

**UNIVERSITY OF PÉCS**

Earth Sciences Doctoral School

Earth Sciences Programme

**Country image in our mind**

**The content Elements of Cognitive maps  
of Pupils Aged 14-16 Years on Hunga-  
ry's Neighbouring Countries**

PhD Thesis

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**PÉCS, 2007**

**The title of Doctoral Programme:** Earth Sciences Doctoral Programme

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## I. INTRODUCTION

Cognitive maps are the conscious means of the world's cognition and its gathering information. Mental space is the individual interpretation of the objective geographical space. Its conscious appearance, reflection is the cognitive map with several individual elements (TOLMAN, E. C. 1948). The words indicating the content elements of cognitive maps fix countries in our mind and by them the conscious images can be shown for the external world, as well.

The cognitive map are continuously formed, changed as the individual experiences, information are changing about the objective space and also his/her individual relation to the world. Man of our age can hear, see some new pieces of information about his or her geographical environment in narrow or wide sense day by day which may also happen by personal experiences. The geographical environment is dynamically changing, not only at the level of a person but also objectively; we live the regions' world and by this we have to make us understand the new space dimensions, to orientate surely, evaluate, decide, act in them.

The geographical environment contains several elements where both the natural and the social laws come into force. The objective space includes subjective elements from the point of human team or an individual; it is narrowing continuously and becoming more personal. The personalized space, the mental one is based on the objective space, its form structure, content elements may much differ from it as well, and they depend on the given person's thinking, knowledge and the individual experiences. Everybody has a personal, mental map about his/ her own, direct and wider geographical environment showing a how an individual interprets the geographical environment (TOLMAN, E. C. 1948).

Orientation in space, thinking are gradually developing and together with them the cognitive image of our spatial environment as well. The cognitive images in ourselves are fundamentally schemata, the cognitive mapping is modelling process through several stages (DOWNS, R., STEA, D. 1973). This process is based on some pieces of information originating from many sources, personal experiences, media, education, their processing is in connection with the person's social-cultural world; the same spatial environment is

interpreted by individuals of different cultural environment dissimilarly.

The parts of cognitive maps are also the drawing, mapping elements, the mental maps (LYNCH, K. 1960), which are some important parts of our knowledge, and are used without stopping in our every day orientation. Many international (LYNCH, K. 1960, HOLAHAN C. J., ORLEANS 1982) and Hungarian (CSÉFALVAY Z. 1994, TÍMÁR, J. 1994, BAJMÓCY, P.- KISS, J. 1996, MICHALKÓ, G. 1998, MESTER, T. 2005) examinations prove their importance in inquiry and the visualisation of the geographical environment turned to be personal.

The cognitive maps are the parts of all our knowledge thus also those of the pupils aged 14-16 years. There have been few examinations concerning this age-group (FARSANG, A.- JÓRI, J. 1999, MAKÁDI M. 2003), therefore I aimed to deal with the cognitive maps of pupils aged 14-16 years.

## II. OBJECTIVES

The purpose of my research is to discover the content of cognitive maps of pupils aged 14-16 years on Hungary's neighbouring countries, to help recognize the image formed by this age-group about its geographical environment and to promote geography education to be able to satisfy its task the highest possible way.

In the paper I will seek the answer as follows:

- What kind of cognitive map do the pupils aged 14-16 years have on Hungary's neighbouring countries?
- What sort of information sources can be seen as an influence on the pupils' cognitive country images?
- Are the country images timeless?

Some further researching aims:

- To assemble a list of country characteristics from the cognitive elements of the neighbouring countries in order to promote some additional researching work.
- To evaluate the target group (the pupils aged 14-16 years) results comparing with the control group.
- Comparison of the examination results with the requirements of the subject Earth and our Environment.

Presentation of the results are multilevelled: the analysis of the target group according to years on basis of the regions, the pupils with their own travelling experiences or without and the size of settlements. I am going to show the change of country images those plasticity and the effect of different information sources. The interpretation and the evaluation of results are helped by the survey with control groups which is also new in this form.

As I think the importance and the timeliness of cognitive maps is possible and with the help of geography subject also necessary to create more comprehensive country images. In twenty first century we build up a common Europe with collaboration in cross-border dimensions. Its requires a more exact knowledge of one another the recognition, the appreciation, the honour of our values. This paper, which will be presented, helps for this work according to my aims and hopes mainly.

