

DOBÁK, JUDIT PHD

boldobak@uni-miskolc.hu

cultural anthropologist, university lecturer (University of Miskolc BTK AFTI)

The Mental Map of a Rural (workers') Housing Estate in Hungary

An Urban Anthropology Research



ABSTRACT

The results from two stages of a research project will be compared in this study. The research was conducted at a housing estate which used to belong to a characteristic element of the Borsod industrial region, the metallurgy in Diósgyőr. 20 years ago, when the research was done, it was also a methodological experiment. The goal of the research was to map and understand the complex lifestyle of the inhabitants of the colony mostly in the context of historical anthropology. Mental mapping was one of the research methods. Today, the research applies mental mapping as a central method and intends to reveal the social changes over time based on the information gathered in the previous research. The architectural environment and permanent spatial system of the housing estate makes it a suitable research site for fine tuning mental maps and drawing more detailed ones. The present research aims to contribute to this by including the time factor.

KEYWORDS

rural workers, space usage, mental map, social hierarchy, masculine and feminine space, public and private space.

DOI 10.14232/belv.2018.4.9

<https://doi.org/10.14232/belv.2018.4.9>

Cikkre való hivatkozás / How to cite this article: Dobák, Judit (2018): The Mental Map of a Rural (workers') Housing Estate in Hungary. An Urban Anthropology Research. *Belvedere Meridionale* vol. 30. no. 4. 141–159. pp.

ISSN 1419-0222 (print)

ISSN 2064-5929 (online, pdf)

(Creative Commons) Nevezd meg! – Így add tovább! 4.0 (CC BY-SA 4.0)

(Creative Commons) Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)

www.belvedere-meridionale.hu

Social science publications more and more often report about research projects where the researchers work with mental maps. This tendency will slowly make it possible for us to create more coherent methodological suggestions and discover the use of mental maps in a variety of new situations through the accumulated experience and examples. The present research report intends to contribute to the above.

A workers' colony of a country town in Hungary provides the location for the research. The surveyed urban space can be considered a typical one for the reason that it reflects the economic and social problems which have characteristically followed the closure of heavy industry plants all over Europe: (permanent) unemployment; the lack of rehabilitation of brownfield sites and the need for it; the "slumization" of city districts; internal tension developing in these communities and their generally negative reputation. In the same time the urban space in focus is unique in the sense that the physical environment (the dwellings, the overall spatial structure, the location of old outbuildings, the streets, city squares) of the 150-year-old Diósgyőr-vasgyár workers' colony has not changed due to the lack of rehabilitation. These features make the place suitable for conducting a longitudinal research by the means of a simple method: getting mental maps drawn.

The model colony built for the metallurgy workers of the Diósgyőr Ironworks differs from the building of other workers' dwellings in the country from many aspects. One of these aspects is that it was an empty, marshy plot where the construction of the factory started, far from Miskolc and Diósgyőr, then two separate communities. This aspect made the unique construction solutions possible; the architects were not constrained by existing spatial features when planning. The second important aspect is that the constructions were publicly financed, which on one hand played an important role in the identity of the generations who worked here and on the other hand it meant a more stable workplace for them compared to the market dependent private sector since it was centrally directed and financed accordingly. The third aspect is its rural location which made a difference in terms of the contrast between the capital and the rural cities and its distance from Budapest (200 kilometres). These three unique factors together created a non-typical workers' colony in Diósgyőr. As a result of the constructions, which took a start in 1868, a housing estate for 9000 people were built within 30 years that followed.

As there was no previous settlement on the site, the Colony¹ was designed to be self-sustainable. For this the designers had to create a complex, fully functioning city plan which would encourage workers to be loyal to the factory, also listed as a strategic centre, to satisfy their needs and to make them settle for long-term here. The consequences of this idea can still be spotted in the colony today.

The residence and public buildings were constructed at a very high quality compared to the standards of the era. A sewer system was built, the streets were lit by electric lights and they started to equip the district with a great variety of functions from the very first years i.e. schools, shops, a steam-bath, a hospital, a slaughterhouse, a community bakery, a post office, a pharmacy, a restaurant, community spaces and a church were all built in the years to come. The houses were designed according to the different job positions. Certain types of houses were built in each street, so people who were on the same level in the company hierarchy lived in the same street. (OLAJOS 1998. 39–50.).

¹ The housing estate had various names: "Gyári telep", "Telep", "Gyarmat", the name "kolónia" was only used after 1945. The first building plans used the expression "Gyarmat" (Colony). The map of the Colony: A Diósgyőri magy. kir. vas- és aczélgyár története 1910.

The visual elements of the built environment also reflected the different ranks in the factory. Only the workers were allowed to live in the colony, there were no privately-owned estates, the factory had all the houses in its possession and the residents could only live there until they were employees of the ironworks. Documents prove that the control mechanism of the factory also had a great influence on the local system of norms in the Colony. If a person infringed the rules at his workplace or in the Colony with his misbehaviour (fighting, drunkenness, stealing, going on strike) he was soon expelled from the community with his family. If they kept themselves to the rules, the factory provided them with a good living. There were worker families of many nationalities and languages. Everybody was foreigner when they first arrived there, workers from the surrounding villages only started moving in later. The first classes in the primary school had no children who spoke Hungarian. By 1910 the inhabitants of the Colony all defined themselves as Hungarian. A discharge document from 1890 tells us (DOBÁK 2012. 233.) that the workers are registered as Hungarian–Austrian and of foreign nationality. Skilled workers were mostly Hungarian but furnaces which required special knowledge were mainly operated by German speaking experts. People from the Colony would rarely pay a visit to the neighbouring settlements: Diósgyőr or Miskolc and if someone would arrive there from Miskolc, the local paper never missed the opportunity to write about the news.² This professional endogamy and the relatively closed local community of the second and third generation of workers could not be disjoint even by the great wars either. It was only the 1950s when the process of becoming a community was halted (R. NAGY 2012. 45.). The stimulated population growth of the factory and the simultaneous wrecking of the labour aristocracy caused conflicts even within the families. In the meanwhile, Miskolc grew around the Colony,³ hence it became less isolated and formed more and more connections with its environment. The first economic restructuring in the history of the factory brought changes in the work routines and in the company hierarchy too but the spatial structure of the Colony could not follow these for obvious reasons. The simple but firm framework, which was previously considered to be a stable one, collapsed. The second economic restructuring was another important turning point in the life of the local society. This was a critical situation too and it was made worse by the fact that the factory and the Colony parted due to the privatization of the workers' houses, so the housing estate was not related to the factory or the iron industry anymore. The workers' houses in the Colony had not been changed to that point, apart from filling the empty plots among them, the houses and the spatial structure of the Colony remained untouched.

