THE PERCEPTION UPON LANDSCAPE REVITALIZATION OF INDUSTRIAL SPACES. CASE STUDY: THE INDUSTRIAL UNITS BELVEDERE CIGARETTE FACTORY AND S.C. MEFIN SINAIA

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ABSTRACT - Many Romanian cities are confronted with difficulties regarding the insertion of redundant industrial objectives in the present urban landscape. This study focuses on two industrial units that have created a certain place identity through time, both undergoing a conversion process, due to relict or underused industrial structures. These industrial units are reclaimed by the increasingly public demand for new construction spaces that are more adapted to the cultural, social, economic and ecological context. Belvedere Cigarette Factory was an important factory in Bucharest because it initiated the tobacco manufacturing in the Romanian capital city. The buildings of the cigarette factory, which were constructed from the late 19th century until the early 20th century, are considered heritage objectives. Currently, some factory buildings and annexes are demolished and in their place shopping and entertainment spaces have been built. S.C. MEFIN S.A. Sinaia was established on a pre-existing industrial unit in 1953 and in 2007 it was decided to be integrated into the services sector (tourist accommodation, commercial spaces, sports and leisure) in order to raise the attractiveness of the area. However, the transformation of this unit cannot be dissociated from the community’s preferences regarding the area’s revitalization (Stan A, 2009, p. 201). The methods applied in this study are the case study research and the survey that allows the comparison of the reuse perception of the industrial units. The need to return these productive areas to the urban context recognizes people (residents) as active participants in the revitalization process of industrial landscapes

Keywords: spatial disparities, perception, industrial landscape, urban regeneration, industrial heritage

INTRODUCTION

In the scientific literature, studies that address issues related to industrial decentralization, relocation of industrial units, deindustrialization and conversion of industrial areas are increasing, approaching different perspectives which are specific to geographers, historians, planners, architects and sociologists. They focus mainly on the impact generated upon the space, neglecting the human component and the psycho-social relevance for the human community induced by this transformation.

Lacking strict regulations regarding the industrial conversion, numerous industrial spaces are quickly converted into residential complexes, office buildings or shopping malls and supermarkets, most often without being based on a study regarding the architectonical importance, the consequences of the transformation process, hence without conducting a public debate or a poll concentrated on respondents living in the surrounding areas that are to be converted and who are directly affected by these transformations.

Through this article we intend to explore this field of analysis and to thoroughly approach the population’s perception on the industrial landscape in two particular areas.
The questionnaire technique was applied during this investigation, being an instrument used in recent studies (e.g. Crown T. in 2003 and Dincă I. in 2004) regarding the population’s perception on the urban space and the effects induced by the environment upon the local communities.

The application of this technique is based on the theory that information and environmental stimuli do not trigger the same reactions due to several features specific to the perception process: it is proper to each individual, either consciously or unconsciously; it differs depending on the age and the social-economic status; it is influenced by individual activities and pursuits; it depends on the variables intuition, common experience and personal psychology (Bailly, 1977, p. 9). Moreover, it reflects the fact that the fundamental feature of space is the discontinuity; hence the territorial evolution of these two particular urban systems determined certain disparities reflected in the community’s perception and the preferred changes that could improve the quality of life.

In order to spatially correlate the information which was gathered by using this technique, we selected two industrial sites undergoing a transformation process: Belvedere Cigarette Factory and S.C. Mefin Sinaia, respectively.

The anticipated results which were developed during the analysis of the relation between a subject (the individual) and an object (the landscape) are the following:

- Identification of certain industrial landscapes inside two distinct urban systems (Bucharest, Sinaia);
- Identification of the inhabitants’ perception related to these types of landscapes inside the two urban systems;
- Identification of differences in perception among residents.

**STUDY AREA**

Since the working hypothesis is that regional circumstances influence the people’s perception on similar urban structures, two areas were selected where the industrial landscape evolved in different manners, influencing thus the attitudes of local communities towards the spaces shaped by industry. On the one hand, the industrial units of Bucharest developed as result of the raw material convergence to the country’s capital and, on the other hand, the industrial units located along the Prahova Valley have emerged in the context of the in situ valorisation of resources.

The reference point for the evolution of the industrial landscape in the two areas is represented by Bucharest’s consolidated role as a political, economic and administrative centre. Furthermore, the new commercial link between Bucharest and Brașov, established on the Prahova Valley, determined the economic progress of Sinaia and the extension of the industrial sites.