### III. METHODS

The research methods were as follow: the questionnaire survey, the text analysis made by the author and based on database, its analysis, evaluation and finding the links between results.

The self-made questionnaire consists of 4 unnumbered and 12 numbered, open questions providing a wide answering possibilities. Their use can be explained that my intention was to assemble a quality-list characterizing the different countries through the age-group concerned.

The questionnaire comprised a sheet of paper showing Hungary's outline map in order to be able to draw our neighbours without aids and then they have to write in the 5 words reminding them of given country.

While the private experiences are very important in the cognitive mapping, one of standpoints to select a participant was to live next to a neighbouring country; the other standpoint was not to live in a settlement, county neighbouring with any country. Another standpoint was to take part in our survey living in settlements of various types, and so the pupils of villages, cities, county-seats, capital attending schools filled in the forms.

The pupils of target group belong to some various school-types: thus we can have pupils of 8<sup>th</sup> class comprising students of elementary school and of grammar school of 8 classes, and we can find pupils in 9<sup>th</sup> and 10<sup>th</sup> class together with kids of vocational secondary school and also pupils of 4 and 8 classed grammar school. Pupils of 8<sup>th</sup> class filled in questionnaires from every kind of settlements but the ones from higher classes originating from just the towns.

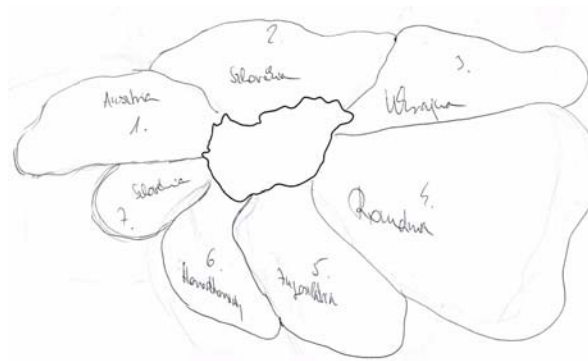
The questionnaire survey happened in spring of 2005. year, 926 questionnaires proved to be useable, this given the full pattern. The questionnaires were sent to the counties approximately in the same number, asking them to fill in similar number by the pupils of the 3 years. But this idea did not realize totally because 433 pupils of 8<sup>th</sup> class, 427 pupils of 9<sup>th</sup> class, and only 66 pupils of the 10<sup>th</sup> class are in the pattern. Since the teachers supervising survey chose the classes (presumably 'better performing ones') for completing the forms although the results do not have an influence on evaluation of special subject knowledge.

Because of better interpretation of the target group's results a control group has also been examined. College students and some working adults of different professions are the members having filled in questionnaire of same content. The pupils of 5<sup>th</sup> and 6<sup>th</sup> class did a different one. The latter ones are not members of the control group, their role is to show a situation before the geography subject learning by comparing the school-knowledge to it.

The data-processing, the results, the presentation of the cognitive country images happened on basis of several aspects:

- according to the answers given by the target group in the first place,
- according to the total answers of the target group,
- on basis of Budapest and each regions,
- considering the answers of pupils having visited or not the given country,
- as to the replies of the people living in the different settlements,
- the cognitive image of the control group as a whole and broken down by college students and working people.

Presentation of the results was demonstrated by written analysis and graphic method.



*Figure 1. Petal-like mental map  
Source: A pupil's drawing*

## IV. RESULTS

### *1. The mental maps of 14 to 16-year-pupils on Hungary's neighbours*

The country outline drawings of the pupils differs from the real ones on large scale. The various differences can be grouped, there are some similarities, apart from their individual features, in the same group as well.

- The good country outline reflects the real shape with just a little deviation not disturbing the country character. 7,2% of the pupils were drawing a good mental map.
- Approximately good means having a greater difference from the real shape but it resembles properly. 17% of the mental maps are as forementioned.
- In case of the petal-like drawing the countries can be found around Hungary being the middle of a flower and their shape, size are almost the same, stylized. The 'petal-like' nomination can be considered to be new the earlier use of this is not known in special literature. 56% of the mental maps can be found in this category.
- The drawing initiatives, the untouched sheets got to the not drawn category. 19,8% of the pupils did not draw any map.