In the first phase of the research project (1998) this process was still visible and the interviews made with the old, true-born inhabitants of the Colony helped us map the personal and collective memories too (cf. DOBÁK 2007.). The second phase of the research project (2017) makes the evaluation of this process possible. Applying mental maps in the research of the spatial representation of social hierarchy and its changes over time is a very effective method. The Vasgyár Colony of Diósgyőr can serve as an excellent location for a research like this since, unlike other factors, the spatial structures have been preserved here in their original state, which can give us a firm reference point in the comparative study.

² *Borsod Miskolczi Értesítő*. Local and other news 25th January 1882: "Since the new ironworks in Diósgyőr has electric streetlights installed, it has become frequented by visitors from outside. We had a chance to pay a visit there in the company of the Mayor and the chief engineer of our city last week and we can say, we were truly amazed..."

³ When the "Big-Miskolc" concept was realized in 1950, Diósgyőr became the part of the administrative unit.

The comparison was also assisted by Kevin Lynch's "elements of the city image" (LYNCH 1960. 99–105.):

- paths,
- edges,
- nodes,
- districts,
- landmarks.

I used the five space defining data types both during info-gathering and in the comparative evaluation. The maps were drawn by the informants individually, however the evaluation was made from the aspect of the entire local community in respect, i.e. the mental map of the local community is what I address in this study. What might the level of this abstraction be? Where is the border between the mental map of the researcher and that of the local community? These are legitimate questions to ask.

FIRST RESEARCH PHASE

The first difficulty in the methodology was encountered when it came to have the hand-drawn maps prepared by the informants among the factory workers of Vasgyár. I started the research with a blank sheet in 1998 also in the very practical sense that I placed a blank A4 size sheet of paper and a bunch of coloured pencils, ballpoint pens and drawing pencils. The order in which the different colours or drawing tools were used by the informants or how the maps were drawn were not in the focus of the research, hence the process of drawing was not recorded by any means. Most of the drawings were made with a blue ink pen, colours were only occasionally used. I analysed maps drawn by 25 informants. Most of the families I contacted were inactive; the majority of them were retire and only a few were unemployed at that time. Only three of the families had members with a job and this proportion reflects the rate of active inhabitants in the entire Colony.

The analysis of the Vasgyár Colony was easier in this phase of the research for several reasons: there were still many elderly people living in the Colony who had been the members of the community for most of their lives, their active working years were related to the nearby ironworks or to one of the surrounding factories, so their way of life was determined by the Colony in general. They were happy to speak in detailed accounts about the history of the Colony and proved to provide fairly exact information about it as it turned out, when later the information from the interviews was compared to that of other documents. The informants were very motivated and enthusiastic to talk and mainly due to their being retired, they had enough free time to allocate for the researchers.

There is very little found about the process and circumstances of the map drawing sessions in the literature. Most of the studies settle the question with that this method of data recording is a subjective one and drawing helps bridging cultural differences (LETENYEI 2006. 164.). Based on the field experience I can say that the willingness of the informants to draw the maps may depend largely upon their sociocultural background, their education and the forms of communication they practice every day. The inhabitants of the Colony, now and in the past, have mostly done

manual work and has cultural roots in the iron industry or a related professional field. Apart from a few exceptions they needed a lot of encouragement and long convincing explanations before they would start drawing on the maps. The task of evaluating certain areas by grading them on a scale made things clearly easier. The informants were asked to evaluate the streets, areas, institutions they know and frequent on a 10-grade scale. They had no problem performing this task, they were more comfortable with it than with drawing the maps. After this grading task they were easier to start “filling up” the maps.

I asked my informants to tell me and show me the places which they like and use on a daily basis, but also which they usually avoid for some reason. The areas determined by the different informants mostly overlapped each other.⁴ Because of this it was possible to localize 5 districts and some other passive areas.⁵ My next question to them was to grade different areas of the Colony by sympathy on a scale from 0 to 10, where 0 means the least appealing and 10 means the most appealing grade. Ten points could be given to places where they would like to move the most or where they like going the most to visit friends or relatives or just during a walk. Grade 5 meant places which are emotionally neutral areas.

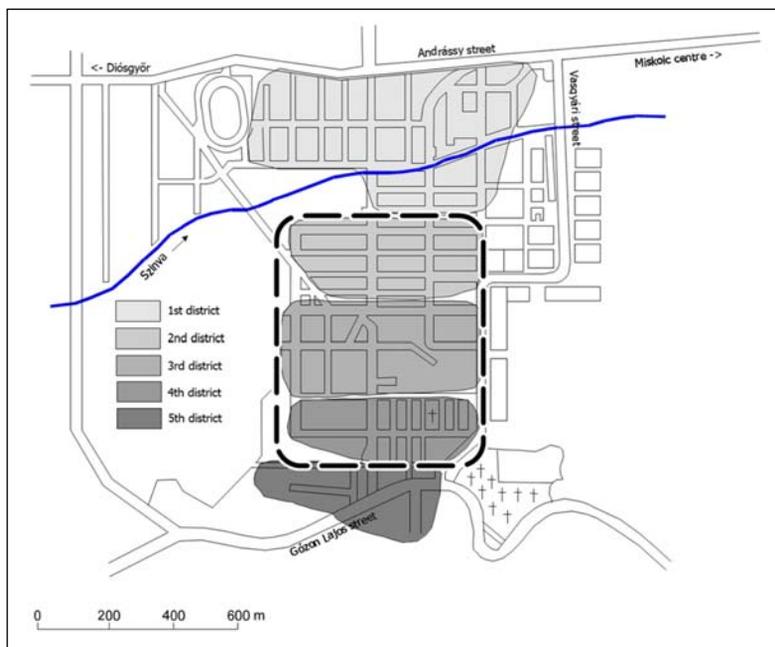


FIGURE 1 Districts on the mental map of the Vasgyár Colony of Diósgyőr (cf. DOBAK 2007.)

⁴ I copied the maps drawn along the basic streets given as guidelines on transparencies and putting them over one another I located the most frequently marked areas. I identified these districts by simple numbers.

⁵ The informants graded residential areas as it was suggested by the questions raised. Passive area: entrances of factories, shops, buildings of different institutions, the hospital (!) Asking about these areas later, it turned out that there are quite frequented places among them, but they mostly only pass through these areas by means of public transport or private vehicles or they only visit the institutions, shops located there, hence they are important for the function of the buildings in respect rather than because of the location of the area.