Therefore, the enhancement of the industrial function of the two areas resulted in the shaping of a typical landscape, integrated into the urban landscape, consequently, the industrial landscape which is materialized in space through buildings, facilities, access roads, storage facilities, areas for their management and supply (raw materials supply, water, electricity), etc. Thus, „any type activity of processing natural raw material generates new physiognomies and functionalities into the landscape that can be classified as industrial, divided into submultiples resulted from the main types of activities“ (Dincă I. 2004, p. 126).

With the Union of the Romanian Principalities in 1859, Bucharest concentrated a considerable part of the economic and political power, resulting in the appearance of the large industries. Most of them were located at the city’s periphery, next to the entry barriers, thus becoming concentrating poles which subsequently generated the interwar industrial belt. Thus the periphery’s landscape has a specific pattern composed of agricultural fields, orchards, vineyards located at the slums’ limit, invested with the industrial inception of a new status both functionally and perceptually.

Our study area, the Belvedere Cigarette Factory, is located within this kind of pole, “Podul de Pamant” barrier which attracted the implementation of large and varied industrial units (e.g. E. Lesse Parquet Factory, of Industrial Joinery and Wooden Furniture; Luther Brewery and Herdan Mill) (Figure 1).
Figure 1. Location of Belvedere Cigarette Factory, Bucharest

Figure 2. Location of S.C. Mefin, Sinaia
Bucharest Cigarette Factory of Belvedere Cigarette Factory as it was commonly known in the interwar period firstly appeared in 1864 on E. Grant’s estate. During the following years, the manufacture was modernized and extended, resulting in its integration into the state’s monopole (under the law of 6th of February 1872). Consequently, between 1888 and 1909, the existing buildings were replaced with more efficient and larger ones. Some of the new facilities provided location for processing activities and tobacco marketing and they are partially present in the current landscape even though transformed.

Starting with 1929, the unit developed under the constant tobacco industrial extension. In 1912, the Belvedere neighbourhood emerged with the support of the Communal Society for affordable housing, meanwhile it developed under the name of Grant (Duțu M. and Duțu A., 2000, p. 42), the former estate. This neighbourhood was destined to the factory’s workers; this was the first case in the Bucharest’s modern history when a residential space was formed around an industrial nucleus and not around a church or a mansion as in the classical pattern. The factory became the centre of the community, so that, starting with 1930, a pharmacy, a nursing home, a kindergarten, a clinic, a park for the employees, a sport field, a primary school, an apprentice school, a public library and a chapel were created here (Duțu M. and Duțu A., 2000, pp. 47-48), justifying the common appellation of “tobacco citadel”.

During the Second World War, the cigarette manufacture was partially destroyed in the bombardments, but was reconstructed after 1960 and extended with a new workshop. Once the factory was closed, the buildings were rented to different firms and institutions which used them for storing or as small workshops. Part of the buildings was included in the new functional structure of the space. It is the case of Orhideea Bricostore store, which integrates the water tower created in 1908. This is due to recognizing Belvedere Cigarette Factory as a historical monument, under the industrial architecture class. Despite the attempts to harmonize the past and the present in the creation of the new building, today it represents a spatial dichotomy in relation with the remaining heritage buildings, implicitly the water tower, currently used as office space.

The profound changes also affected the neighbouring urban vicinity, Grant district, where, after 2000, a gentrification process appears as obvious because the standard original workers houses were gradually occupied by people with high social status, who modified the architectural characteristics.

The Fine Mechanics Factory in Sinaia (Figure 2) was founded originally outside the limits of the town, in 1878, for the production of lime, lumber, nails and screws, correlated to the unit’s location near raw materials, with the possibility of using the water power and having accessibility to the main roads (Macovschi E., 1946, pp. 334-336). The town’s industrial development was simultaneous with the creation of the resort profile, through the intervention of Eforia Spitalelor Civile (an institution of social assistance created for the management of hospitals in the country, which was financed out of private donations).

The economic relations with the surrounding industrial centres amplified as a consequence of the rail road construction and the emergence of the metallurgical processing, thus contributing to the creation of a micro-regional economical cohesion. During the Second World War, the factory produced munitions, but following the nationalization of 1948 and the decision to develop large-scale tractor fabrication, it started to produce injection equipment. In order to guarantee a stable workforce necessary for the production, starting with 1918, houses for the workers coming from the neighbouring villages were built in the surrounding area of the factory.

In the ‘60s it gained access to the latest German and British technologies and equipments, becoming the most advanced producer of diesel injection manufactures in Central and Eastern Europe. Due to the increased production, the industrial area increased from 1.46 ha in 1940 to 8.9 ha in 1980. Moreover, several technical schools were opened in the working-class neighbourhood and also new block of flats. By 1989, the industrial unit became a particular symbol in the collective consciousness.