The results of the control group: 14% of the college students were drawing a mental map of good category, 51% of these did not draw. 30% of the working people drew good maps, 50% of them 'petal-like' ones, 20% did not draw.

The results of the target-group approach the working people. About the three fourth of pupils indicated total countries well. In the faulty maps nearly every error connected with the onetime Yugoslavia, as well as they changed Slovenia and Slovakia.

### *2. Visits to the neighbouring countries*

The most important information source of cognitive maps is a personal experience. The great part of the target group pupils has already



been to our neighbours, at least 80% of all the classes' pupils. Most pupils went to Austria, Croatia, fewest ones were in Ukraine. The members' of the control group also were in Hungary's neighbouring countries in high proportion, in Austria every one of them.

The target group in travelling order according to regions:

- West-Transdanubia: Austria, Croatia, Slovenia, Slovakia, Romania, Serbia, Ukraine.
- Central-Transdanubia: Austria, Slovakia, Croatia, Romania, Slovenia, Serbia, Ukraine.
- South-Transdanubia: Austria, Croatia, Slovenia, Romania, Serbia, Slovakia, Ukraine.
- South-Lowland: Austria, Serbia, Romania-Croatia, Slovakia, Slovenia, Ukraine.
- North-Lowland: Slovakia, Austria, Ukraine-Romania, Croatia, Slovenia, Serbia.
- North-Hungary: Slovakia, Austria, Romania, Croatia, Serbia, Slovenia, Ukraine.
- Central-Hungary: Slovakia, Austria, Croatia, Romania, Ukraine, Serbia, Slovenia.
- Budapest: Austria, Slovakia, Croatia, Romania, Slovenia, Serbia, Ukraine.

Examining attendance in regions the geographical nearness seems to be a significant factor but not primarily. The travelling purpose is determining and if it can be realized nearby, then distance is an important factor e.g. the West-Transdanubian people are skiing in Austria, the North-Hungarian ones in Slovakia.

### *3. The contents of mental maps on Austria*

The leading element of Austria's country image is Vienna and it is followed by skiing, then the Alps, mountains, purchase, German, beautiful landscape, richness, advanced stage. The picture elements originate from a personal experience above all, they are all connected with German school studies as well; the country image was decisively formed by personal space usage. This is also proven by the phrases in the other category e.g. cleanness, Milka, calm people.

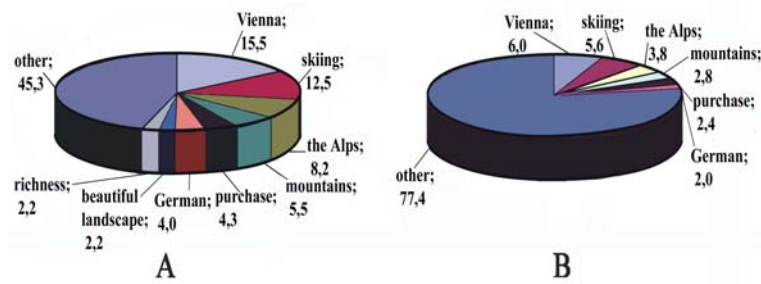


Figure 2. The cognitive country map of Austria on the basis of the answers given in the first place/A/ and in the total places /B/, %/

The elements of the cognitive country image in frequency order according to regions:

- West-Transdanubia. skiing, purchasing, Vienna, mountains, the Alps.
- Central-Transdanubia: Vienna, the Alps, German, skiing, beautiful landscape, richness.
- South-Transdanubia: Vienna, skiing, the Alps, mountains, richness.
- South-Lowland: Vienna, skiing, the Alps, mountains, beautiful landscape, advanced stage.
- North-Lowland: skiing, Vienna, mountains, German, beautiful landscape, advanced stage.
- Central-Hungary: Vienna, skiing, mountains, purchasing, the Alps, richness, excursion.
- Budapest. Vienna, skiing, German, richness, mountains, Lake Fertő.

The cognitive country image of the pupils having been to Austria or not does not show any difference, similar to the recognised, it is characteristic for dwellers of the different settlements. The personal experience is determining, the people having not been to the country the school knowledge appears. The individual country images, proceeding towards the smaller settlements, consist of ever-decreasing knowledge. The country images of the control group build up of nearly the same elements, their ratio is similar, reflecting an experience of their own.