The Colony is situated among several fenced factory areas which are not open to the public. Its boundaries are permanent due to its geographical and built environment, hence it leaves little space for analysing symbolic meanings. The only exception is the Stream Szinva: “*The area over the Szinva has never been part of the Colony.*” On the first plans the Colony only extended up to the southern banks of the Szinva. The factory was forced to start expanding its area to the other side of the stream in 1907. These newer houses they built on the opposite bank were of much weaker quality. The area of the Colony on the opposite banks of Szinva has never become integrated as a real part of it either from an architectural or a social aspect. The Stream Szinva is characteristically considered as a positive location. It also appears as a community space sometimes: “*We used to go bathing in the Szinva, it did not look like this at that time.*” The water from the stream was used for the production too. As for the earliest plans it would provide sufficient water for metallurgy, so it had an industrial role and also served as a natural boundary for the Colony.

Ógyár Square, at the junction of the two *edges* (Vasgyári Road and Gózon Lajos Street) and another inner street (Kerpely A.) was getting outlined as a central node on the maps. This square with its significant size, besides being a traffic hub (a city bus and a tram lines and a big parking lot) has a great deal of symbolic relevance too. This is where we can find the first and ever since used entrance of the factory, there are several pubs and other commercial units here and the building of the old consumers’ cooperation, “Konzum”, which served as the single convenience store in the Colony for a long time. The experience of the crowded square at the time of shift changes⁶ is closely attached to this place and was remembered as an ever-desired bright past by all the informants. Their emotional relation to certain spaces was generally stronger in case of memories from the past.

Accessing the Colony is possible by tram, by city bus, by walk and by car. Most of the informants who use the public transport system marked the tram stop of line 2 as hot spot. Mainly *paths* exiting the Colony were identified as roads for car traffic. Moving around in the Colony mostly happens on foot due to the relatively short distances. Moving directions both in and out were marked on the maps in the area of the Colony to the south from the Szinva. In the same time, the informants only marked the outbound routes from the “numbered streets”.⁷ None of the maps show passages between the two areas (there is a walking bridge, which connect the areas on the right and left banks of the Szinva).

The drawings on the maps define 5 separate *districts*, which more or less cover the housing area in the Colony. The districts were graded and this revealed that opinions about each of them show differences. The highest average grade, 6.24 was given to the central area of the Colony where the place of the Roman Catholic church was originally marked on the blank maps. This is also where first and oldest entrance of the metallurgy factory is. The lowest grade was given to the area of the “numbered streets” on the left banks of the Szinva, as the rows of houses which were later built for the Colony. This area mostly got points between 0 and 2, due to higher grades given by the few families living there, the average of the points was 2.32.

The best regarded areas host the old Chief Officers’ semidetached houses and the Roman Catholic vicarage is also located here. “*This is the most distinguished area in the Colony, it is simply*

⁶ At times of shift change several thousands of people gathered here.

⁷ Numbered streets: First, Second, Third, [...] Fourteenth Street (These set of streets are only referred to as “numbered streets” because they never had proper names but numbers.)

good to look at those houses whenever you walk by them. The whole thing looks so noble. These had bigger gardens too and some of them had a maid's room in the basement.”⁸ Retired skilled workers and ex-employees from the lower management lived in these houses at the time of the research. The mod con buildings and the gardens were well maintained, the characteristic red brick style of the houses was preserved. The apartments were bought by private owners and were made mod con at their own expense.

The worst regarded area marked was the district of the “numbered streets”. As the informant said, “Slovaks, Polish, Romanians lived here” at the time when those houses were built. “These people had only one set of clothes, they didn't even have a proper home to live in where they came from, they were happy to have one here. The people who live here now are also immigrants, only that these came from a nearby place, the Avas.”⁹¹⁰ The quality of the work performed by these people was the basis of how they were judged by the others. “Well, these were the second class people, so to speak. They were put up in barrack like houses”.¹¹ The barrack like dwellings, due to their condition, meant a comfortless life in one-room apartments on the fringes of the Colony. They were the ones on the bottom of the workers' hierarchy. “Workers, foundrymen or forgers went home, ate, drank, made children and went to bed. Their job consumed them. Those in higher positions, had the motivation, they would go home, change and the family went to the choir group [...]”¹²

The house in the “numbered streets” were rented to workers without children or to temporary workers, “as it was good enough for them”.¹³ The negative qualities of “Hundredhouses”¹⁴ stuck in the collective memory of the locals. The Colony with its closed structure used to have access to the city through the “numbered streets”; people of Miskolc tend to identify the whole Colony with this slum-like image and this causes discrepancies in the identity of the community.

The other low regarded area is smaller in its area, a district practically on the edge of the Colony is district 5.¹⁵ The average of the points it received from the people I asked is 3.4. even if the district is populated by gypsy families it has not become a “gypsy slum”, it has not gained ill fame and not as segregated as the previously mentioned “numbered streets”. This district was not put in the category: “I avoid it for some reason” as opposed to the other district.

There are semidetached Officers' houses and pairs of workers' houses here. The district got 4.12 points in average despite it was often mentioned as a “nice and clean area”. When asking about the reason for the low grading the informants shared with me that unwanted visitors from the outskirts of the Colony often come here and disturb the people living here. They come to beg, to steal from the gardens. “People live in fear here.”

⁸ 62-year old skilled worker – excerpt from the interview

⁹ Avas: A housing estate built in Miskolc, in the 1970s with nearly 40,000 inhabitants. Families moved from the mod con blocks of flats to the negatively regarded areas of the Colony, they were satisfied with the lower standard accommodation for some money in return. This moral and physical unambitiousness is reflected in how the area is judged.

¹⁰ 72-year old retired turner – excerpt from the interview

¹¹ 72-year old retired turner – excerpt from the interview

¹² 72-year old retired turner – excerpt from the interview

¹³ 72-year old retired turner – excerpt from the interview

¹⁴ “Százház” – “Hundredhouses”: the alias was used in colloquial language because there were exactly 100 houses were built in the “numbered streets”

¹⁵ The part of the Puskin and Kabar Streets closer to the Ládi – Colony, the Bolyai and Örs Streets

Only two informants marked the Vasgyár Cemetery as a frequented place by them. As it turned out during the interviews all the families involved in the research visit the tomb of a family member in the cemetery at some frequency. It has a very standard structural arrangement. There are some exposed tombs which have a distinguished position in the structure: the group of children's tombs and the so called "Officers' Lane", where the Engineers and important technical leaders of the factory rest.

"Konzum" (a convenience store today), "Szaletli", the by now demolished building of the riding-hall, the ice factory, "Szabadságkert", the swimming pool and the market are all preserved in the locals' memories.

