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CONCRETE ESTATES AND AGEING RESIDENTS

BETONOWE OSIEDLA A STARZEJĄCY SIĘ MIESZKAŃCY

Abstract

The paper presents researches related to the analysis of social change in the context of an aging society. The subjects were: age structure, family status, physical fitness. The researches were conducted in one large prefabricated housing estate in Wrocław – Szczepin. The analysis aims to create a model of activities that will lead to satisfy the needs of the aging residents of the estate.

Keywords: slabs technology building, estates, ageing residents

Streszczenie

W artykule przedstawiono badania związane z analizą przemian społecznych w kontekście starzejącego się społeczeństwa. Badaniom poddano: strukturę wiekową, status rodzinny, sprawność fizyczną. Zostały one przeprowadzone w jednym dużym prefabrykowanym osiedlu mieszkaniowym we Wrocławiu – Szczepinie. Analiza ma na celu stworzenie modelu działań, które będą służyły zaspokojeniu potrzeb starzejących się mieszkańców osiedla.

Słowa kluczowe: budynki z wielkiej płyty, osiedla mieszkaniowe, starzejący się mieszkańcy

1. Introduction

Concrete is often referred to as an artificial stone (it is a mixture of cement, aggregate and water). It was invented and used in the construction industry in Assyria, then in ancient Rome. In subsequent centuries, it was used for decorative castings and, in principle, it was not used on a large scale. In the 19th century (after the invention of Portland cement), it became widespread as a building material. It gained many supporters in the period of the development of wheel transport during the interwar period, for the construction of roads. A new style – Modernism – used a wide range of concrete and caused a diffusion in architecture. The concrete architecture of modernism is often badly associated, mainly because of slabs housing estates.

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A considerable part of the Polish society lives in prefabricated housing estates, commonly called “bleak housing projects”. The 1970’s and 1980’s were the “Golden Period” of large panel construction in Poland. With time, such housing estates were affected by ageing. Along with the age of housing estates, the advancing age of its occupants resulted in a change of their social structure. In the 70’s and 80’s, the estates were inhabited by young people, mostly families with children. Having grown up, the children moved out of these flats and left their ageing parents alone. That is why these housing estates are mostly inhabited by elderly people who often live alone. As a result, new problems connected with addressing the needs of this particular group of tenants/occupants emerged. The analyses presented in this study continue my over ten-year research on the problems inherent to prefabricated housing estates. Despite the constantly growing number of new flats, prefabricated housing estates are still home to a large portion of the population in Poland (approximately 12 m, which amounts to about 30% of the entire population). It should also be mentioned that these buildings are not in such a bad technical condition as the media or press seem to suggest in broadcasts and articles, which has been confirmed by research conducted by the Faculty of Civil Engineering of the Wrocław University of Technology. The fact that the occupants of prefabricated housing estates get older and their needs keep changing with time is an important aspect of this study.

The aim of this study is to show social changes resulting from the ageing of the society and taking place in prefabricated housing estates. Therefore, an important aspect of the project is to conduct social research and evaluate the quality of the environment in which elderly people live, and then to select solutions, which can improve their quality of life based on their real needs and their psychophysical abilities. Social psychology shows a close relationship between a human being and his/her living environment. Maslow’s or Gehl’s theories are well known. According to Maslow, human motivation changes as needs are satisfied at each subsequent level of personal development. Human needs are hierarchical in nature and thus need to be fulfilled in a given order: first, fundamental needs have to be met in order to effectively meet the higher needs. The most fundamental needs are physical requirements for survival: need of food, shelter and clothing. Safety needs, which come second, take precedence when the first are relatively satisfied. A man in extreme hunger (need for survival) will primarily think of food, and only after satisfying this hunger will he turn to the higher need of safety. Once physiological, financial and emotional safety is present, the need of belongingness and love emerges. Man is a social being and needs to feel loved, liked and accepted by others. The fourth in the hierarchy is the need of self-esteem, related to self-respect, whereas the need of self-actualization is at the top. On the other hand, the Danish psychologist J. Gehl, who also deals with similar issues, identifies three other types of needs that should satisfy the occupants, which are as follows: the feeling of safety (home, protection from pollution and noise, safety of communication), physiological needs (rest, food, drink, sleep, air, light, hygiene), psychological needs (contact, belonging, orientation possibilities, identification).