#### 4. The cognitive country image of Slovakia

Slovakia is the country of skiing, mountains, Tatra, Bratislava and Highlands. The travelling purposes are mainly skiing purchasing but also theatre and relative visiting excursion. The individual experience and the learnt knowledge well complementing each other, provide the cognitive picture.

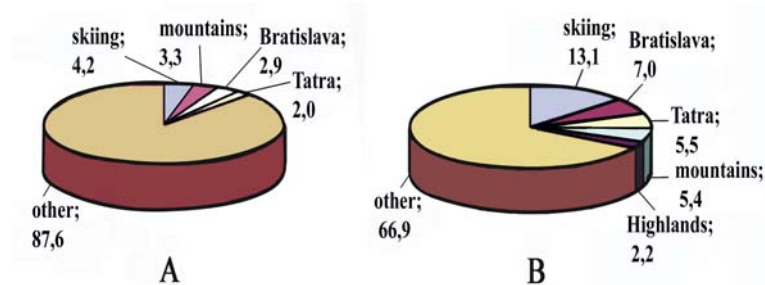


Figure 3. The cognitive country map of Slovakia on the basis of the answers given in the first place/A/ and in the total places /B/, %/

The elements of the cognitive images according to the regions in frequency order:

- West-Transdanubia: Bratislava, skiing, mountains, Tatra, Highland.
- Central-Transdanubia: Bratislava, Tatra, skiing, mountains.
- South-Transdanubia: skiing, mountains, Bratislava, Hungarians, Esztergom-bridge.
- North-Lowland: skiing, mountains, Tatra, Bratislava.
- North-Hungary: Tatra, skiing, cheap, forest, Bratislava.
- Central-Hungary: skiing, Bratislava, Tatra, Highland, mountain.
- Budapest. skiing, mountains, excursion, Tatra, Highland, one-time Hungarian territory.

The country image of the people having been to Slovakia is dominated by skiing, mountains and Bratislava, the order is also the same who have not visited Slovakia before but in proportions much less than the previous ones. The town dwellers' country image is nearly the same as in the total pattern, and it consists of less elements

than in villages. An important element of the rural dwellers' cognitive image is the phrase 'Hungarian' which is found in proper rate just in case of the group having not gone to Slovakia.

The country image with similar content of the college students and of the working people shows some personal experiences and besides this the historic past, the actual events are also present more powerfully than at the pupils.

### 5. The cognitive country image of Ukraine

The determinants of Ukraine's country image are Chernobil-atomic blast-nuclear catastrophe in outstandingly high proportion. For many pupils poverty, mafia and Kiev represent the country. The image is one-sided, including few elements without personal experiences, indicates media influences well.

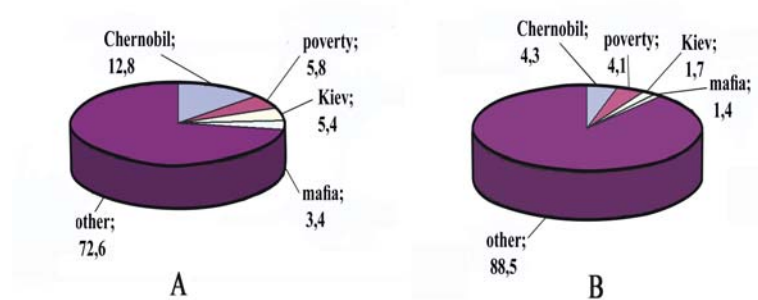


Figure 4. The cognitive country image of Ukraine on the basis of the answers given the first place/A/ and in the total places/B/, %/

The elements of cognitive images according to regions in frequency order:

- West-Transdanubia: Chernobil, poverty, Kiev, mafia, cheap purchase.
- Central-Transdanubia: Chernobil, Kiev, mafia, smuggling, poverty.
- South-Transdanubia: poverty, Chernobil, Kiev, Sowietunion.

- South-Lowland: Chernobil, Kiev, mafia, poverty, great state.
- North-Lowland: cheap petrol, cheap purchase, poverty, Chernobil, smuggling.
- North-Hungary: Chernobil, cheap purchase, crime, great state, poverty, Sowietunion, Sub-Carpathia.
- Central-Hungary: poverty, Sub-Carpathia, Kiev, mafia, cheap petrol, Chernobil, Sowietunion.
- Budapest: Chernobil, poverty, underdeveloped, environment-pollution, great state.