It reveals a lot that the factory itself and the gates of the different plants were only marked by the retired ex-employees of the ironworks. 16 people thought it was important to mark these but nobody among the otherwise inactive informants did so. Not even those who have a view on the gates of DIGÉP¹⁶ at the end of their street. The Colony is only valuable as a living place for these people. Those who used to work in the factory looked at it and the Colony as one organic unit as it was planned at the time when they built it.

The community was further pushed towards the edge of its collapse by the fact that public places and community programs were discontinued. There is a nursing home working in the old director's house but apart from that, there is no other community spaces in the Colony open for the public. There are 3 schools in the Colony (one primary school and two vocational schools), which are not running anymore. Only 4 informants marked them on the maps.

One of the most essential results of the first phase was to see how the relationship between the space and society was revealed by the maps. It was obviously due to the maps drawn that we could see this result, since they made a specific understanding of the social structure visible and because despite the players changed over the years, this image seems to persist in the community. The closest house to the main gate of the factory was the director's house. The lower one was in the company hierarchy the farther his house was from the factory gate. The hierarchy also determined the size and level of comfort of the houses. The best regarded districts were where the early leaders, engineers and foremen of the factory used to live. The population changed since and skilled workers moved in the place of the technical elite. The houses of the skilled workers were then occupied by workers of lower ranks and later by people who had no relation to the factory.

SECOND RESEARCH PHASE

16 interviews and 16 maps were recorded between August and September 2017 in this phase of my research project. One of the criteria of choice was that the informant had to be living in the Colony for at least 5 years in a row. I only managed to talk again to one of the map drawing informants from the previous phase of the research. The youngest informant was 40 years old and the oldest was 93. There were two informants in the group who had been living for less than 30 years in the Colony, the rest of them had been living here since their birth. Two of the informants have no professional skills, one informant has finished studies in higher education, four of them

¹⁶ Diósgyőr Machine Factory

attended a technical school. Two of the informants in the group identified themselves as gypsies.¹⁷ The 16 maps were drawn during interviews out of which 4 interviews were more in-depth conversations conducted about the whole lifestyle of the interviewees in general. In the rest of the interviews the discussion was strictly about the use of the physical space, moving between the specified elements of the space and grading, evaluating the defined districts.

I strove to set the criteria of the analysis as much alike the previous ones as possible. For the sake of comparability, I gave the same blank maps, tasks and instructions to the informants as before. However, it was necessary to make minor corrections as some of the streets in the original map do not exist anymore and some houses are now replaced by various service providers. As it happened in the first phase (DOBÁK 2007.), the informants were asked to evaluate the streets, areas, institutions and community spaces they know and frequent on a 10-grade scale.

There was only one informant this time and during the first phase too who asked to keep the map for a few days to think more about it and spend more time with drawing it. These maps proved to be more detailed and colourful than the ones drawn instantly.

The drawing task was not easily accepted this time either, some of the difficulties at the time of the first try repeated themselves. The majority of the informants have eyesight problems as it is reflected in the drawings; even if they had their glasses on, they could not properly identify everything they saw on the white sheets. Compared to classic verbal interviews the different method appeared to cause some hindrance too.

Details about the financial situation of the informants or their consumer habits were not included in the interview concept. One can guess the interviewees' approximate financial situation by their clothes, their homes, their yards and gardens. Moreover, the tools and objects surrounding them may tell the researcher about the position of the informants in the wider local community. The everyday problems shared by the informants during the interviews (e.g. difficulties to pay for utilities) let us know that the amount of regular expenses does not allow those people to spend on luxury products, in this case, a pair of new glasses. Some of the informants objected the drawing task, among them those who were otherwise motivated by the interview and happy to talk. Therefore 4 of the 16 maps were manually drawn by the researcher by the instructions of the informants.¹⁸ Including these 4 drawings in the research is explained by the fact that these elderly informants had been living in the Colony for over 70 years (since their childhood), hence had a long-term perspective on the life of the Colony. It is a rare opportunity to be able make an interview with informants like them, since the old population have mostly moved from here or have passed away.

The complete area of the Colony today is about 1.5 km². A few small nooks or skew street parts break the orderly grid of the parallel street structure. The streets appear very similar for the outside spectator; red-brick houses stand everywhere. Looking down the streets, the image may seem monotonous. The network of the streets and the basic characteristics of the houses did not change, but unique modifications, which change the unified picture of the street, are more and more frequent. The smaller houses are less and less convenient for today's modern way of life. Certain indoor modifications of the houses make outdoor modifications necessary too. One of these

¹⁷ The question was not asked from them directly, the informants referred to themselves as gypsies during the interview. I did not ask the informants about their ethnic background or their religion.

¹⁸ I tried to keep the drawing real by asking control questions and continuous directions.

is the elimination of the small, characteristic windows from the street front of the houses, or the utilisation of the attics by turning them into loft rooms, which makes the changes in the roof structure visible from the street too. But the original physical dimensions have neither changed since the beginning of the 20th century nor since the previous research phase in 2000.

The routes the map drawers usually take between their homes and some important destinations are the same every day. Only one of the informants said that he sometimes takes a walk among the houses of the colony without any specific destination. The rest of the interviewees only take certain routes for daily routine tasks. *“I don’t usually walk much. I like to get on the tram here at the square [Ógyár Square]. But I don’t like coming home at night, I don’t feel safe. I had no incidents so far, but you can always see young rascals show off. Just the other day, I saw one of them swinging a baseball bat. I avoid that area when I can. There are some troublemaker families living around here, you’d better avoid those. There are more and more gypsies.”*¹⁹

