

LANDSCAPE ARCHITECTURE AND DECISION SUPPORTING SYSTEMS
DOCTORAL PROGRAMME



Theses in the PhD thesis on

**INNOVATION, NETWORKS, AND HUMAN RESOURCE IN
RURAL DEVELOPMENT**

by

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1. ANTECEDENTS, OBJECTIVES

The theme of my thesis is the role of innovation and the innovative person in rural development. It has been observed for a long time that some regions develop at a remarkable pace, whereas others seem reluctant to get into motion and progress despite the relatively significant central efforts. For a long time it seemed impossible to explain why regions showing dynamic growth spread sporadically on the map, “like the pattern on panther’s skin”, as Murdoch (2000) claims. In the beginning agricultural economists would suggest the importance of habitat and other natural factors, being agriculture is the main stay of rural economy. Porter (1998) explained that economic sectors get settled in clusters. Murdoch (2000) highlighted the role of economic networks in the development of regions, which took the seat of the networks formed by the one-time (agricultural-) relations. Barabási’s study gave a boost to the examination of networks that lace our world, in the light of which even regional development too is worth studying. Bourdieu (1998) claims it is the sort of social capital that determines economic expansion too. At the same time innovation researchers established that innovation materialize in nodes in both space and time. They classify regions in terms of innovativity. If we explore the factors that form and influence innovativity in regions, then perhaps we can get closer to the very causes that can make a region progress or stagnate.

1.1. My thesis endeavours to answer the following questions:

- What differentiates dynamically growing small regions scattered among rural regions from other small regions that stagnate or show less dynamical progress? What are the factors in the rural society, geography, and economy that can accelerate development in a certain region?
- Does rural innovation differ from the generally accepted concept of innovation? Is it possible that in the country an uncommon and slightly different concept that applies to the special rural features of innovation should be used?
- Why do rural areas show less innovativity in surveys? Does the method of survey have anything to do with the rurality’s limited innovativity?
- Which persons, social groups are carriers of innovation in the rural areas? What are the special characteristics that feature the innovative person?

1.2. Structure of the thesis

My thesis is structured in accordance with the subject-matter discussed; following the chapter introducing the methodology applied there are three major sections. The first deals with *innovation*, its nature, features, spreading, methods of measurement, and the innovative person. Furthermore it construes innovativity of regions, the difficulties to measure it, and the problem of distinguishing it from competitiveness of regions. The second major section focuses on *the rurality*, rural development, and rural society; their features that facilitate or hinder innovation. In this section rural development programmes and their influences on innovation are described; the European Union's LEADER programme, setting innovativity as precondition to supported projects, is given detailed research. The third section treats *networks* and network approach that influence progress in regions; special attention is given to collect the elements of networks and borders lacing rurality and influencing the spread of innovation. New and novel results, conclusions, literature, and appendices are introduced to conclude the thesis.

