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Spontaneous transformation of single family house settlements from 1970–1989 on the examples of Polish cities

Introduction

Spontaneous – according to the dictionary it means unplanned, running without a plan. The use of such an adjective in relation to the modernization of individual buildings in one housing estate was used by the author on purpose. He treats an estate as one coherent whole, creating the full urban layout, and each individual building as its inseparable part. Any modernization processes, planned only within the boundaries of the house plot, significantly affect the reception of the entire complex, which is especially true when modernization concerns a large number of buildings. In this context – the context of a whole estate, these instances of building interference are not a planned activity, but rather chaotic and usually causing “visual confusion” in the estate. Problems related to uncontrolled and spontaneous transformation of the urban landscape of single-family housing complexes from the period of the Polish People’s Republic are visible, however, they are on the margins of the debate between architects and city managers. These transformations arise from the need for adapting buildings to the current standards of thermal insulation, comfort of living and broadly understood condition of the building. Uncontrollable and not well thought over modernization actions are highly justified, however, they usually introduce chaos and dis-harmony into the housing estate space. We still do not have any regulations which could control and help inhabitants in the proper conducting of such activities.

The research questions posed by the author concern the possibility of preserving this, already historical, housing, while at the same time raising its standard and adapting it to

current requirements and standards. By analyzing selected housing complexes, the author tries to systematize the modernization and house transformations taking place there.

Theoretical background

In the housing economy of the Polish socialism period, four characteristic stages can be distinguished, falling into the next four decades of socialism. The first is a period of Stalinism, lasting from 1946 to 1956. It was a time of intensive reconstruction of Poland after the war and the settlement of the Recovered Territories (northern and western Poland)¹. A compulsory flat management was introduced, based on the top-down allocation of flats and compulsory accommodation of tenants in private flats. During the Stalinist period, the housing cooperative movement² was almost completely liquidated and replaced with a centrally controlled institution – the Central Cooperative Union. After 1956, Władysław Gomułka became the first secretary of the Central Committee of the Polish United Workers’ Party until 1970. The housing policy pursued by his

¹ First legal regulation that had a real impact on the improvement of the development of individual housing in Poland was *Uchwała Nr 81 Rady Ministrów z dnia 15.03.1957 w sprawie pomocy Państwa dla budownictwa mieszkaniowego ze środków własnych ludności* [Resolution No. 81 of the Council of Ministers of March 15, 1957 on state aid for housing construction from the population’s own funds] [1].

² The spontaneous development of housing cooperatives occurred at the turn of the 1950s and 1960s, when their role began to increase as a result of changes in the housing policy. In the 1970s, in connection with the housing crisis, the government saw hope in grassroots social initiatives. At that time, small housing cooperatives were established, the members of which were directly interested in flats realized by these cooperatives. They were also involved in the implementation of the entire project, starting from the preparation of documentation, obtaining land for construction from the city, and ending with the acquisition of building materials and construction. In this way, most of the single-family estates of that period were created.

government restored housing co-operatives, introduced housing loans and influenced the dynamic development of housing construction. Unfortunately, this period was characterized by a high shortage of building materials and savings solutions in the housing sector. This was due to the pressure of government economic plans to develop industry and agriculture. The next decade, the period of Edward Gierek's rule, brought the greatest development of housing investments. During that time, in the years 1971–1980, 2.5 million flats were commissioned for approximately 10 million Poles [2]. It was connected with the full industrialization of construction and the widespread use of the large panel system. During this period, resolutions were issued that had a real impact on the development of single-family housing. In 1976, *Uchwała Nr 128 Rady Ministrów* [Resolution No. 128 of the Council of Ministers] was implemented. It was to set the direction of development and standards for this type of house construction. According to the Resolution, single-family housing, carried out by cooperatives or individually, was to be treated as an important link in the development of the national residential program. However, the emphasis was placed on intensive, dense type of construction, in the form of terraced, atrial or semi-detached houses, with a limitation of a usable area³ [4], [5]. The 1980s was characterized by a slowdown in the housing economy and the economic crisis [2]. The single-family housing construction was also to be popularized by the typification process. Its purpose was primarily to streamline the construction process and optimize its costs. For this purpose, catalogs of typical projects and national competitions for cheap, typical single-family housing were held⁴. Single-family housing faced many barriers on the way of implementation. According to the assessment of the Ministry of Municipal Economy, the most serious were difficulties with obtaining construction plots (incomplete Spatial Development Plans prevented the division of plots), the areas offered for individual construction were usually without sanitary or electric installation network and in a much worse location than those intended for multi-family housing. Other problems were related to the insufficient amount of building materials allocated by the government. As a result, much fewer single-family estates and settlements were built in Poland than originally assumed [2]. Similar problems with realization of residential buildings appeared in other socialist countries, for example in Hungary [6].