Vasgyári Road seems to have a privileged position, which was only marked by those who use a car. Vasgyári Road is the car traffic route that connects the Colony and Miskolc, this is the only road through which you can reach Andrásy Road going towards Diósgyőr. The second most often mentioned streets were Gózon Lajos Street and Alsószinva Street. The rest of the streets were only mentioned because the informants had their houses there. Like Vasgyári Road, Gózon Lajos Street also stretches on one of the boundaries of the Colony. This is the second of the two optional routes that takes one to Diósgyőr. Alsószinva Street provides access to the area with smaller, one-floor houses. The frequent mention of the three streets is not surprising; even if the grid of the streets is simple to comprehend, because of different obstacles (tramrails, fenced factory area, cemetery, hospital, the Stream Szinva) the access to the Colony by car is only possible through a few defined routes. There are only two traffic lights set up in the Colony (one at the railway crossing and a three colour traffic lights), both can be found on exit roads. Traffic is not busy within the Colony, there are only a few traffic signs too, even in some narrower streets only a couple of the junctions have a sign showing the direction of the traffic. People who live in the inner streets always keep an eye on any unknown car that enters their street and look at those who get out the cars with expectations. Every passer-by who rarely walk here, also get the attention of the locals. Attention of similar intensity is usually payed to strangers by the population of very small villages or closed communities only. Asking them about this element of attentiveness, some of the informants told me that no strangers can be seen in the inner streets, there are some regular visitors (postman, nurses, doctors, frequent relatives), who are known to everybody. In both the first and the second research phase it got highlighted that the routs get cut at the Stream Szinva. The stream divides the area of the Colony into two. The access on foot or by car to the Colony over the Szinva is either on the edge (Vasgyári Road) or through one of the hubs in the direction of the Catholic and Evangelic churches (Füredő Street). There is a walking bridge over the stream (at the end of Kabar Street) and the tram has its own bridge, on which no other traffic is allowed. The bridges are about 100-200 metres away from each other, which makes the access to the other side of the stream easier. As opposed to all this, none of the maps has routes connecting the two parts marked.

¹⁹ Interview excerpt, 40-year old woman, 2017.

The majority of the informants marked the Andrásy Road and the Stream Szinva (pre-drawn on the maps) as the *edges* of the Colony. There were no dominant inner boundaries drawn. Only when asking them about the different districts did any of the informants mentioned some inner boundaries which previously played a role in the grouping task. However, the informants did not define them as edges. When I asked them to draw the edges of the *districts* they previously graded, they drew them bigger than in the research phase in 2000. The “numbered streets” appeared as a block with a negative reputation. The problematic “numbered streets” (from First to Fourteenth Streets), which have always been regarded low are owned by MIK²⁰ and have never been sold, they are still belong to the property of the Municipality of Miskolc. Part of the houses there were demolished in 2014 which received great media attention.

Other negative areas, which are related to fear were marked around the old entrance of the factory (Ógyár Square). The “numbered streets” received 1 or 2 points from the informants there was only one person, who gave 7 points, so the average 2.25 points does not differ much from the earlier result (2.32 points).

One elderly lady expressed her happiness over the demolition of some of these houses. She marked this by crossing the area out and she told me, that she moved to the Colony in the 1970s and “*there were good people living in the numbered streets*”, they even helped her with moving in. She used to stop to talk anyone from there, children would often visit each other, “*the stream did not mean no obstacle*”. His son had a little gypsy friend from there when he went to primary school, she said and she showed me the distance between the house of the friend and their house. In her opinion, the population of the “numbered streets” has changed over time and now she would be afraid to go there alone now.

Opinions of the informants about the new, monumental stadium being built right at the corner of the “numbered streets” and hence at that of the Colony are divided. Whoever marked this area on the map voluntarily had a positive opinion about it, one of the interviewees gave as much as 9 points to the stadium. There were two essentially negative opinions recorded: “*Whenever I walk past it [the stadium], the view almost makes me cry! Why is it so necessary to build here? Who on Earth will visit this at all?*”²¹ And there was the narrative of the current political situation: “*This area has a bad reputation because of the parking lot and the stadium being built here. It has always been like that and will always be like that. In the place of the slum like numbered streets, an insane but petty and pitiful dictator is having his own memento built.*”²² The bigger part of the map drawers did not mark it on the map, neither did they comment on it despite that it was pre-drawn on the map. From the direction of the Colony the construction site of the stadium does not look so significant because the it is farther away from the residential area, but the question of the construction seems to be a real issue among the locals. As one of the informants said, “*The houses had to be demolished to make space for the parking lot for those who will come*

²⁰ MIK: Miskolci Ingatlan Kezelő Vállalat, now called Miskolc Holding Önkormányzati Vagyonkezelő Zrt (Miskolc Holding Municipality Asset Management Corporation), but it is still referred to as MIK in everyday use: e.g. rents owned by the Municipality of Miskolc are called “MIK-flats”.

²¹ Interview excerpt, 83-year old man, who drew a map in the first phase too

²² 58-year old male teacher – interview excerpt

to see the games by car and buses and because they wanted to make those very low standard gypsy houses disappear”.

The concept of fear was mentioned during the drawing of almost all maps. When asking them about certain neighbours or cases, the interviewees sounded more hesitating. The 83-year old, male informant praised his two next-door neighbours, describing a several-decade long good relationship and cooperativeness, he said: *“I’ve got hundred percent neighbours. No matter, they are gypsies, they are very nice, I wish everybody had neighbours like them [...] the other one too, he is also very nice to me. But there are some who are always fiddling at the corner there, smoking. I am afraid of those.”*

Only steers or parts of streets were identified as groups on the fringes. The inside part of the Colony appeared as one large block. While in the previous research phase this area was marked to have 3 districts, now it appeared as one coherent spot in the middle of the map. Only in three cases did an informant refer to the old parts in some way or another. Even the informant who also drew a map earlier made one of two previous inner parts now as one. He talked about the system of districts in the Colony as in the previous interview, but he drew less districts this time. Nevertheless, the buildings or the spaces they are set in have not changed in a physical sense in those streets over the years. The drawings now showed three districts, two of which were intact areas and the third was the broken line of the districts on the outskirts of the Colony.

The cemetery was marked by six informants this time, more than in the previous research phase. The cemetery is not to be further extended, only old plots can be reused.

The ones I asked do not go out within the Colony. They only meet others in public spaces for the mere reason of meeting. As R.Nagy pointed it out in his study about a village workers’ colony (R. NAGY 2002. 81–82.), the same defined space which was designed by German architects for other Germans (immigrants) to live in, worked as a sociopetal space and for the indigenous Hungarian peasant population as a sociofugal space. In case of the Vasgyári Colony the micro-cultural elements which have appeared as sociopetal forces in the defined space for long, from the aspect of the local community do not work for the new community anymore. The social content which used to fill these spaces have disappeared.

The informants I asked this time, rarely or only occasionally visit the local churches. Those who practise their religion go to other religious communities or churches outside the Colony even if the local churches of three different religion are active. Most of the information shared with me in relation to the church (4 mentions) was about the midnight mass of the Roma Catholic church, which is often visited by many locals even by some who do not generally practise their religion.

Some landmarks, the Catholic church, the cemetery and the Stream Szinva were pre-marked on the blank maps. The first research phase showed that analysing these is not necessary, premarking landmarks was to assist the method. The choice of the three landmarks was the result of a test before creating the map. There were no other reference points marked on the map apart from these. The informants added their present or former houses as further reference points.