After 1990, the situation changed due to the economic decline. The industrial restructuring finalized with the decrease of 73% of the workforce between 1991 and 2003. Unemployment led to the migration of the inhabitants and the neighbourhoods underwent a gentrification process.
Currently, in both cases it is observed how the industrial function of the urban space is decreasing with the amplification of the services one. The transformation process was initiated by the economic changes and the industrial decentralization which started as a slow process, recently accelerated, determining high social inequalities in Sinaia due to increased unemployment.

Today, much of the industrial buildings are unproductive, the industrial artifacts are affected by a high degradation degree. Occupying a significant surface of the urban space (8.7 ha in Sinaia and 1.47 ha in Bucharest), the industrial areas represent a challenge for the local authorities, requiring to be integrated into sustainable development plans, representing an opportunity both for investors and for local communities who can benefit from the insertion of necessary urban services.

**METHODOLOGY**

The geographical research is being confronted with the need to define the interrelations between environment – landscape – the attitude towards landscape – and the way in which the human communities are being affected by the landscape quality or a particular type of landscape.

A major challenge is the implementation of a methodology to identify and analyze territorial planning disparities in a systemically approach, at the level of the smallest administrative unit, since the intervention of the decision factors could be thus more efficient.

In order to explain these correlations, we used an approach specific to the social geography domain to understand the dissimilarities in the perceptive process and find a useful instrument able to offer information related to the way people perceive landscape changes, then integrate this information in a spatial reference (Bailly A., 1977, pp. 40-41). The following phases were established:

**Determining the general and the specific objectives**

The framework of the study and therefore of the questionnaire is to analyze the perception of the industrial landscape reuse within distinct urban systems. A series of specific objectives were withdrawn:

- The identification of the awareness degree regarding the current situation of industrial reuse in two distinct urban systems, separated both socio-economically and culturally, namely Bucharest and Sinaia;
- The identification of the awareness regarding the impact of the industrial units upon the environment;
- The identification of needs and preferences in relation to the urban landscape;
- Reviewing the transformation potential, focusing on the community’s needs.

**Determining the possible hypotheses**

- Not all persons to be surveyed are aware of the current state of the industrial landscape and the transformations unfolding within them;
- Most respondents would not agree with the structural and functional transformation of the industrial units, thus they do not recognize in this a form of urban regeneration;
- Most respondents would choose in favour of transforming relict industries in medical centres, green spaces, structures for recreation and entertainment, since they represent the major deficiencies of the two urban systems;
- Most respondents will highlight the poor state of the urban environment (through its elements: environmental quality, street texture and traffic, etc.), without determining a way to improve the community’s quality of life by transforming industrial spaces.

**Determining the sample to be surveyed**

The investigated sample was established considering the fact that people generally have a deeper knowledge of the neighbourhood they live in, of the spaces where they go to work, go shopping or spend the free time, and have a lesser understanding of the spaces that do not have a particular functionality for them (Brunet R. cited by Bailly A., 1977, pp. 14-15).
Therefore, we applied 60 questionnaires in the close vicinity of the industrial space, in the related working-class neighbourhoods, on a 50-100 meter radius. We consider this population sample to be the most representative for our study by reason of being directly affected by the changes of the industrial spaces; it is the population with the highest degree of knowledge of this space and its evolution because the people have been living in these areas for a long period of time.

The population’s satisfaction regarding the quality of the urban space depends on the respondent’s age and the residential length in that area: the longer we live in a neighbourhood, the more precise our image of that space becomes.

Establishing the research method and creating the questionnaire

The technique we used is that of the questionnaire, a very useful tool in investigating certain aspects of the space. It represents „a logical and psychological series of written questions or graphics with stimuli function, in relation with the research hypothesis, which are being administrated by investigation operators or by self administration, thus determining a verbal or nonverbal reaction that will be registered in writing” (Chelcea S., 2004, p. 105).

It serves to „produce explanatory data” and focuses both on the analyzed phenomena and the determining factors. It intermediates the approach of a wide variety of specific issues – events, phenomena, particular process, knowledge, state of awareness of the reality, which are useful elements in studying the community’s perception upon the urban transformations.

Depending on the phenomena that are intended to be studied, we have chosen a type of questionnaire that would reproduce most clearly the phenomena and offer explicit data. Considering the covered information type the currently used questionnaire is an opinion one, which records subjective data (opinions, attitudes, motivations and interests, tempers and inclinations). Through it we analyzed not only the opinions of the surveyed persons, but also their intensity.