³ Within the meaning of the resolution, a single-family house was a house or an independent part of a semi-detached or detached house with a total usable area of residential premises not exceeding 110.0 m². Usable area limitations were determined by the bank loans, ordered by the Minister of Municipal Economy [3].

⁴ The first catalog of typical houses was created in 1957 and included 17 prepared construction projects. Another catalog, which was created in June 1958 at the request of the Ministry of Municipal Economy and the Management of Town Planning and Architecture, already contained 60 designs of typical houses. Single-family buildings have been designed taking into account the local habits of the population and the possibility of using materials and building elements of local production. An important feature of typical designs was the ease of their adaptation to local conditions.

Current state of research

Nowadays, the question of residential, single-family or multi-family housing is usually discussed in connection with new trends in architecture, original architectural solutions or development of home and residential common spaces, as well as in the context of sociological or socio-urban studies. Studies on the architecture and urban planning of post-war residential complexes from 1946–1989 are conducted mainly in the context of revitalization and modernization of buildings. The author observed a significant disproportion between the number of research works on the state of preservation of multi-family residential buildings and the analysis of the residential environment of such buildings from the years 1946–1989, and the literature dedicated to the research on the state of preservation of single-family housing of the socialist period, which is less significant. Architecture of the Polish socialism period in their research is addressed, among others, by Andrzej Basista [7], who summarizes housing construction and more, from the communist period. However, he focuses not only on the past of this building industry, but also analyzes, based on his research, what future awaits the architecture of the socialist era in Poland. Agata Gabiś in her research focuses on the post-war architecture of Wrocław and presents the history of individual, original buildings of this period. Her publication is a form of a catalog of the Wrocław's architecture from the communist period [8].

Currently, the subject of revitalization and modernization of post-war residential complexes is discussed, among others, by Jan M. Chmielewski and Małgorzata Mirecka in Warsaw city [9], Andrzej Tokajuk in Białystok city [10], or Barbara E. Gronostajska, who in her studies focuses on post-war, multi-family residential complexes in Wrocław [11]. In a bigger, urban scale, the significant transformations from the socialism period in Poland have also been analyzed [12]. Hanna Zaniewska analyzes the economic aspects of the modernization of socialist construction in Poland and Europe [13], [14]. Generally, Polish urban and rural housing characteristics from the socialism period have been analyzed [15]. There are not many scientific papers dedicated strictly to the subject of post-war single-family housing in the communist period. Zuzanna Napieralska devoted her doctoral dissertation to single family settlements from Wrocław from socialism period [16], Monika Sroka-Bizoń wrote, in her doctoral thesis, about single-family settlements from the socialism period in Katowice city [17]. International publications that cover this scope of research connected with post-socialist house settlements also appear. Interesting research, in the context of house settlements in post-socialist Tirana, Albany, was also conducted [18]. The word “transformation”, in the context of post-socialist urban changes, also appears in international publications [19].

Methodology

The author has selected four different single-family complexes from the 1960s to 1980s for analysis, located in three Polish cities: Wrocław, Katowice and Szczecin.

The buildings of all these housing estates have been transformed in different ways: extended, completely modernized or thermo-modernized. The scope of these transformations and their impact on the current character of the estate was analyzed.

The author of the work performed an archival query in the Archives of the Museum of Architecture in Wrocław, the Archives of the City Hall of Wrocław and the Building Archives of the City of Wrocław, where project documentation is available for selected single-family complexes. On its basis, the archival urban plans of the housing estates and designs of individual buildings were examined. The catalogs of typical single-family buildings constructed between 1946 and 1989 were also analyzed. An important part of the work was the inventory search in the field. It included photographic and drawing documentation of the examined buildings, as well as spatial arrangements of settlements and single-family housing estates. On the basis of the collected materials, it was possible to analyze and compare the selected single-family buildings as regards design assumptions, implementation and later changes.