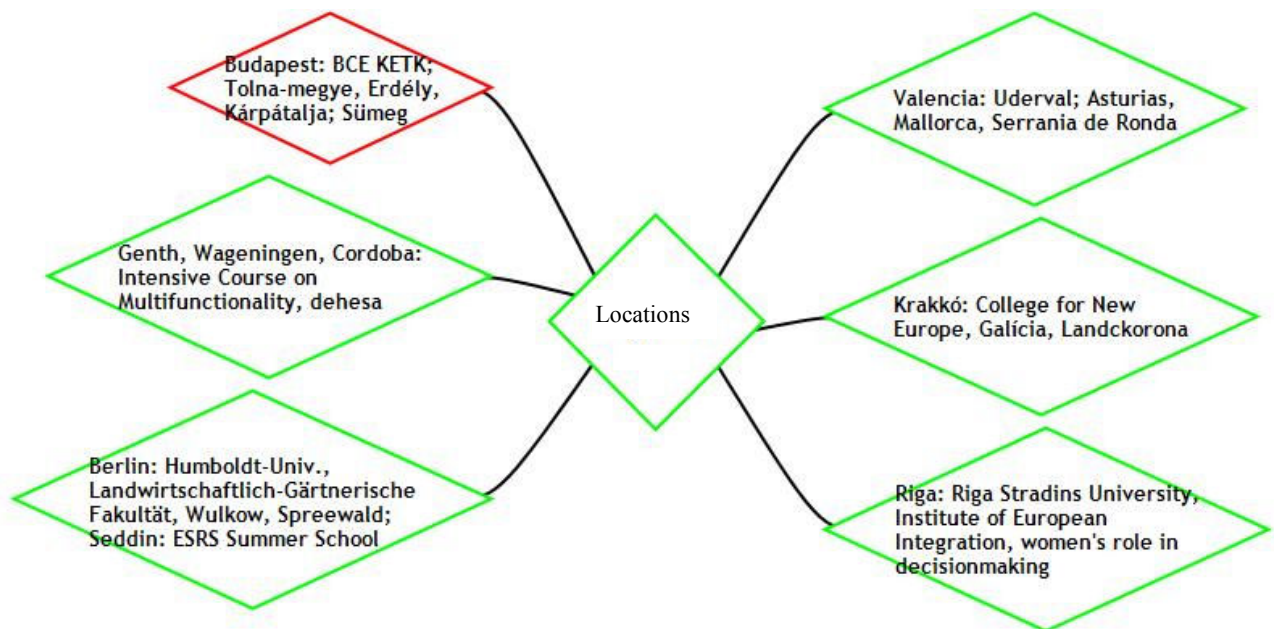


Figure 1: Study locations

2. METHODOLOGY

The methods applied to write this thesis and to collect the knowledge required were drawn mostly from the toolkit of rural development and community development. They are divided into three groups:

- *Techniques to collect knowledge.* For the most part they are conventional qualitative methods: desk research, participative observation, case studies and conducting semi-structured interviews. Furthermore, an uncommon and rather pioneering technique of exciting nature was also used: cognitive mapping.
- *Techniques to collect knowledge, which, at the same time intervene in the process studied.* This group consists of action research (fairly common in rural development's toolkit) and participatory video; the latter one is a technique less common and only in experimental phase in Hungary.
- *Techniques to systemize, process, and present knowledge.* They were applied in the last phase in writing the thesis in order to present the knowledge obtained in the course of my research in a systemized, structured, and clear form; to achieve this aim so-called mind maps were used.