RESULTS

The list of questions forming this questionnaire represents the investigation tool; hence, it was given a particular attention. Using this criterion, the questionnaire has pre-coded or closed questions.

The applied questionnaire includes six questions, chronologically arranged, from present to future, completed by five identification and personal questions (gender, education, current occupation, age group and whether they are or are not residents from this area).

From a psychological point of view, these questions unfold from establishing the psychological contact to the essential questions for verifying the research hypothesis, consequently from the neutral questions to those with emotional significance.

Correlated with the question’s role, the questionnaire includes an introductory question, two passing questions, three questions concerning the respondent’s attitude towards the addressed problem and five identification questions.

The first objective of our study is identifying the awareness level regarding the current situation of the industrial conversion in these two distinct areas. It is set through the introductory set of questions out of which we highlight the item „knowledge of the current state of transformation in the neighbouring redundant platforms”, indicating the respondent’s understanding of his/her quotidian space. Consequently, a proper perception of the present industrial landscape was observed in both cases. Thus, 90% of the respondents from Bucharest are former employees of Belvedere Cigarette Factory, while in Sinaia, the share of the former and current employees represents 60% of the total due to the fact that former employees have left the town in search of a working opportunity and their homes have been occupied mostly by seasonal residents from Bucharest as a second residence.

The passage set of questions mark, in the questionnaire’s structure, the introduction of a new problem. The most relevant item in this set concerns the awareness level regarding the urban reality and the changes within the urban morphology. In this phase, the subjects are asked whether they are aware of the transformations brought to the industrial units located in their neighbourhood. In the case of Sinaia, 60% of the respondents affirmed that no changes have occurred in the industrial landscape, and the rest did not perceive any modifications. In the case of Bucharest, the majority of 56.6%
answered that the industrial units are partially changed, through the creation of a commercial centre which integrates elements of the old industrial structure.

The second objective is to identify the awareness regarding the impact of the industrial units upon the community’s neighbourhood elements. The items in the questionnaire explore if there are any perceived degradations of the environmental quality (reflected in smells, smog, poor water quality) due to the industrial presence, if there are pressures upon the street texture due to the auto traffic that converge towards the industrial unit or increased danger for the pedestrian traffic or for housing, if the access to certain urban services (e.g., schools, medical centres) has changed due to the evolution of the industrial unit and finally if they are aware of the impact upon the general neighbourhood’s landscape.

Out of the total responses (Figure 3), it is noted that in Sinaia, the industrial restructuring has a highly positive impact on the environmental quality (57% in Sinaia) due to the decrease of traffic and smog.

The impact upon the traffic’s intensity has a lesser importance in Bucharest, where 51% of the respondents think that these transformations will not improve its quality. In Sinaia, 56% of the community consider that the transformation influenced the pedestrian traffic in a positive way, while in Bucharest, there was no modification observed.

As regards the housing security, 81% of the questioned population of Sinaia support the closing of the industrial unit due to the fact that in the past it represented a polluting source and a source of hazardous incidents. In Bucharest, the highest share of population has a moderate perception on this issue, since they do not consider the unit to have an immediate dangerous effect on them. Even though the community of Bucharest considers that the conversion has a positive effect on the quality of landscape, the responses have appropriated values, without being conclusive, as for Sinaia, the share of 60% of positive responses reflect a higher observed impact.

The pensioners have a general positive perspective regarding mainly the improvement of the environmental quality (33.3% in Sinaia and 16.6% in Bucharest), the pedestrian traffic (40% in Sinaia and 16.6% in Bucharest), the housing security (46.7% in Sinaia and 16.6% in Bucharest) and a more moderate impact in the case of streetscape and traffic, the access to urban services (30% in Sinaia and 16% in Bucharest) and the neighbourhood’s landscape (Figure 4).
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Figure 4.

The employees in Sinaia consider that the positive impact is limited only to the environmental quality (26.7%) and the housing security (33.3%). All the questioned employees in Bucharest agree that all the neighbourhood’s elements are positively influenced by the industrial landscape transformation (Figure 5), while the unemployed population gives a variety of answers in both cases, suggesting the heterogenic relation of these groups with the former factory (Figure 6).

Figure 5.
The third objective is to review the transformation potential, focusing on the community needs and preferences in relation to the urban landscape.

In this regard, a key item of the questionnaire inquires the respondent’s preferences on the possible transformations that are to be brought to the industrial units found in contiguity with the residential space (Figure 7).

Figure 6.