In order to better understand the issues of present modernization, the author has conducted a survey – interview *in situ* with residents of the analyzed housing complexes. The questions in the survey were divided into three parts. The first part defined the profile of the residents: their age, sex, education, how long they live in this particular housing estate and how many members of the family there are. The next part of the survey concerned the respondents' housing conditions:

1) house area, number of rooms, plot area. The respondents also answered questions regarding the renovations that they carried out and the technical condition of the house, for example:

- a) no renovations have been carried out in the last 20 years,
- b) minor, ad hoc renovations,
- c) thermo-modernization,
- d) complete renovation of the building,
- e) complete renovation of the building with extension,
- f) extension of the rest of the building without renovation.

2) Reasons for renovation (several options can be selected):

- a) poor technical condition of the building,
- b) visual aspect,
- c) insufficient usable area of the building (adaptation of utility rooms to usable rooms),
- d) insufficient lighting of the rooms,
- e) bad functional and communication layout of the building,
- f) changing the function of the building (e.g., to an office).

The last part of the survey concerned their perception of the quality of life in the housing estate, neighborly ties, urban infrastructure and spatial order. The interlocutors were asked whether they identify with the place they live in and want to have an influence on its shape and space or if they treat their homes as an integral part of a larger urban layout. Interviewees were also asked to indicate the

advantages and disadvantages of the estate and the house, for example:

- a) too high density of buildings in the estate,
- b) too far from the desired services,
- c) bad communication,
- d) bad communication marking (signs, lights),
- e) no parking zones,
- f) neighborhood,
- g) location.

Advantages:

- a) attractive location,
- b) attractive architecture,
- c) urban layout,
- d) neighbors,
- e) plot size – garden,
- f) house volume,
- g) common greenery,
- h) good communication with the city center and the workplace,
- i) proximity to the desired services.

In total, 38 people from four selected housing complexes were asked to participate in the survey – interview. Most people refused to participate in the study. Ultimately, 18 people took part in the survey. The survey was not completed in the Zgrzebionka Estate, Katowice. The time of conducting the research was a difficulty. Most of the residents were at work or school at that time.

Analysis of four Polish, single family house settlements

Budowlani Estate, Wrocław

In 1967 the building cooperative to realize single-family houses of *Budowlani* was established. It was responsible for the construction of one of the first post-war complex of single-family housing estates in Poland, and the first in Wrocław.

The housing estate is localized in the southern part of the city, nearby greenery of allotment gardens. The authors of the urban planning and the repetitive design of the single-family building were architects Witold Molicki and Ryszard Spławski. Works preparing the ground for the construction of a new housing estate started in 1968 [20]. The project assumed the construction of 96 semi-detached buildings located on plots of about 300 m². In the central part of the estate's urban layout two symmetrical squares were designed, separated by single-family, semi-detached housing (Fig. 1). There are landmarks in the estate's space – the square in the south-western part of the housing estate functions as a bus square, with a stop and bus terminus and a small green square. Single-family housing of the *Budowlani Estate* [Constructors Estate] includes two-storey buildings, without basements. Their simple shape is diversified by elevation materials and colors. Vertical stripes of window width, slightly backward in relation to the wall face, were covered with wooden coverings or painted in dark brown colors. They were to be distinguished against a background of a white, plastered elevation. Thanks to this operation, its geometric division was highlighted and

the cuboidal form of the houses was made more attractive. The architects proposed two types of buildings which are part of the analyzed residential complex. It was the so-called big and small building [20] (Fig. 2). However, both were based on the same form: a cuboidal block in a semi-detached building. Thanks to this, the whole complex formed a coherent spatial arrangement. According to the data contained in the archival documentation, in the 1970s and 1980s, all attempts to interfere with the build-

ing block of the Budowlani Estate complex were consistently rejected by the City Hall. As justification for such decisions in official letters it could be read: *The project of the Budowlani single-family housing estate was realized according to a homogeneous urban-architectural concept and constitutes a closed spatial composition. The District Office consistently observes the principle of not changing the development, especially as the area of plots is extremely small. Functional changes inside the building*