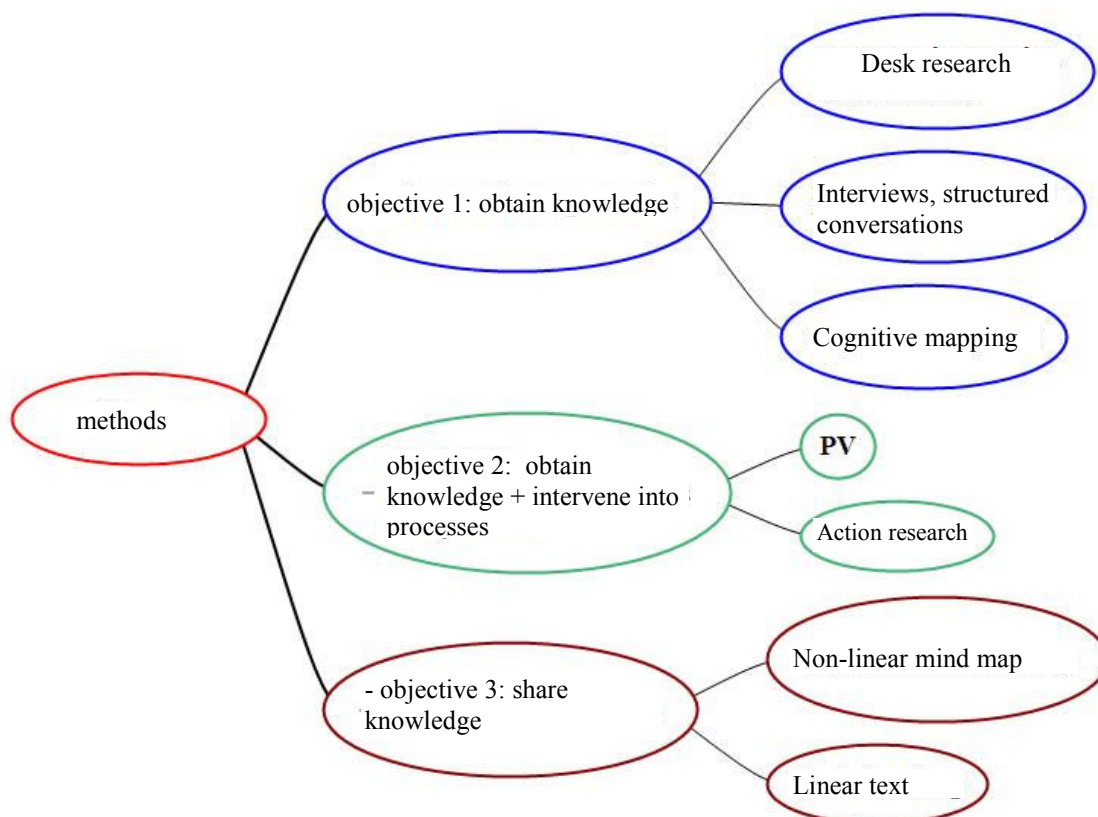


Figure 2: Mind-map of methods applied in the thesis.

3. RESULTS

The theme of my thesis, that is the role of innovation and the innovative person in rural development is the borderland among economic research, rural research, and mathematics. The thesis just superficially suggests that key concepts (innovation, change agent, networking, etc.) used in economic research can be applied to rural economy as well. Rural innovation as well as the role of innovation in rural development is such a complicated matter, which needs further research to settle and reassure. In addition, it has practical benefits: innovation, among LEADER's principles, is the most difficult to interpret clearly, hence is the concept most widely misunderstood by the local action groups. This uncertainty objects the principles of "transparency and accountability" to implement and is the weak point in project evaluations, because the question of which project may be regarded innovative is not defined centrally.

The various tools (participatory observation, participatory video, etc.) of qualitative methodology are of overriding importance in rural research, whereas innovation research mostly applies quantitative tools (such as measuring and modelling factors of innovativity, etc.). I do not believe quantitative tools should be applied in rural research, but at the same time would expect qualitative tools (the use of cognitive maps to explore relationships within a company), if introduced into innovativity research, could open new prospects and result in new conclusions in economic research.

You may not study rural society if detached from its history. Being an active player in rural development myself the locals' passive attitude, resistance to changes, floods of complaints, and seeming despond that looked like a wall impossible to tear down gave me a plenty to think about. Since I have been knowingly trying to explore the very causes in the history of rural society, I have a much better understanding of their attitude. I came to realize that not only the events took place in the life of today's generations, but also other ones happened well before. In order to find the elements (persons, families) responsive to changes in rural society, I needed to make the typology of my own village community. Finally, I managed to divide the progressive and the regressive.

As a matter of fact studies on economic networks [e.g. Murdoch (2000) on economic networks; Nemes (1996) on social networks, Ray (2001) on rural development networks, etc.], precede researches conducted on rural networks, but I have not read any studies that would present the interlinked system of those networks. However, the perception that every network is interconnected

to one another has significant consequences. When an institution in the country is closed down, it does not merely mean some employments are terminated; in fact it affects road traffic, social relationships, etc. Therefore rural institutions must be operated even at cost rates higher than those in urban zones. Since there are few institutions left in small townships, the most important one is the local school. The school is the key to all; settlements where children cannot go to school under reasonable conditions are not suitable for young families to live in. Although remote work (home-based work), flexible working hours, and the large number of passenger cars mobilize and enable parents to commute, children are in need of school-bus or parents to visit distant institutions.