The country image of the people having been to Ukraine is the same as their own experiences in connection with purchasing. The cognitive image of those living in any type of settlements is uniplanar, in case of the rural dwellers there used to be just often an element. The country image of the adult groups is more colourful shows more features; the target group shows the greatest similarity with the working people's country image.

#### *6. The cognitive country image of Romania*

The pupils' individual cognitive maps show that Romania is nearly completely the same as Transylvania. The leading element of the country image is Transylvania; poverty, Hungarians and Bucharest join with this' in the first place, on the basis of all the answers as well. A personal experience is indicated by disordered, bad roads, Székely gate belonging to the other elements, but stereotypes are also found here e.g. Drakula.

The elements of the cognitive images according to the regions in frequency order:

- West-Transdanubia: Transylvania, poverty, Hungarians, underdeveloped, Bucharest.
- Central-Transdanubia: Transylvania, poverty, Hungarians, Roma, Dacia, Bucharest.
- South-Transdanubia: poverty, Transylvania, Hungarians, underdeveloped, Bucharest.
- South-Lowland: Transylvania, poverty, Bucharest, Hungarians, Roma, Dacia.

- North-Lowland: Transylvania, poverty, mountains, Roma, Dacia, Székely.
- North-Hungary: Transylvania, poverty, Hungarians, Székely, Roma, Dacia.
- Central-Hungary: Transylvania, Bucharest, poverty, Hungarians, mountains.
- Budapest: poverty, Transylvania, Roma, Hungarian, Székely.

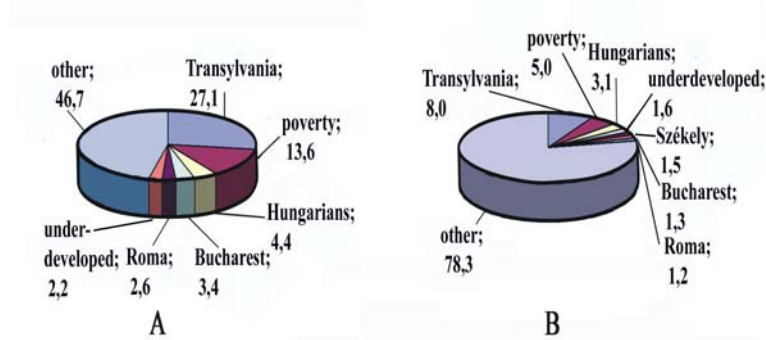


Figure 5. The cognitive country image of Romania on the basis of the answer given in the first place/A/ and in the total places/B/, %/

The country image of pupils having been to Romania or not is the same as above, it does not show any substantial difference. In case of the latter ones the school knowledge e.g. mining, mechanical engineering as expressions.

The cognitive map of the people living in towns is of Transylvanian center, geographical environment, mountains are drawn up. That of the inhabitants living in villages is determined by poverty-underdeveloped doublets, the words regarding Hungarians are also found, but the naming of Transylvania is missing in an expressed proportion, which can only be found here.

It is worth taking notice of two things: the geographical space forming Romania is the same as Transylvania, Bucharest is known but is floating without link in space. The other note is that the whole target group depicts poverty powerfully. By reason of talks and television news, programmes we can make the following things probable: news in connection with Hungarians' difficulties, film about poor

children, hard rural life can be seen on television. Cultural values, traditions involved in them can hardly be seen by the kids aged 14-16 years, their influence is rather depressing. For adults Transylvania, Hungarians, poverty provide the character of image.

### 7. The cognitive country image of Serbia

War, poverty, Yugoslavia and Belgrade mean Serbia for the pupils. Arranged knowledge, media and school are the primary sources. The other category already indicates an individual experience as well e.g. funny language, purchase, market words.