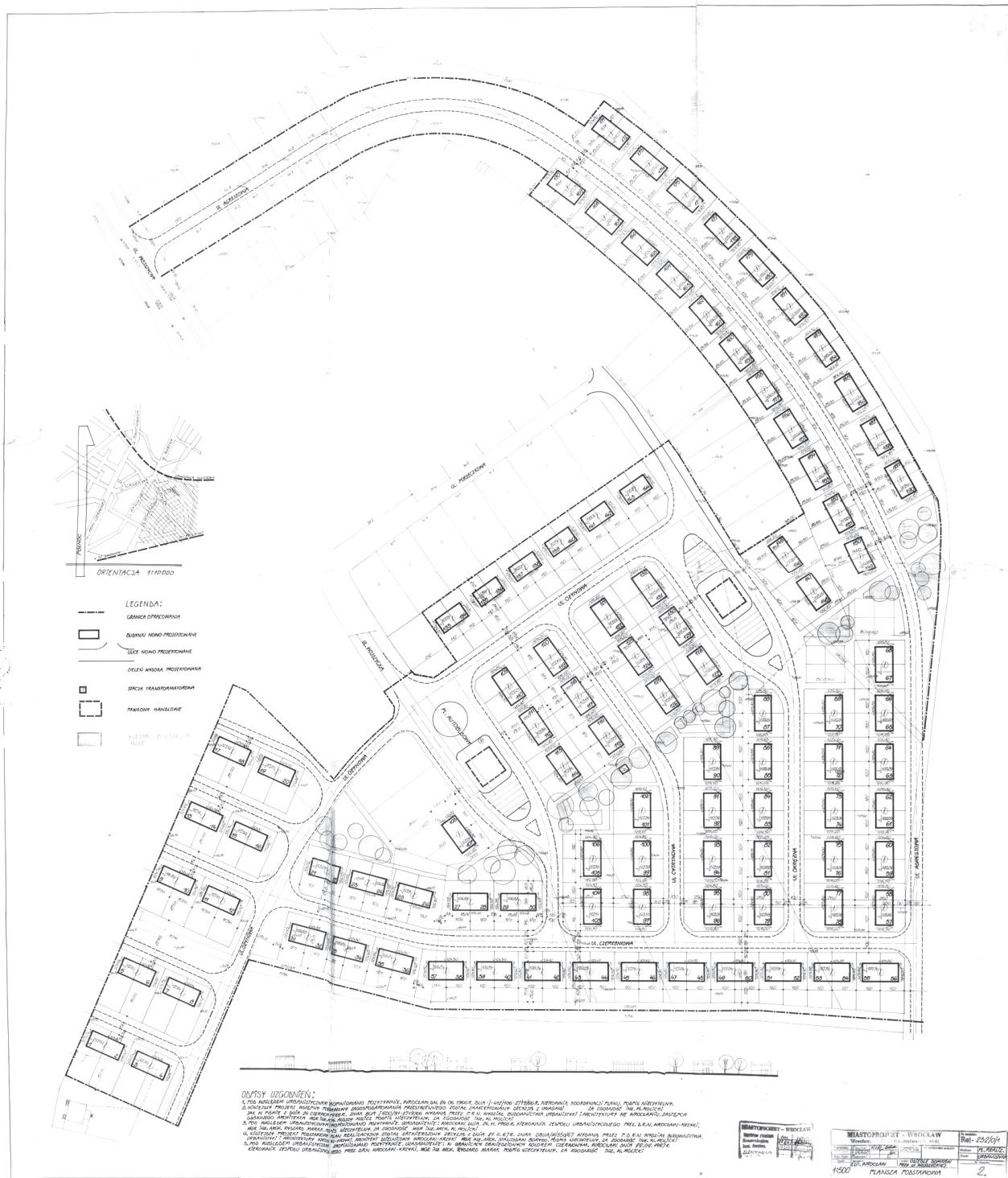


Fig. 1. Urban Plan of the single-family housing estate of Budowlani, designed by W. Molicki and R. Świątkowski, 1967 (source: [20])

II. 1. Projekt zespołu zabudowy jednorodzinnej Budowlani, autorstwa W. Molickiego i R. Spławskiego, 1967 (źródło: [20])

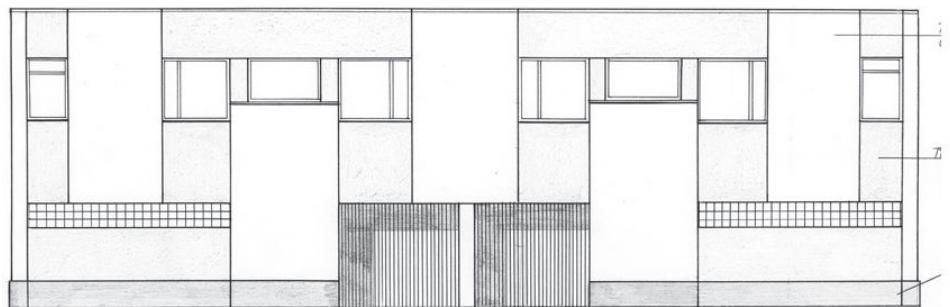


Fig. 2. Single-family house estate Budowlani, front elevation project, large semi detached building (at the top) and small semi-detached building, designed by W. Molicki, R. Spławski (source: [20])

Il. 2. Osiedle Budowlani, projekt elewacji frontowej, budynek duży bliźniak (u góry) i budynek mały bliźniak (u dołu), proj. W. Molicki, R. Spławski (źródło: [20])



without affecting the horizontal and vertical dimensions of the objects are possible [21].