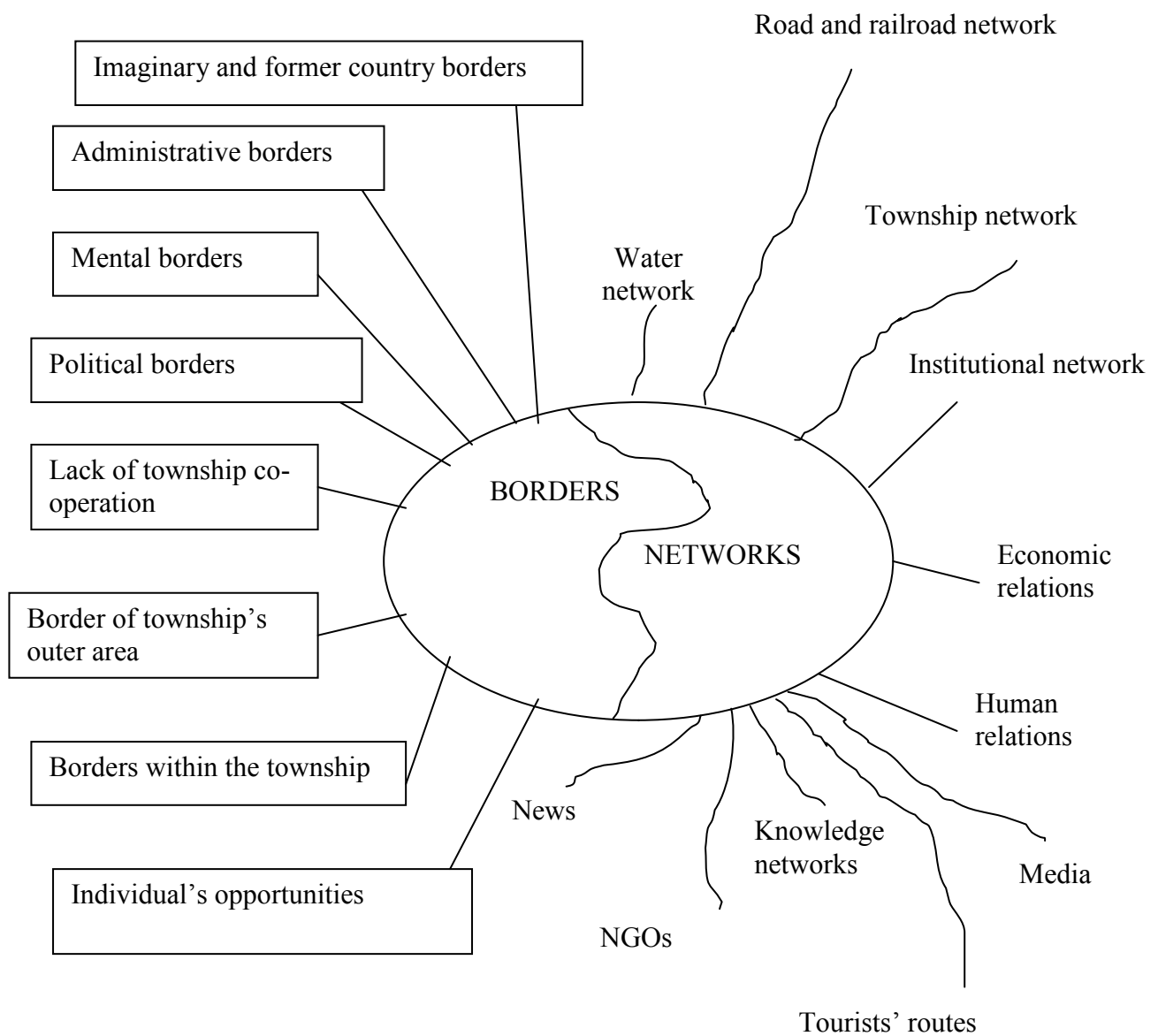


Figure 3: The complicate system of rural networks and borders.

Many have studied the role and influence of frontiers or one-time frontiers in the today's life of a region, but hardly any discusses many other borders of different kind lace the rural areas. Cultural and religious differences separate even adjacent townships, there are no train services on the railway where one should go to work, and there is no bridge on the river to get to the city lying only in a few hundred meters on the other side. In the town hall they do not photocopy the documents of the gipsy association under foundation for the gipsy men; when some members of the association buy paint and brush and step-ladder to paint one of the rooms in the society centre at a time previously fixed with the mayor, then the mayor sends a word he cannot come to open the centre for he has gone to pick the cherry. At the same time the man, who organizes gipsy community day in the village, in the absence of his brother cannot enter his brother's house with his sister-in-law also involved in organization to talk about the programme, because locals will speak ill of them. For the outsider incomprehensible and tangled borders lace the country and beating the non-apparent, that is "mental borders" is far the most difficult.