It can thus be concluded that there is a close link between the quality of the residential environment and the quality of life of the elderly. It is evident that satisfaction of people with their place of residence is closely connected to the specific requirements related to age. Therefore, it is important to learn about all the problems and aspects related to the ageing process.

Analyses show that the Polish society will keep getting older and older. The topic is also more and more popular with the media. Therefore, the needs and abilities of this

particular social group should be closely investigated. The issue is very complex, as it combines many problems. Dealing with the issue of the elderly in Poland is connected primarily with the establishment of the Polish standards of conduct, since the economic, social, philosophical and religious situations differ from the solutions worked out in the West (and for this reason, they cannot be adopted directly in Poland). For many years, Western European countries have developed a model of retirement homes, which are very popular there. Yet, Polish reality is different from the one in the West. It must be stressed that not all elderly persons will end up in retirement homes. They are too expensive or offer poor living conditions. Most of today's retirement homes can be commonly labelled as "dying homes", where the elderly end up not of their own volition, but are most often placed there by their families. Such facilities are in poor condition and the housing conditions make the elderly feel lonely, abandoned and often ill.

It must be stressed that the majority of elderly persons do not want to move out of their homes. Therefore, they should be allowed to live in their previous residential environment as long as possible. It is even more important since research shows that one of the conditions for good physical fitness in the old age is being independent. Such independence is possible primarily by owning and taking care of an apartment, which makes us feel "at home". People say that "old age is not designed properly", but it comes to all of us and we should already start thinking about the conditions in which we want to spend the last years of our lives. That is why any voice that promotes dignified ageing and shows how to live and spend leisure time is worthy of attention.

The conducted research shows that initiatives must be directed at three fundamental issues:

- improvement and adjustment of the residential environment to changing needs,
- education of the elderly at various levels, taking into account their actual abilities,
- broadly defined encouragement of the elderly.

2. Old housing estates – old persons

The housing estate selected for analysis is Szczepin – the estate was erected in the 1970's with the use of the large panel construction technology. The analysis includes historical context, cultural environment and architectural and urban solutions, including location, basic parameters, land development and its morphology. Social structure, types and possibilities of leisure activities were also subject to analysis. Investigating the structure of the housing estate with regard to the elderly, their needs and ability to adjust to the needs of this increasingly numerous group of occupants is also an important element of the research.

The profile is based on an analysis of the real property market performed with real property agencies and shows that 40% of their current turnover includes flats on prefabricated housing estates. Surprisingly, these flats are not as cheap as one might assume. In Wrocław, the average price of a prefabricated flat built before 1990 is lower in comparison to new flats, but the difference is only about PLN 300–400 per m². What is more, in some cases, the prices are higher than the average price of flats in the resale market. The price analysis was performed for flats located at the prefabricated housing estate subject to research, located in the western area of Wrocław. The buildings were erected in the period from 1970 to 1980.



- III. 1. The map with the boundaries of the Szczepin estate, <http://wiki-mapia.org/4199020/en/Szczepin> [26.06.15]
- III. 2. Church
- III. 3. View of high buildings
- III. 4. A billboard advertising services

The above analysis of the prices of flats in the resale market suggests that they are very similar to the prices of flats in the primary market (development flats). It gives rise to questions about the grounds for such “attachment” of Poles to “prefabs”, since the popular opinion about such estates suggests their attitude should be quite contrary. Given these data, one should take a closer look at the location of such housing estates within the city, their communication links, quality and proportion of green areas, availability of services as well as architectural and functional solutions for the buildings and urban planning solutions.

3. Szczepin North

3.1. Location of the area – basic parameters

The area is located within the Stare Miasto (Old Town) district. It is quite close to the city centre, 2 km from the Old Market and about 800 m away from the outbound route to Zielona Góra. The boundaries of the estate are outlined by Zachodnia Street in the south, Młodych Techników Street in the east, Ścinawska Street in the north and Poznańska Street in the west. The analysis covers real properties with a total area of 8 ha (400 m x 200 m) and occupied by 3000 people.