SUMMARY

Using mental maps in my research helped reveal new things while identifying the certain areas and characterizing them. Due to the local structure of space the paths, edges, nodes, landmarks did not produce any surprising results, however the grading of the different areas provided some further and deeper information which could not be revealed by the interviews or by studying the history of the local built environment. The interesting thing about grouping or grading was not the difference of the average results. The most surprising thing was that the informants made a connection between the building of the Colony, the grading of the houses and the position in the company hierarchy.

Besides the local structure of space and the social layers, some other important horizontal aspects were brought to the surface by the maps. A hot spot in the Colony turning into a slum identified as the “numbered streets” area, the gender aspects of space analysis in the Colony and the relationship between fear and space are all horizontal aspects, which appear in both phases of the research.

The role of the “numbered streets” proved to be important in both phases of the research. A two-step reorganization process took place in the time between the two research phases. In the first step the houses in the beginning of the “numbered streets” (First, Second, Third and Fourth Streets) were demolished. Buildings for service providers were pulled up at a quick pace in their place. In the second step of the reorganization the residential function of the area up to the Eighth Street has been terminated so far.²³ Erosion has started to speed up after this. Some of the buildings were taken apart by the locals, who took the reusable parts. There are several ruined houses can be seen there today. The problem was much more articulated and emphasized at the time of the second phase of the research, while in the first phase it was only mentioned as a side story.

The earlier discussed natural edge, the Stream Szinva also appears as a boundary in the social texture of the Colony and this is clearly reflected by the mental maps. During the fieldwork it was observable that the informants do use the bridges/passages, however they did not mark these on the maps as important routes. This was also against the fact that certain destinations can be easier accessed via the route through the “numbered streets”. People living in the right banks of the Szinva marked the area on the left banks with an intact spot in both research phases without any subdivisions. No such subdivision appeared in the grading task, the reputation of these streets was generally bad in case of both data collection phases and they appear as a separate block on almost all the maps. The map-drawers who only put numbers on the blank maps marked this area with a single digit too and gave low points to the area in both phases.

Only negative opinions were articulated about the “numbered streets” in both research phases. This general image was somewhat altered by the informants living there, however they gave the lowest points to their own streets in the Colony too. This negative reputation reflected by the given grades and the explanatory comments in the second research phase too. Although, the *element of fear* was only attached to the district in the second phase. Most of the informants said, they choose to avoid the area, they never enter and never pass through the few streets that still exists.

²³ The Municipality of Miskolc demolished some houses in these streets in September 2014.

Nevertheless, even a feature of this area would support this, since there is a kindergarten situated in the “numbered streets” besides the dwellings. Even so, people seem to avoid it on purpose as they admit and even emphasize the fact. Many of them brought the problem up while drawing the maps even without asking them.

The strong masculine character of metallurgy was well represented in all phases of the research. The public spaces in the Colony also reflect this. From the gender aspect the use of space in the society, the public and private spaces in the Colony exhibit all the possible conditions of private-feminine and public-masculine roles.

The results of the research phase in 2000 showed the obvious masculine characteristic of the Colony. Media interviews, professional discourses were all about the problems, technical innovations of production and the supply sector, the masculinity of the workingman and his family. This local male dominance was unquestionably represented in the memoirs from those times. *“Only men would work in the factory. Women would only perform support or administrative tasks.”* The Colony was the home of the factoryworkers and their families. This obviously indicated that the Colony is built upon the idea of the workingman. The family, the woman was (only) a natural and requisite element to it. No matter if the respective informant was male or female the axiom of the characteristic male dominance in the Colony was rarely shaded in any interview.

The same can be observed in case of the analysis of street names. 17 out of the 39 street names have a reference to masculinity. 13 names of famous males (6 of them are related to the metallurgy in Diósgyőr) and 4 names with a masculine reference. Two streets wear a female name but none of them are related to Vasgyár (Irma Street, Jászai Mari Street). The other 20 street names are neutral (Füredő, Sás, Sétány, Kórház [Bath, Sedge, Promenade, Hospital] etc.), 11 of them belong to the “numbered streets”. Public sculptures or similar non-functional objects are rare here. The ones we can find are all related to industrial production which can be identified as a masculine concept of space forming. The drawings do not reflect this. The informants did not comment on the street names and did not form an opinion about them in any way. The older male informants tended to bring up the more famous names like Técsey or Kerpely during storytelling not in relation of the maps.

The space seems to be divided into two in the family photos too: men are often represented in a work environment, while women appear solely in family photos of the private scenes of life, they appear in the house or in the yard. Only propaganda²⁴ photos are an exception, which started to be more frequent in the 1950s, but the photos found in the families all reflect a characteristic division of public and private spaces where the first is dominated by the male and the second respectively by the female population. The gender aspect within the Colony can only be mentioned here, the extent of this article does not allow to discuss it in detail. The spaces being divided by the above-mentioned idea match the locals’ approach to work, religion, the different roles in society and their view on the world. The questions of feminist geography, e.g. “Who had a word in choosing the common living place” within the family; “How was work shared between the sexes?” (TIMÁR 1993. 4.) are not relevant in this community. It is not because of the questions, the reason for this is that the answers are too obvious. Some memoirs highlight that the traditional dominance

²⁴ A gyár közleményeiben, helyi sajtóban megjelenő képek.

pattern of male and female roles was unquestionably made the community more stable. Besides being a barrier, it also meant predictability and security. The community has never tolerated any deviation from the traditional system of male and female roles. It was mentioned several times that divorced women were soon excluded from the texture of the Colony. Only in case a woman was left alone due to a tragedy did she and her children deserve the protection of the Colony, unlike in any other case. In the interviews recorded in the first research phase it was often mentioned that women used to have their own public spaces in the Colony. They were mostly related to the household duties and the past (childhood memories of the informants) e.g. community bread making, courses organized for women, learning circles, the women's bath.

These elements did not appear in the second research phase, the gender roles were reduced to the opposition of the private and public spaces. As Staeheli and Mitchell define this: the public space is constructed through the discourse about the public sphere. (STAEHELI – MITCHELL 2009.) Duncan highlights the strong gender aspect in the division of public and private spaces. In his view, this dividedness makes it possible that “the relationship of oppression and dependence formed by gender inequality can be legally justified” (DUNCAN 1996. 128.). The public sphere is ideally formed around a paid job, production, action and heroism and is related to the masculine gender category. Because public spaces are the products of society through the discourse about the public sphere, it seems obvious, that they will bear masculine characteristics. (MOLNÁR 2012. 32.) Because of the long history of this patriarchal aspect, similar to marginal farmers (once peasants) (MOLNÁR 2004:172), this dividedness of the public and the private spheres between the sexes has only started to dissolve by the end of the 20th century (strict difference between masculine and feminine spaces).