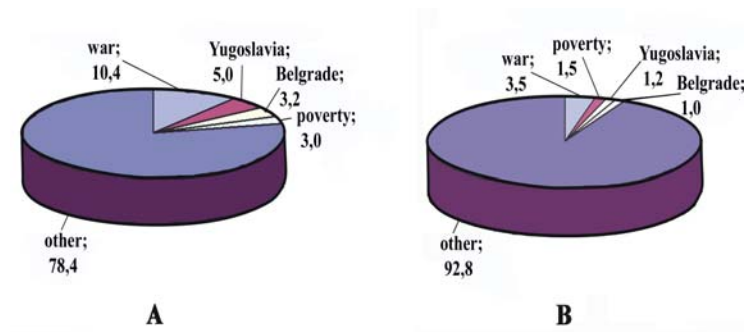


Figure 6. The cognitive country image of Serbia on the basis of the answers given in the first place/A/ and in the total places/B/, %/

The elements of cognitive images according to the regions in frequency order:

- West-Transdanubia: war, Yugoslavia, Belgrade, poverty, water-polo.
- Central-Transdanubia: war, Belgrade, Yugoslavia, poverty, anti-Hungarian, underdeveloped.
- South-Transdanubia: war, violence, Szabadka, purchase, Yugoslavia.
- South-Lowland : Szabadka, purchase, war, poverty, Yugoslavia, underdeveloped, cheap commodity.
- North-Lowland: war, Belgrade, anti-Hungarian, new state.

- North-Hungary: war, Yugoslavia, Belgrade, underdeveloped, Hungarians, Hungarian-beating, poverty.
- Central-Hungary: war, Belgrade, Yugoslavia, anti-Hungarian, South-Land.
- Budapest: war, poverty, underdeveloped, Yugoslavia, water-polo, Hungarian-beating, Voivodship.

In the country-image of people having been to Serbia the words war, Szabadka dominate, then sea follows, poverty is of insignificant proportion. The people having not been to the country emphasize war then write geographical names, all of them are subject requirements. In the cognitive image living in different settlements theory the words war Yugoslavia and anti-Hungarian are determining. The personal experience is in small extent, the number of elements is also decreasing proceeding towards the smaller settlement.

In case of the college students war is exclusive, some important words are yet: poverty, violence, at the working people is war although in smaller ratio. Their country image is more diversified: Belgrade, Yugoslavia, Voivodship, rioting and Gavrilo Princip are in mostly the same measure.

#### 8. The cognitive country image of Croatia

Croatia is the same as sea, holiday-making, the country images of the different groups are very similar.

The geographical names are in connection with sea, travelling there decisively. The mind images consist of few elements, the unique country where just 8 features are in a higher ratio than 1%.

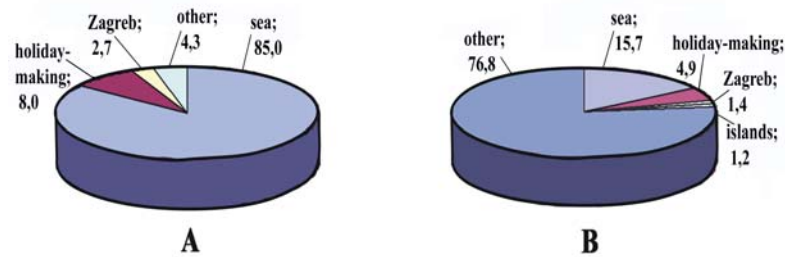


Figure 7. The cognitive image of Croatia on the basis of answers given in the first place /A/ and in the total places /B/, /%/'



The elements of cognitive images according to the regions in frequency order:

- West-Transdanubia: sea, holiday-making, islands, Zagreb, tourism, beautiful landscape, towns.
- Central-Transdanubia: sea, holiday-making, Zagreb, sunshine, beautiful landscape, towns.
- South-Transdanubia: sea, holiday-making, Zagreb.
- South-Lowland: sea, holiday-making.
- North-Lowland: sea, Zagreb, tourism, holiday-making, summer.
- North-Hungary: sea, holiday-making, Zagreb, islands, sunshine, beautiful landscape, towns.
- Central-Hungary: sea, holiday-making, sunshine, Zagreb, tourism.
- Budapest: sea, holiday-making, sunshine, summer, tourism.

### 9. The cognitive country image of Slovenia

The cognitive map of Slovenia is made up by personal experiences and subject knowledge and small country is being outlined with mountains, skiing and sea which is complemented by the capital, Ljubljana. The pupils have a little knowledge of the country, many of them wrote instead of features that they did not know.