Figure 7.
The community’s general inclination, in both cases, is for the completion of the urban functions and the harmonization of the urban development projects. In this regard, in Bucharest, the respondents wanted new green spaces and playgrounds to be arranged (20.6% of the total), medical centres (17.5%) and industrial museums (10.3%), the last choice being in accordance with the architectonical potential of the remaining industrial building. In the case of Sinaia, most respondents are in favour of the insertion of a shopping centre (22.9% of the total), medical centres (18.6%), cafes and restaurants (15.7%), reflecting the current low degree of diversification of urban services, in spite of the town’s tourist profile.

On social categories, the alternatives chosen both by the employees from Bucharest and Sinaia reflect the general hierarchy of preferences (in Bucharest: green spaces – 23%, medical centres – 17% and industrial museums – 17%; mall – 28%, medical centres – 12%, cafes and restaurants – 20% in Sinaia).

In both cases, the pensioners from Bucharest and Sinaia agree with a more efficient organization of the space and the improvement of the vicinity’s functionality and aspect by providing easy access to services that cover their immediate needs (medical centres – 24%, green spaces – 21% in Bucharest; medical centres – 23.7%, shopping spaces – 18.4% in Sinaia).

The unemployed population mainly support the creation of green spaces (15%) in Bucharest, while in Sinaia they prefer the possibility of opening new manufacture workshops (33%) in order to benefit by the advantage of not being forced to practice daily commuting to distant cities in the counties of Prahova or Braşov (Figure 8).

Figure 8.

Depending on the education level, in Bucharest, the expectancies of the population with medium and high level of education are determined by the opportunity of increasing the real estate value through the insertion of new residential projects, medical centres, expositional centres and museums, while those from Sinaia prefer spaces to spend their free time and projects meant to absorb the unused labour force appeared after the industrial restructuring, a fact confirmed by their choices.
We consider this item an important aspect to be taken into account in the urban planning policies, where decision-makers should consider the community’s preferences when approving a development project. In Bucharest, the overall trend in the community’s responses is to constantly support the reshaping of former industrial spaces, reflecting the requirement of the entire city. Hence it is clear the need to transform the urban texture in order to be more facile through the use of old and new landmarks (e.g. an industrial museum). In Sinaia, we observe that the main services should be brought closer to the community, covering the deficiencies expressed in the analyzed neighbourhood. The given responses reflect the disparities manifested in the urban planning and development.

CONCLUSIONS AND PERSPECTIVE

After investigating the community’s opinion about the possibility of urban regeneration through the reuse of the closed industrial spaces and the relation with the neighbourhood, we reached the conclusion that more an area is visible in the urban context, as in the case of the two industrial units, the greater the option to transform that will be expressed by the communities which prefer the vicinity of proper urban structures able to meet their current needs.

We observed that the perception of the industrial landscape involves not only the pure visualization of particular elements (which by shape, function or position are marks in the urban landscape) or constant elements (which became common in the urban texture through repeatability), but also the integration of individual experience (Bailly A., 1977, p. 52). Experience is part of the perceptual process and memory records previous sequences.

Therefore, the perception implies the life’s framework, memory and imagination, synthesized in the image concept. In this regard, this study will continue with the parallel analysis of the two industrial units in view of transposing the data collected through the questionnaire in a sketch following the principles of Lynch’s urban image. It starts from the idea that residents hold only segmented images, depending on the internal reference system. The criteria that facilitate the perceptual schematization are:

- **Scale**: meaning in this case the industrial volumes standing out in the urban landscape;
- **The flowchart**: it is predetermined through culture and education. It was observed that the respondents recorded a certain number of familiar buildings (the water tower at Belvedere Cigarette Factory, or Băneasa bridge or the rotating pump plant in the case of Mefin Sinaia) symbolizing the logical functionality of the space they interact with or they live near to;
- **The landmarks**: physical, cultural and psychological, help people locate in relation to the type of space, shape, colour, smell, all the elements that determine its character. The special features of the two industrial landscapes function as structuring landmarks of the urban space.

This study resulted in observing that spatial disparities developed within two different urban systems are the consequence of unequal urban organization of the structures and functions, perceived as disruptions.

The questionnaire reflects at a smaller scale (within the analyzed areas) the general needs of different urban systems. Firstly, in the case of Bucharest, it emerges the imperative to better manage the extent of built and green spaces; secondly, in the case of Sinaia, we have identified the option for a development in the direction of services and small workshops to ensure the enhancement of the community’s quality of life.

Consequently, generating spatial cohesion of different urban structures (industrial spaces, commercial and residential) involves mitigating the existing disparities in the degree of organizing diverse urban landscapes, the implementation of differentiated policies that should consider the peculiarities of these areas.

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