In the light of the above my brief answer to the fundamental questions raised in my thesis is as follows:

1. Rural areas in our country are systems of networks and borders. The complicated systems made of networks and borders are typical of each area and affect the spread of innovation and either facilitate or hold back development. Networks lacing areas inhabited by man can be interpreted one by one (e.g. transportation, water network), but it seems more useful to analyse them together in groups. For instance, in the course of planning a network of settlements one should knowingly design the networks of green areas as well as transportation and water networks too. Networks include both "hard" (such as road network for transportation, networks of institutions or settlements) and "soft" networks (bus services running (or not running) regularly on public roads, the complicated network of human relationship, economic relations, and tourist routes). Nevertheless not only networks, but also borders influence the resulting changes and innovation. The word border here not only means apparent borders (frontiers of a country, count, settlement, etc.), but also mental limits and pressure deriving from social standards and expectations fighting against change, the limits of the individual's life opportunities, and the constrained opportunities originating from lack of willingness to co-operate. I reckon the system of networks and borders lacing rural areas is of crucial importance that could be decisive of defining the progress profile of a region.

2. In order to make innovativity of rural areas apparent innovation in the broadest term must be used. Actually, it is the oldest definition too, as Schumpeter claims; in his view any form of doing things in a different way in economic life shall be interpreted as innovation. To make in complete I would add that in rural areas innovation can be active and passive too: discontinuing any unquestionable activity (for economic reasons) integrated in any place, community, or company may also be deemed innovation; however, apart from Schumpeter's, this statement cannot be translated into any other exhaustive definition.

3. In most surveys on innovation rural areas, when compared to urban zones, seem less innovative. For the most part the reason, among many others, for such findings is that innovation in those surveys is usually interpreted under too narrow term and most surveys leave out agricultural enterprises out of the sphere of respondents, as if an agricultural plant could not operate innovatively. Certainly, it is probably true that rural areas are less willing to change and are less innovative, but the method those surveys apply further reinforces assumption. It fails to consider some particular features of innovation such as discontinuing an activity or failure to shift to "modern farming" (biofarming or preserving conventional working methods). In fact, there are innovations that do not qualify development in the conventional way, as they are valued for everybody else has given them up.

4. In my experience rural development manager has crucial role in catalysing and setting social-economic changes in motion. In my perception rural development managers, often settled from elsewhere, are called "carpet-baggers", which is in accordance with the finding explored in the literature on innovation, that is the people who immigrate into a community and are loosely related to the locals are often carriers of innovation. In the literature rural development managers are referred to as change agents. The local society and its openness to receive the "strange", the creative, or just the "different" also influence the spread of innovation.

5. NEW AND NOVEL SCIENTIFIC RESULTS

In addition to answering my fundamental questions the following statements of scientific value have been established:

- As the system of networks and borders lacing rural areas is typical of the region in concern, differs place by place, and changes slowly in time, therefore it is a key (facilitating or objecting) factor in determining development in a region.
- Participatory video, (PV) is an outstanding technique in rural research to stir up a community, to facilitate participation in the community, and to stimulate thinking about the how to improve the community's status. Primarily participatory video is a great tool to overcome the mental borders objecting co-operation and interpersonal communication.
- Compared to other networks rural schools are extremely important to sustain the networks essential for rural life: the place of the local school determines the time and direction of passenger car traffic, which influences public road network; it forms friendships among students of the same age-group, which may turn into economic relations later; it establishes/maintains parental relationships too. The school, as a member of the school network, represents the township to the outer world and cherishes relationships through competitions and twin-school partnership; it is often carrier of novelties (e.g. in small settlements it was the first place with access to the Internet); it employs and concentrates intellectuals, accommodates cultural events, etc.
- Rural development manager often functions as an engine that powers development and initiates changes in a region. Members of rural development manager's network encounter positive examples worth following and obtain international experiences that urge and encourage them to make propositions that might as well break local conventions (mental borders).
- It is not merely transmigration and desolation the rural Hungary is suffering from; in fact, it is rather an exchange of population: wealthy families leaving the town first push poorer families out of villages surrounding the town, and later other regions at larger distances also "get full". The well-to-do can afford to live in villages short of services (yet healthy and beautiful). Those who are well off shop in and educate their children in the town. Native and poorer village-dwellers cannot afford to keep their houses with value increased on account of immigrants and do suffer from shortage of local services, therefore they move to (cheaper) housing estates or regions lagging behind. At the same time the poor urban family also relocate to areas lagging behind.

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