Unfortunately, after the political transformation (in 1990) and the change of regulations concerning individual construction, such decisions prohibiting interference in the body of a private building not covered by conservation protection had no legal justification.

We are currently observing progressive changes within the above complex. The buildings are deprived of their original, geometric façade, the windows and colors of the buildings are changed, and numerous extensions and superstructures of existing houses are made (Fig. 3). Original buildings of Budowlani Estate have been subject to nu-

merous, uncontrolled interference actions with the body of the building in order to increase its volume. What has the greatest impact on the so-called spatial order, the character of original architecture and integrity of the estate are the uncontrolled extensions of single segments of semi-detached houses, especially superstructures, with a sloping roof, which have already been carried out in several buildings of the Budowlani housing estate (Fig. 4).

• Survey conclusions

Five interlocutors have been interviewed. The average inhabitant of this estate is retired, aged 65+, with university education. The second largest age group are married



Fig. 3. Semi detached house of Budowlani housing estate, designed by W. Molicki, R. Spławski. An example of thermal modernization (left side), the original windows design on the facade has been changed. Stylized window bands were introduced (photo by Z. Napieralska)

Il. 3. Budynek w zabudowie bliźniaczej osiedla Budowlani, projektu W. Molickiego, R. Spławskiego. Przykład termomodernizacji budynku (lewa połowa) oraz zmiany w układzie okien. Dodatkowo wprowadzono stylizowane opaski okienne (fot. Z. Napieralska)



Fig. 4. Budowlani housing estate, designed by W. Molicki, R. Spławski, an example extension and superstructures over part of the building (photo by Z. Napieralska)

Il. 4. Osiedle Budowlani projektu W. Molickiego i R. Spławskiego, przykład rozbudowy i nadbudowy jednego z segmentów zabudowy bliźniaczej (fot. Z. Napieralska)

couples over 50, with adult children. There are also families with small children, encouraged to live in a housing estate close to schools and kindergartens. There is no large rotation of residents in the development complex (one property was marked for sale). For the majority of respondents, the Budowlani single-family house complex is an attractive place to live, mainly due to its location providing a substitute for a small town. The respondents agreed about the peace and quiet in the area as well as good neighborly relations. The respondents (mostly elderly people) indicated negative changes in individual buildings. According to them, they do not fit the whole estate. Residents are socially involved. On their initiative, speed bumps were installed on local roads.

Single-family housing complex realized by house building cooperative Wspólny Dom Estate, Szczecin, Poland

This terraced house complex, was constructed as part of the cooperative single-family housing estate of the 1970s. And it is one of many examples of this type of implementation in the period of the Polish People's Republic (Polish socialism era).

Favorable legal provisions concerning intensive individual construction, granting construction loans and intensive development of cooperative movements have contributed to a significant increase in the share of this construction sector in Poland's total housing economy [22]. The analyzed house complex is located in the northern part of Szczecin city, in the Żelechowa estate, and closes a larger single-family housing complex from the north, which includes buildings erected both after the political transformation, during the communist era, as well as those from the pre-war period.

The residential complex consists of fifty-three terraced housing segments (Fig. 5). The segments are three storeys tall, with a basement section and a garage, partially underground and two above-ground storeys. A typical project assumed very economical material solutions and cuboidal forms of buildings. The buildings are covered with ventilated flat roofs. The author of the project, in order to diversify the simple façade, introduced horizontal stripes made of vertically arranged wooden boards, which fill the spaces between the windows (Fig. 6). This type of housing was implemented in various Polish cities. Currently, most of the segments have passed thorough modernization. Only a few owners have recreated the original elevation, keeping the colors and materials. Today, the *Wspólny Dom Estate* [Our House Estate] in Szczecin is a series of terraced houses, which is a diverse collage of material and color solutions. However, we do not observe any uncontrolled extensions here (this is basically not possible due to the type of construction), but only material nuances and different solutions of the entrance zones (Fig. 7). This results in an interesting effect, where each segment is individualized and not a copy of the neighbor's building.