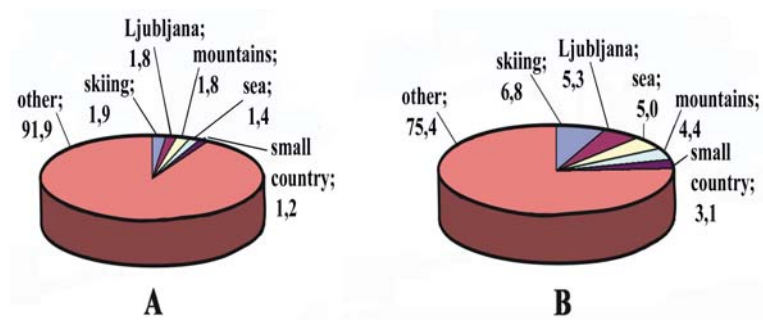


Figure 8. The cognitive country image of Slovenia on the basis of the answers given in the first place /A/ and in the total places /B/, /%/

The elements of the cognitive images according to the regions in frequency order:

- West-Transdanubia: sea, skiing, Ljubljana, mountains, small.
- Central-Transdanubia: sea, Ljubljana, mountains, small country, beautiful landscape.
- South-Transdanubia: small country, skiing, Ljubljana, mountains, sea.
- South-Lowland: skiing, Ljubljana, beautiful landscape, mountains, sea, developed.
- North-Lowland: skiing, mountains, sporting, Ljubljana, developed.
- North-Hungary: Ljubljana, sea, small country, developed, skiing, mountains, country.
- Central-Hungary: mountain, Ljubljana, skiing, sea, caves.
- Budapest: forests, skiing, mountains, small country, developed, holiday-making.

The people having been to Slovenia mark sea, mountains, skiing first of all, and their travelling aim is purchasing as well. Those having not been to the country identify it with Ljubljana and the sea, the inhabitants living in towns consider skiing and the sea the most significant character. The people living in villages do not write about skiing in their cognitive image. The rural population used the most characters, formed the most diversified picture. It can be explained not by the chancing tendency but many of them being interviewed live in neighbourhood of Slovenia.

The college students visualize Slovenia as the country of sea, tourism but capital and small country also appear. The working people identify it with sea and rich words, they wrote the most characters, chiefly on the basis personal experiences.

To summarize the cognitive images, we can state that the personal experience is a factor of the strongest influence and then information mediated by family members as acquaintances. These are the parts of cognitive image which is changing with their continuous increase. The effect of media is also strong, their information is building in the country image but their life is short. The school knowledge plays a smaller role than it can be expected by the pupils but it is more important generally for those having no personal experiences.

*10. The popularity of excursions and of longer stay in their neighbours and other European countries*

The cognitive maps exist in the form of opinions, stereotypes as well. The answers given to questions regarding travelling purposes reflect these, enlarge the country image.

From the target group most selected Croatia for outing, shorter stay, every one of them because of the sea. Then Austria follows, in summer the towns are travelling aims. In Romania, apart from Transylvania, many of them are curious about the other parts of the country as well. In Slovakia mountains and the castles, in Slovenia sights during travelling through are preferred to see. The least people are curious about Ukraine and Serbia, their aim is a relational visit and in Serbia the sea as well. It can be seen that no new elements did not appear compared to the known ones, content change did not happen.

The selection by widening to European measure, our neighbours are falling into background. The most chosen countries: Italy, France, Spain, Great-Britain, Greece. Croatia is in the 7<sup>th</sup> place, no other neighbours are in the first 10.

The countries are popular from several points of view, the attraction of the Mediterranean sea is the strongest but significant motivating factors are the cultural sights and language learning.

For longer stay with learning then work employing the most popular neighbour is Austria. Because of its developed situation, good earnings, living standard are the main attractive forces. Then Croatia follows, here relaxation and work do not separate in due measure.

By enlarging the choosing possibilities the order has changed: Great-Britain, France, Germany, Italy are the leading countries, with exception of the working people, where Austria displaced Germany. Good earnings, life-circumstances and language-knowledge are the determining points of view in selecting.

Romania, Ukraine, Serbia, Russia, Albania and Bulgaria are not popular in any case. The main reasons are few possibilities of work, salaries, under-development and worse circumstances. The pupils preferred the Hungarian schools to any other ones that's why they do not choose learning abroad.