Looking at the local structure of space, there can be no feminine space or space elements found. Because none of the aspects of life is purely masculine or purely feminine, a world where the division of sexes reach an extreme level it causes the distortion of reality and the distortion gets fixed by the built space. (ALEXANDER 1977. 147.) The interviews lead us to think that spaces dominantly used by women are concentrated around the elements of the public transport system and smaller local convenience stores outside the private sphere, nowhere else. Female interviewees between the ages of 76 and 77 marked the paths and destinations related to shopping or other routine-like tasks and the relevant (public) transport routes on the maps. The majority of the men interviewed uses a car. This determines the paths they take and means the role of the leader at the same time. None of the interviewed women drives a car alone. They are either transported by relatives (a husband and in the other case a son) in a car or use public transport to leave the Colony. One of the older women takes a bus to move between her own and her son's house within the Colony.

The spaces which used to be considered as feminine spaces have disappeared or their feminine character is not dominant anymore. At the time of the first research phase the mentioned feminine spaces were marked on the mental maps e.g. the bath (3 mentions) or the community bread making (2 mentions) but they were considered to be part of the past, nobody talked about or drew such spaces existing in the present. By the second research phase there was no mention of these spaces at all. There had been no shops for women in the Colony. The interviewees said, that they went to Miskolc to get new dresses or photos taken. Spaces of beauty-care as a feminine thing have always been outside the Colony, so the informants had no chance to draw anything like this on the maps.

The Colony belonged to the families. Single men all lived in the outskirts, while single women only lived in one place, “Angyalvár” (The Angel Castle) as it was referred to in the colloquial language. “Angyalvár” is one of the oldest buildings in the Colony, which hosts a nursery home today. As for one of the map-drawers there were nuns living once. “Angyalvár” only appeared in the drawings during the first phase. They tended to appear on the drawings of those interviewees who talked about the history of the Colony like storytellers and sometimes went into details in relation to a story. The mystery of the building was encouraged by a few legends. One of the informants said to know why the name was stuck to the building. He said, that they used to perform the abortions of girls with unwanted pregnancy, they “made angles” here. Another informant originated the name from a couple of female teachers who once lived there. In the first research phase the building was mentioned four times, it appeared as a landmark and a reference point too. It was only mentioned spontaneously one time, in the other three cases the building was mentioned when I asked them about the values to be preserved and this is how it became part of their mental maps. In the second phase no informant marked the building, I could not find any trace of the legends either. It faded from the collective memory and was missed out of the maps too, although it is one of the most beautiful buildings in the colony with its ornamented red brick portal and carved hanging corridor, besides its significant volume. It has preserved its feminine space character. It has functioned as a police station and a music school for a short time, but it has mostly been used for functions related to the feminine side. Even if it was designed to be a public building, it had never been involved in production and its location is also somewhat peripheral.

The gender aspect also appears in how the reputation of the “numbered streets” is conceptualized. Three of the informants in the first research phase had the incentive to additionally mention that it was only single males who first moved in the houses of “Százház”, today known as the “numbered streets”. 76 of the 100 houses were built with one room and 24 of them with two rooms in 1909. The importance of this relies in the fact that the informants could not have personal memories about the issue, the image of single men moving into the houses of low comfort level was preserved in the collective memory of the families.

The division of space based on gender dominance has gone through an ethnic transformation. The streets of the Colony “*were took over by gypsies*”, said one of the informants, involuntarily referring to the element of dominance which appears in an areal sense too. Until the company managed the houses there were no gypsies living in the Colony. The forced growth of the factory staff starting from the 1950s brought a great number of gypsy workers from the countryside who commuted to the factory for quite some years. The unskilled or “quick-trained” workforce was never excluded on ethnic base there was a gap between the true-born Vasgyár people and any other “intruder”. The process was simultaneous with the wrecking of the labour aristocracy or making it weightless. Gypsies working in the factory were generally accepted at that time, there were no significant problems in the factory or in public events because of their gypsy origin.²⁵ Gypsy families started moving in the Colony in the 1980s which initially had no segregating or negative connotations. The locals used the opportunity brought by the privatisation of apartments to move to other parts of Miskolc in bigger and higher comfort level apartments, all with the hope

²⁵ Based on the interview with Drótos László, former CEO of LKM (Lenin Metallurgy Works)

of a better life.²⁶ The empty houses in the Colony were then occupied by gypsy families in an increasing number. As the result of the economic recession in the area and in the whole of Miskolc the lower educated, less mobile social group, so to speak, stuck in the Colony. Their presence has been visible, there were other social problems attached to the appearance of gypsies. The local media and every city leader since the regime changed in Hungary have tended to let things evolve or even helped things evolve to a point where the gypsy population can be accused of all the problems. “*This is now Little-Lyukó*”, as one of the map drawing informants, a 43-year old man said about the part of the Colony referring to one of the biggest slums in Miskolc. “*There are only gypsies here*”, “*it’s either empty or a gypsy lives in it.*” as another informant talked about the street they live in. An element of fear appeared in every interview and it was mentioned in relation to gypsies every time, despite the fact that crime rate shows no difference with that of in the entire city of Miskolc.²⁷ Koselka and Pain discuss the complexity of the relationship between certain places and the fear attached to them when they say that “fear of crime is the result of complex processes; these processes define our opinion about certain places by making us aware of the possibility of becoming a victim: fear of crime can define the meaning of a place and in the same way a place can affect the fear of crime”. (KOSKELA – PAIN 2000. 278.) (quoted in: MOLNÁR 2012. 33.)

Researches working with mental maps rarely discuss the vertical characteristics of space. There is no obvious reference to the vertical dimensions of the space in the field documentation of the present research either. Only the church, the hospital and some industrial buildings are tall in the housing estate I chose to study. However, the volume of buildings is not significant in case of the tall ones either, they do not stand out from their environment e.g. the Evangelic church can hardly be noticed in the shade of the surrounding trees. There are no multi-storey houses among the buildings in the Colony, the houses characteristically have one or two floors. Taller buildings appeared as landmarks in the interviews and on the maps drawn. The most often mentioned buildings were: the Roman Catholic church, the hospital and the DAM office building. The latter one also has only three floors but it is built on a base structure with stairs, hence it looks tall from the street level. Environmental psychology researches have shown that the lower housing density, overseeable spaces, semi-public spaces, lower houses motivate community life and induce new social relationships. The architectural structure is considered as the physical expression of the social texture/network (DÜLL 2010. 91.). Relevant parts of the interviews also support this idea. The method of mental maps needs additional support to be able to cover vertical dividedness as well.