- Survey conclusions

Seven interlocutors have been interviewed. Most of the inhabitants of the estate are people over 60 years of age. Most often, they are the first residents of this complex who has built their own houses (cooperative of workplaces). The next group are families with adult children. In the estate, young families with small children are rather in the minority. Most of the residents of the estate have lived there for a long time, for over 10 years. According to the respondents, the positive aspects of the estate include: peaceful and quiet neighborhood, well ordered urban space and good neighborly relations. The inhabitants of



Fig. 5. Wspólny Dom detached house settlement in Szczecin, urban layout (source: [23])

II. 5. Układ urbanistyczny zespołu zabudowy jednorodzinnej Wspólny Dom w Szczecinie (źródło: [23])



Fig. 6. Wspólny Dom detached house settlement in Szczecin. The front elevation project reconstruction (elaborated by Z. Napieralska)

II. 6. Zabudowa szeregową osiedla Wspólny Dom w Szczecinie. Rekonstrukcja projektu elewacji frontowej (oprac. Z. Napieralska)

the estate identify themselves with their place of residence and want to have an influence on its shape. For most of them the space of the estate is ordered and harmonious with each other. However, there is a group of residents who perceive the chaos in the space of the development complex and negatively perceive the interference of other residents with the interference made to the original building form.

Zgrzebionka Estate, Katowice

The *Zgrzebionka Estate* is located in Brynów, a district adjacent to the center of Katowice. It was realized in the 1970s. This residential complex is located between Łabędzi Street, Bocianów Street, Pelikanów Street and Albatrosów Streets, and consists of low-rise multi-family buildings and compact row houses. The whole was designed in an architecturally consistent style. The estate is situated on the slope of a small hill. The spatial configuration was adapted to the terrain conditions – roads run along the contours of the terrain, while groups of residential buildings are located along access roads (Fig. 8). The use of such a composition arrangement gives the impression of building development, from low single-family buildings in the lowest part of the complex to taller multi-family buildings situated in the highest part of the estate [17].

A uniform, wooden, low fence or a hedge was designed throughout the whole complex of single-family housing, which emphasizes the cohesion and homogeneity of the settlement. Single-family, terraced houses are designed as rectangular blocks with large window openings. In the upper part, the elevations of the buildings are finished with boards in a dark tint, and additional vertical strip of boards creates a division of the elevation and deepens its tectonics. The entire complex is surrounded by high greenery and recreational areas, which compensates for the small plot area.

Currently, this architecturally interesting residential complex has not undergone major transformations. Most of the buildings still have original elevations. Only individual buildings have been modernized, but these are only changes in the color of the elevation, and therefore

changes that can be withdrawn (Fig. 9). No extensions or superstructures of individual segments were observed.

- Survey conclusions
- Lack of information.

The colony of patio houses Youth Estate, Oporów, Wrocław

The project of a colony of patio houses called Youth Estate was the result of work on a cheap and functional single-family house, initiated by the Polish Architects Association competition in 1972. The competition project was not completed, however, on its basis, a single-family complex was built in Oporów estate in southern part of Wrocław city, and was commissioned by the Youth Cooperative Construction Assistance Association. Its author is architect Leszek Konarzewski.



Fig. 7. Wspólny Dom detached house settlement in Szczecin city, the current state of the buildings after modernizations. Originally designed wooden panels have been changed with different materials: stone mosaic, brick tiles or justify by different color (photo by Z. Napieralska)

II. 7. Zabudowa szeregową osiedla Wspólny Dom w Szczecinie, obecny stan zachowania budynków po modernizacji. Pierwotnie zaprojektowane drewniane okładziny elewacyjne zostały zastąpione innymi materiałami: mozaiką kamienną, cegłą czy tynk w innym kolorze (fot. Z. Napieralska)



Fig. 8. Zgrzebionka Estate, Katowice city. Urban layout of house complex (source: [24])

Il. 8. Układ urbanistyczny osiedla mieszkaniowego Zgrzebionka w Katowicach (źródło: [24])



Fig. 9. Zgrzebionka Estate, Katowice city. Current state of the buildings at Kormoranów Street.
Typical project Stolbud Namysłów, designed by Politechnika Wrocławia Design Studio (photo by Z. Napieralska)

Il. 9. Osiedle mieszkaniowe Zgrzebionka, Katowice. Obecny stan zachowania budynków mieszkalnych przy ul. Kormoranów.
Projekt typowy Stolbud Namysłów, wykonany przez ZSP Politechniki Wrocławskiej (fot. Z. Napieralska)

The residential colony was designed on a plot of 5.73 ha in total and consists of 91 single-family buildings with a carpeted area for about 480 inhabitants. Residential segments are designed on plots of land with an area of 280.0 m² (2nd stage of the investment) to 350.0 m² (1st stage). In the central part of the urban plan there is the primary school area, which separates the northern and southern parts of the colony.

