect on the cognition; if quality or price differences are supposed, the spatial distribution of commerce is distorted. The spatial inequality of services can be explained by their non-traded (or at least less traded) characteristics. The border cut the personal contacts due to communication problems (including eventual difference in language). If we are thinking about a whole border region, it is natural that the personal contacts decrease with the geographical distance, but without borders this decrease would be continuous.

To map the perception of these objects and elements by the border zone residents, we applied a questionnaire of 25 questions about their perceptions, opinion, facts and intentions. The first wave of the research was executed in 2003 around Hungary at all 7 border sections within 30 km distance of the international border. We could fill in 1995 filled questionnaires on both sides of the border. The main results of this surveys was summarized in a previous article (Székely-Kotosz, 2005)

The new wave was launched in 2016, first with a pilot study on the Hungarian-Serbian and Hungarian-Romanian sections, where 153 questionnaires were filled in.

#### Figure 5: Spatial cognition in a border region



#### 3. Comparative analysis of the questionnaires

In this paper, we focus on the special last question of the questionnaire: *What do you mean the border? Draw it.* This question opens the possibility to analyze which theoretical elements are present in people's mind, which objects and flows are determinant in their perception. However, analysis of picture created by the respondents of the questionnaire is more complex. They vary by their elaborateness (including just a flag or a line, but also more than 40 elements). Sometimes it is hard to identify what is on the drawing, and we should consider that mapping flows is always more complicated than simple objects. Thereby, classification of mental representation is not clean-cut, sometimes it is subject to the discretion of the analyst. This is the reason why we use just approximate distributions.

The study realized in 2016 suggests the lack of substantial changes in mental perception of borders. Among the total mental maps (=drawings) the incidence rate of the drawings with fence or walls has been doubled.

Туре	2003	2016
Border crossing / control point	20%	20%
Classical mental map (residence and the border in space)	20%	15%
Separating line	10%	15%
Boundary stone	10%	0%
Fence or wall	20%	40%
Sections specific phenomena (petrol tourism, Danube, new bridge, etc.)	20%	10%

Table 1: Typology of drawings and approximate distribution

Source: The author's calculation.

### Conclusion

After analyzing drawings, we can conclude that the cognitive difference in time is proved. While generally a significant improvement of the perception of the border cannot be shown, typically first and second stage (dysfunction or asymmetry) situations are expressed; the impact of the fence is quite clear: the border is mentally more closed. The asymmetry can be caught through the detailedness, drawings are more detailed in the home country side. It means that van Houtum's theory is also proved.

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