3.2. Cultural environment

The area is located in the western part of the Old Town. It is adjacent to residential areas in the south, recreational facilities in the east and west, and educational facilities in the north. The cultural context of the estate involves facilities located in its direct proximity:

A. The brick building of the Complex of Schools No. 18. The building was erected in the 19th century in accordance with the assumptions of neoclassical architecture. The school consists of two 4-storey buildings (A and B). The area between the buildings is filled with greenery. During spring and summer, the area makes a perfect place of relaxation for students during their breaks. Complex of Schools No. 18 combines Junior Secondary School No. 37 with classes specializing in sports (swimming, handball, athletics, judo) and classes specializing in mathematics and IT with Secondary Technical School of Mechanical Engineering No. 3, providing its students with education in the following specializations: mechanical technician, electrical technician and mechatronics technician. The school has a 60-year history. It has signed contracts for long-term cooperation with such enterprises as Pneumat System Sp. z o.o., Viessmann, Ruukki Polska Sp. z o.o., Volz Gruppe, ABB in Poland, Elektrotim S.A. and Wrocław University of Technology. The cooperation is aimed at better conditions of vocational education. The facility can boast thousands of graduates, including distinguished representatives of the technical, academic and political elite of the city. It provides its students with conditions for comprehensive development and thorough education in particular areas of specialization within particular types of schools. It owes its potential to professional teaching staff and modern equipment. Its backup facilities include a multimedia room, computer rooms, Multimedia Centre with 24/7 Internet access, gyms equipped with electronic running track, complex of courts for team games (including a 350-metre running track,



a long jump runway), lecture theatre, Multimedia Information Centre and a rich film library. Security within the facility is ensured with a vision monitoring system. Both the library and the reading room are properly equipped and student-friendly. Numerous student and school events are held at the school "Icarus" Club. Both buildings have their own cafeterias, which offer a rich selection of hot meals.

B. Christ the King Church – Roman Catholic parish run by the Society of St. Francis de Sales. The building of the church from 1971 has been designed by a famous architect, Witold Molicki. Construction of the church took a long time and it lasted from 1978 to 1991. It is a distinctive and recognizable spot in the neighbourhood as well as the city. Apart from the church itself, the building houses the Dominic Savio Private Silesian Grammar School. It has been designed as a two-level structure. The upper level houses the church; the lower level houses the monastic chapel. The form of the building is a reference to a regular pyramid made of four parts (each part makes $\frac{1}{4}$ of the pyramid) with various heights. The projection of the church is an example of a central layout and it is based on the square. The ceiling is decorated with a structure resembling a crystal whereas the space above the altar is filled with the sculpture of Christ the King by R. Zamoyski.

3.3. Development morphology

The estate was created by W. Molicki. The spatial structure of the estate is dominated by multi-family development areas. They consist of middle-rise and high-rise buildings erected mostly with the use of panel slab technology and fitted with external thermal insulation to a large extent. The estate is not fenced off, which makes it easily accessible. Moreover, it has a network of paths across the greenery, which allows its occupants to move about freely and in pleasant surroundings. The analysed area has a compact, rectangular layout divided by Litomska Street into two, clearly defined parts with transparent urban development.

An analysis of the estate in terms of urban development shows the following:

- The estate is friendly and receives positive opinions from its occupants.
- It has a transparent layout with clearly designed, green, enclosed interior spaces and good proportions taking human scale into account.
- Parking space is separated from recreational areas.

3.4. Communication

An analysis of communication within the housing estate shows the following:

- The existing roads provide a good connection with the city centre and other parts of Wrocław.
- Thanks to convenient connections with outbound and bypass roads, getting out of the city is quick. Difficulties in communication result from heavy traffic at Legnicka

Ill. 5. Parking spaces

Ill. 6, 7. View of recreational areas

Street during rush hours, but occupants can avoid this route by taking one of the two neighbouring streets with lower traffic congestion – Zachodnia and Długa.