The spatial layout of the *Youth Estate* is based on a repetitive module: an access road ending with a square and residential buildings concentrated around it. The architect designed seven such modules in the southern part and six in the northern part (Fig. 10). The squares at the end of each access road have a utility yard, parking places and areas with common greenery and concentrate around six to eight residential segments (Fig. 11). According to the

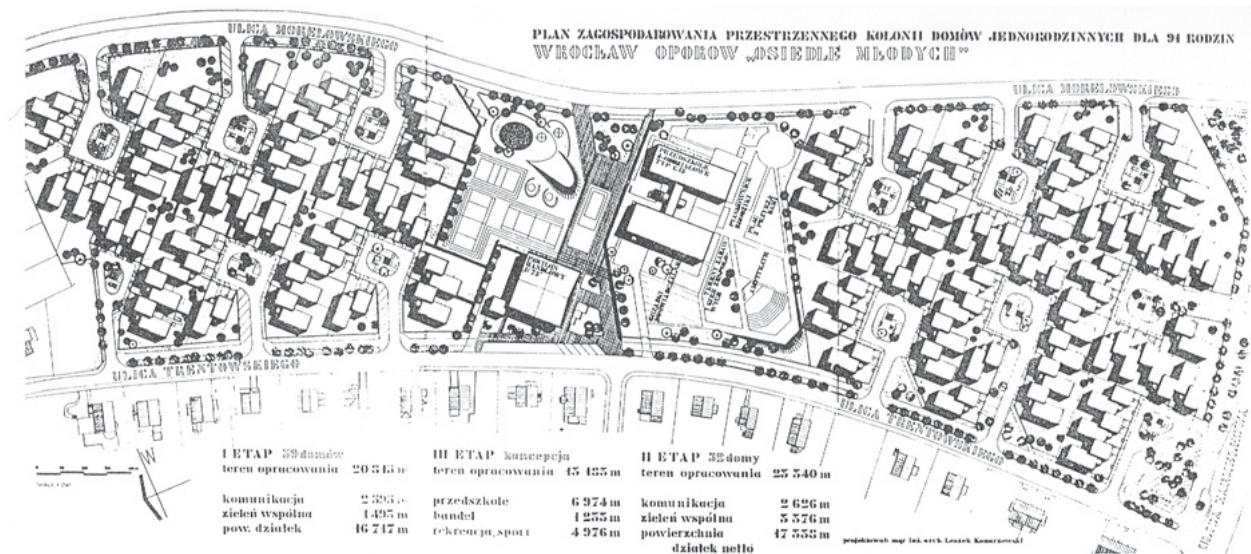


Fig. 10. Land development plan of The colony of patio houses Youth Estate, designed by L. Konarzewski, Wrocław, 1974 (source: [25])

Il. 10. Projekt zagospodarowania terenu kolonii domów w zabudowie atrialnej Osiedla Młodych we Wrocławiu projektu L. Konarzewskiego, 1974 (źródło: [25])

designer's intentions, the common yards were meant to foster the integration of investors during buildings construction or management of materials and equipment [25].

The repetitive building segment was designed on the principle of half-floor: the day part on the ground floor (level 0.00), the night part on the mezzanine (level +1.20 m) and the utility part with a garage below the night part is located in the field. The residential segments were designed in left and right versions. The aim of the project was to provide full freedom in shaping the interiors of both parts of the house and adapting them to the individual needs of the family during construction.

In the 1990s, the author of the design for the entire single-family housing complex, architect L. Konarzewski, presented a concept of superstructure of the existing segments, so that there would be no uncontrolled interference with the original body of the buildings. The extension project was preceded by an analysis of the shading and the impact of the planned changes on the spatial form of the entire complex [26]. The superstructure of the lower part of the segment was possible for the majority of houses, except for some extreme buildings. Any additional cubature in this part of the colony would shade the atrium of the neighbor.

An important design assumption was to unify and clarify the architectural features of the designed superstructure. The author of the project proposed that the shape of the superstructure should be visually separated from the brick volume of the house. The solution was a light wooden or wooden-steel attic in dark brown colors (Fig. 12). Access to the attic was possible in three variants: 1) by continuing the existing staircase, 2) by placing the stairs in place of the existing cell at the entrance, 3) by making an external openwork staircase when the apartment was to be completely independent. Designed by the architect, the superstructure was realized over a part of the houses (Fig. 13).