The “numbered streets” district received extra emphasis at numerous points of the mental map recording and in every aspect of the analysis. It appears segregated in the structure of the physical space, but there are stories related to it, it has a certain reputation, it is identified as a slum, it is mentioned in relation to gender aspects and in ethnic questions. the general reputation of the “numbered streets” has not changed since the district was built. News in the media a hundred years ago was almost literally about the same problems, you can read and hear about today.

²⁶ Based on an interview recorded in the first phase with a 73-year old woman, who grew up in the Colony.

²⁷ The local family counsel has no info about any violence against people for years now. A few years ago, someone broke into a closed grocery store, but no other atrocities have happened since as far as she knows, and she meets many families in the Colony every day.

Low quality housing can only keep a social group who accept lower living standards, preserving the problems of the past by this.²⁸

The general atmosphere of the interviews recorded in the first and the second phase is very different. In the time of the first research phase there was an air of hope and expectations in how the informants spoke and it was clearly due to the lingering possibility of a restarting industry. In the second phase this air of hope was switched to an air of resignation and disappearance.

The maps drawn and the comments added reveal the steps the area is taking towards becoming a slum. In the first research phase, only negative points given to it and its general bad reputation characterized the area and a passive attitude with some expectations. There were still some positive memories recalled about it and some pleasing remarks. Although, expressions like “distinguished” and “noble” only appeared in nostalgic memoirs at that time, but they were apparent. In the *second* research phase the points went down and the element of fear was characteristically represented. This time, the overall run-down condition was strongly articulated with the opinion added, that the situation in the area cannot be mended. The positive memories recalled earlier were only present in fragments and there were less positive remarks. A new element was the general approval of and the relief over the disappearance of one part of the Colony. The level of deprivation can be also measured by the fact that the informants were not interested in the future of the demolished area. They did not support the idea of the demolition to create something new, only the elimination of the bad was important for them.

From the aspect of methodology this also means, that besides the existing values, the social hierarchy, positive/negative general opinions, edges, contact zones it is also worth asking questions about the future vision of the changes in the area and the possible disappearance of it. Because if this vision or the approval of it appears, it means that the researched area is on a deeper level of deprivation. If this can be completed with a longitudinal analysis for comparison, we can measure the intensity of the slumization process by mental mapping.

BIBLIOGRAPHY

ALEXANDER, CHRISTOFER – SARA, ISHIKAWA – MURRAY SILVERSTEIN (et al) (1977): *A Pattern Language. Town, Buildings, Construction*. New York, Oxford University Press.

DUNCAN, NANCY (1996): *Renegotiating Gender and Sexuality in Public and Private Spaces*. In DUNCAN, NANCY (ed.): *Body Space. Destabilising Geographies of Gender and Sexuality*. London, Routledge. 127–145.

DOBÁK, JUDIT (2007). *Mental Maps in the Ironworkers' Colony in Miskolc-Diósgyőr*. In *Publicationes Universitatis Miskolcensis. Sectio Philosophica*. Tomus XII. – Fasciculus 2. Miskolc, E Typographeo Universitatis. 157–166.

²⁸ cf.: DOBÁK 2012, 2007

DOBÁK, JUDIT (2012): Etnikai és vallási tagozódás a Diósgyőr-vasgyári kolóniában. In ILLÉSNÉ KOVÁCS MÁRIA – GYULAI ÉVA – PORKOLÁB TIBOR – BICZÓ GÁBOR (szerk.): *Docere et movere: Bölcsészeti- és társadalomtudományi tanulmányok a Miskolci Egyetem Bölcsészettudományi Kar 20 éves jubileumára*. Miskolc, ME BTK. 231–246.

DÜLL, ANDREA (2010): *Helyek, tárgyak, viselkedés: Környezetpszichológiai tanulmányok*. https://www.researchgate.net/profile/Andrea_Dull/publication/274699356_Dull_Andrea_Helyek_targyak_viselkedes_Kornyezetpszichologiai_tanulmanyok/links/552588610cf25d66dc945cc7/Dull-Andrea-Helyek-targyak-viselkedes-Koernyezetpszichologiai-tanulmanyok.pdf downloaded: 02.22.2018.

KOSKELA, H. – PAIN, R. (2000): Revisiting Fear and Place: Women's Fear to Attack and the Built Environment. *Geoforum* vol. 31. no. 2. 269–280. [http://dx.doi.org/10.1016/S0016-7185\(99\)00033-0](http://dx.doi.org/10.1016/S0016-7185(99)00033-0)

LETENYEI, LÁSZLÓ (2004): *Településkutatás I–II. Módszertani kézikönyv és szöveggyűjtemény*. TeTT könyvek, Budapest.

LYNCH, KEVIN (1960): *The City Image and Its Elements from The Image of City*. Cambridge, The Technology Press – Harvard University Press. 99–105.

MOLNÁR ÁGNES (2004): Asszonyok és családközpontúság. A mezőgazdasági kistermelés és a nemi szerepek egymásra hatása a kiskanizsai „sáskák” esetében. *Századvég* 33. sz. 163–192.

MOLNÁR ANDRÁS (2012): A maszkulin és heteroszexuális köztér termelése Elméleti háttér a társadalmi tértermelésnek a bűncselekményektől való félelem kontextusában történő kutatásához. *Tér és Társadalom* 26. évf. 1. sz. 26–40.

OLAJOS CSABA (1998). *A Diósgyőr-vasgyári kolónia. Tanulmányok Diósgyőr történetéhez 4*. Borsod-Abaúj-Zemplén Megyei Levéltár, Miskolc.

R. NAGY JÓZSEF (2002): „Nekünk má' semmise a gyár...” Identitásbeli azonosságok és különbségek a rudabányai és a diósgyőr-vasgyári munkások esetében. *Századvég* 24. évf. 2. sz. 75–89.

R. NAGY JÓZSEF (2012): *Laborer communities: Cultural anthropological research on laborer communities in northeast Hungary*. Saarbrücken, Lambert Academic Publishing.

STAEHEL, L. A. – MITCHELL, D. (2009): Public Space. In Kitchin, R. – Thrift, N. (eds.): *International Encyclopaedia of Human Geography*. Vol. 8. Amsterdam – Oxford, Elsevier. 511–516.

TIMÁR JUDIT (1993): A nők tanulmányozása a földrajzban, avagy: van-e létjogosultsága a feminista geográfiának Magyarországon. *Tér és Társadalom* 7. 1993. pp. 1–2. 1–18.