- The nearest bus and tramway lines (500–800 m away) provide its occupants with direct access to 20% of the entire area of Wrocław.
- A convenient location of bus and tram stops, which can be found no further than 500 metres from one's place of living.
- A significant shortage of parking space is visible within the estate despite outlined parking lots and garages, which forces its occupants to park their vehicles with violation of traffic regulations (on pavements, lawns and greens).
- Shortage of bicycle lanes, especially within the internal area of the estate.
- Poor quality of pedestrian routes, which are unaesthetic and have no amenities for the disabled.

3.5. Recreation areas and greenery

Analysis of the estate with regard to recreational areas and greenery shows the following:

- The housing estate has a sufficient quantity of recreational areas within its public space and its occupants are glad to make use of them.
- Very large recreational areas are available within its semi-public space (quarters of the estate's developments). Yet, the area does not necessarily correspond with the quality. The areas are rather untended.
- A considerable part of the estate is filled with greenery (including high, middle and low vegetation). Sadly, it is usually far from tidied up or well kept – lawns are trampled down, choked with weeds and not mown.
- Elderly occupants are very eager to make use of recreational areas.

3.6. Social infrastructure

An analysis of social infrastructure of the estate shows the following:

- The estate has good access to a number of facilities, especially educational ones, which can be enjoyed by the elderly, e.g. swimming pool at the school.
- Availability of commercial services is rather limited.
- The estate can boast a social club, which is also available to the elderly.
- Catering services are missing and it takes a long walk to other areas of the estate to find them, which is a serious drawback for those elderly who prefer to eat out.
- Not all services are accessible for the elderly and disabled. Some facilities are located on higher storeys, which are accessible only by a stairway (no wheelchair access ramps, lifts or platforms).

3.7. Technical condition of building and infrastructure

The technical condition of buildings can be qualified as average. Residential buildings have been erected with the use of Wrocław Panel Slab technology:

- All buildings are supplied with central heating (municipal network), water and gas.
- Some flats are equipped with air conditioning systems. Yet, such systems are private investments and air conditioners are installed on balconies and exterior walls, which affects aesthetics of the building in a negative way.
- 5-storey buildings have no lifts whereas 11-storey buildings have been equipped with such facilities.
- All buildings have undergone thermal performance improvement.
- The majority of flat owners replaced old windows with new ones.
- Most staircase entrances are accessible for the disabled.

3.8. Demography

A large proportion of occupants are persons over 60 (about 40%). These people have been living on the estate from its beginnings. They moved into their flats as young couples and have been living there until today.

At the beginning of the 21st century, after 2006, a considerable number of young people appeared on the housing estate. It resulted from the onset of new financial programme called RnS (A Family in its Own Home). The programme enabled families to take advantage of preference mortgage loans. During that period, many young couples purchased flats on this estate, as they were relatively inexpensive and rather small whereas the proximity of recreational areas and educational services made (and still makes) it a perfect location for young couples with children. They can be seen within recreational areas on a daily basis.

3.9. Accommodation options

The estate offers accommodation in a variety of dwellings, from studio apartments to four-room flats. The estate has been developed with four types of buildings: 11-storey buildings with staircases and corridors and 5-storey buildings with staircases, housing two or three flats on every storey. Despite the fact that the estate has been designed and erected with the use of industrial technology, the structure of flats is diversified. It results, among others, from a diversified size of individual units.

4. Summary

In Poland, a large part of citizens still live in settlements from the 70s, built using the concrete panel technology. Despite the continuing warnings of the poor quality of materials used, standardization solutions or the size of housing, these estates have a good reputation among their residents. The analyses carried out in the study also confirm the opinions of the inhabitants. An important advantage of these settlements is the location. In many cases, the neighbourhoods are located in the vicinity of city centres and are well communicated with the rest of the city. An important element of the quality of residence is the proximity of widely

understood services, both commercial as well as educational, or recreational. The surveyed estates have services at a higher than satisfactory level. They are characterized by a large amount of greenery, recreation and sports facilities. One could say that they are a good place to spend free time. However, an important aspect of the further development of these settlements is the question of old people, the number of which is definitely increasing and the housing environment is not adapted to their needs. With some financial resources, there is the opportunity to improve the quality of residence, which can be carried out through a series of activities facilitating the life and functioning of old people, including the disabled. These activities can be divided into several groups:

- Adjustment
- Adaptation
- Intensification
- Reduction
- Cohousing

Ad-a) Adjustment

An important aspect of the functioning of the settlements, built in concrete panel technology, is their adaptation to the needs of the elderly, including the disabled. So, all important points located in the neighbourhood, i.e.: shops, health centres, churches, recreational facilities should meet principles of the “universal design” and be accessible to people with reduced mobility. Green areas, communication routes (sidewalks, roads, pedestrian crossings), benches should be adapted and equipped with facilities for use by older people. The same applies to parking places that should be designed close to the entrances of buildings or under buildings, with special attention to places for people with disabilities.

Ad-b) Adaptation

Another element that can make it easier for older people to use the existing housing tissue is the adaptation that can take place in different spheres of activity. Starting with the scale of your own home (micro), through the scale of the building (mezo) and ending with the scale of the settlement (mega). In adaptive activities, it is important that the space used is adapted to your needs. The simplest solution is the adaptation of housing, because it does not require radical actions, the consent of other users or high financial expenditure. In many cases, the most difficult to reach can be the adaptation of the building, e.g.: to the needs of the elderly and disabled. This is connected with the introduction of lifts, which in the surveyed settlements are very rare. Adding an elevator to an existing structure is a costly investment, often requiring intervention in changing the functional staircase. However, in many cases, in order to ensure the proper environment for older people, it seems unavoidable. It is also important to adapt the space of the settlement to the elderly. If, for example, the housing estate has too many insufficiently used facilities, i.e. schools, kindergartens (because of the demographic decline, there are fewer and fewer pupils in schools), some of the rooms can be adapted to Universities of the Third Age or create places for the integration of the inhabitants. The new solution may be the allocation and adaptation of one or more buildings in a housing estate for the needs of the elderly. On the one hand, it is so good that there is no need to adapt all the buildings but just a few, on the other hand, however, certain evictions are required, which can be very difficult in the case of housing ownership. However, it is not impossible to implement.

Ad-c) Intensification

Housing estates built in concrete panel technology are characterized by a relatively low floor area ratio; hence, in recent years, developers have been interested in free space. It comes to the creation of new plots and intensification of the building. Whereas new housing units are a classic developer's solution with high building density, they generally function as fenced estates. Foreign examples show that older people are well-behaved in the environment they are accustomed to, which they know, and if they are also surrounded by younger people. Hence, a solution appeared for the introduction of new buildings for the elderly in the neighbourhood of existing housing estates. Thanks to this solution, the old person stays in an almost unchanged habitat and a new object, adapted to the needs, allows for good functioning. Such intensification activities can be a much more interesting alternative to current developers' solutions and solve the problem of old people who, against their will, have to move to new and unknown places.

Ad-d) Reduction

The above-mentioned actions may also involve a reduction of dwellings as well as construction structure. High buildings that do not have enough inhabitants can be transformed by reducing the height – the number of storeys and the removal of building fragments. And in the case of apartments that are too small, it is possible to combine them. Such actions in Polish conditions are quite visionary, while they are quite commonly used in Germany – a great example is the Gorbitz estate in Dresden.

Ad-e) Cohousing

Alternative housing for the elderly may be cohousing or community, and is now called a cooperative in Poland. The concept of cohousing was adopted in the Scandinavian countries and from there moved to other countries of the world. It seems to be one of the best solutions that, in the present situation, can be offered to old people in housing estates built in concrete panel technology. The idea is to create communities, such as a staircase or a building. Residents can adapt the loft or basement spaces (there are a lot of them in panel buildings) to communal areas where meetings, dinners, events, training and thematic workshops will be organized. Due to the large areas of the neighbourhood, it is possible to develop fragments for common spaces that are geared to the needs of the elderly, such as greenery, barbecue and meeting spaces, theme gardens and vegetable gardens.

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