### *11. Geographical knowledge in the cognitive country images*

The cognitive maps of pupils aged 14-16 years also contains geographical knowledge. The physical geographical concepts are professional, the pupils use them well, there is no quality difference between the groups. The social and political geographical concepts occur little for the learnt material and they are individually formulated; the school influence is weaker than desirable, stronger than any other information source's e.g. media's. The study of topographical knowledge shows that about half of all the elements applied in the pupils' maps is subject requirement, the rest reflect the travelling routes in many cases. The control groups designated much less geographical names in their maps, chiefly those being familiar on the basis of their journeys.

### *12. Summary*

Examining the cognitive and mental maps of the pupils aged 14-16 years on Hungary's neighbours many – sidedly, the following results were formed:

- the most characteristic form of the mental maps is petal-like.
- the country images contain many, general, stereotyped features.
- the main information source of cognitive images is a personal experience, then the information mediated by family members, acquaintances, then media and school knowledge are following.
- the first of all the personal experiences form the constant elements of cognitive images.
- the group of pupils and adults preserves the countries in their memory with similar expressions, stereotypes.
- the pupils when forming their country images use the geographical knowledge in small extent, the most from topographical knowledge.

The cognitive maps provide help to understand and interpret the spacial environment, that's why it is important for the pieces of information to be objective because the individuals draw up their own cognitive map from them. This requirement can be mostly fulfilled by school knowledge and learning. Apart from the modern,

individual abilities developing methods, enough learning time is necessary in other way more geography lessons to achieve our aims. The pupils country images their contents' usage can be significant in two fields: it may help the geography teaching and tourism by providing information.

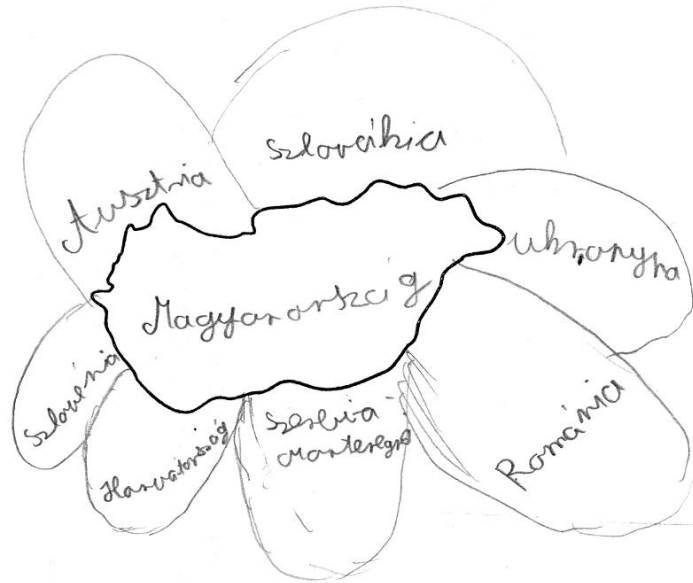


Figure 9. Petal-like mental map  
Source: A pupil's drawing

## **V. THE FURTHER DIRECTIONS OF THE RESEARCH**

The aim of my research was to discover and present the cognitive maps of 14-16 year old pupils on Hungary's neighbouring countries. This theme includes some additional opportunities which have not been the purposes of this paper.

- One of the most important advancing directions is to research changes of the pupils's country image. This also gives a chance of applying the country-list and furthermore its continuous updating.
- Two reasons for examining the country images changes can be given as follow: one of them is to return to test and the other is to research some new persons' cognitive image.
- Research of the country images's content elements may be extended to some other international regions, comprising Hungary as well, e.g. European Union.
- What is the image of Hungary like in the neighbouring countries' pupils' knowledge? This issue is also closely connection with research of this thesis which should be tested in two aspects: from the side of the Hungarian pupil and any pupil of the given country without considering the type of nationality.
- Some further studying the source of information being background of the country image's content elements and paying attention to its mainstream being knowledge originating from the school education. Its outstanding importance is to help the modern geography teaching through an appropriate feed-back.

## VI. PUBLICATION

### *The dissertation based on these publications*

**Lakotár K.** 2004: Bennünk élő szomszédaink - kognitív térképek tartalmi elemei a szomszéd országokról. Iskolakultúra, 11. szám, pp. 109-116.

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