• Survey conclusions

Six interlocutors have been interviewed. The estate is inhabited mainly by families with adult children (most houses are two-generation houses) with higher education. A relatively large group is also made up of families with young children (in preschool or primary school age). They live in three-generation houses (superstructure to the existing building, independent apartment with an external staircase). Residents speak very positively about the estate. They appreciate the original urban layout, that provides them with silence, intimacy and a sense of security. They treat the inner squares, situated at the end of



Fig. 11. The colony of patio houses Youth Estate, designed by L. Konarzewski, Wrocław.

The square at the end of each access road is an utility yard, parking place and area with common greenery. It concentrates around six to eight residential segments (photo by Z. Napieralska)

Il. 11. Kolonia domów w zabudowie atrialnej Osiedle Młodych we Wrocławiu projektu L. Konarzewskiego.

Na końcu każdego sięgacza drogi wewnętrznej w osiedlu lokalizowany jest plac, pełniący funkcję parkingu, wspólnej zieleni, wydzielonej części ze śmiertnikami (fot. Z. Napieralska)



Fig. 12. The colony of patio houses Youth Estate, Wrocław.
Unified superstructure project over the existing buildings by L. Konarzewski, 1990 (source: [26])

Il. 12. Kolonia domów w zabudowie atrialnej Osiedla Młodych we Wrocławiu.
Projekt nadbudowy segmentów zabudowy atrialnej autorstwa L. Konarzewskiego, 1990 (źródło: [26])

the access road, as their private space that they care about and identify with. It favors the neighborly relations as well as neighborly observations, where every intruder or stranger will be noticed and in sight for the inhabitants. Wickets, fences or garage gates are often opened, the residents feel safe.

Discussion

In reference to the research question, the possibility of preserving this, already historical, housing, while at the same time raising its standard and adapting it to current requirements and standards, an attempt to control all types of extensions of residential segments is a rare solution but has appeared in some house complexes from the socialism period. An example of this design practice is the unified

superstructure project at *Youth Estate* in Wrocław, designed by L. Konarzewski. A similar design process, consisting in creating a repetitive superstructure design for the whole complex, was also realized for another, small single-family housing complex in Wrocław. It is a terraced house, designed by Jerzy Wojnarowicz in 1964, located at Grabiszyn estate in Wrocław. The superstructure was designed few years later by Eng. Jerzy Jagodziński, in 1980 and was supported by technical analysis of the building. According to the project of the superstructure, the load-bearing walls were to be made of as light a material as possible (e.g., aerated concrete). The existing flat roof could not be used as a ceiling structure due to its low lifting capacity and slant. The functional layout for each of the three segments was slightly modified. The designed staircase in two segments was located on the garden side, in the middle segment on the front elevation [27]. The superstructure was completed, but probably due to material deficiencies and construction costs it was simplified. Wooden sidings were abandoned and typical window frames were used (Fig. 14).

In both cases (*Youth Estate* and terraced house from Grabiszyn in Wrocław), the house complex was treated as a coherent whole. There are certainly many more examples of such activities in Poland, but already on the basis of these two projects and their subsequent implementation, it can be concluded that it is possible to modernize and make extensions to the existing single-family buildings from the 1950s and 1980s, in order to preserve the cohesive space of the estate, simultaneously raising the standard of construction of the Polish People's Republic to current technical conditions and housing needs. However, this requires the involvement of residents who will accept the unified extension or superstructure module, dedicated to particular buildings from the specific house complex.



Fig. 13. The colony of patio houses Youth Estate,
designed by L. Konarzewski, Wrocław.
The superstructure realizations (photo by Z. Napieralska)
Il. 13. Kolonia domów w zabudowie atrialnej Osiedla Młodych
we Wrocławiu projektu L. Konarzewskiego.
Przykład realizacji projektu nadbudowy (fot. Z. Napieralska)



Fig. 14. The superstructure project of a terraced building at Heblarska Street, Grabiszyn, Wrocław, designed by J. Jagodziński, 1980 (source: [27])

Il. 14. Projekt nadbudowy segmentu zabudowy szeregowej przy ul. Heblarskiej w osiedlu Grabiszyn we Wrocławiu, proj. J. Jagodzińskiego, 1980 (źródło: [27])

Conclusion

Transformations of individual buildings, which are part of the housing development of the examined single-family complexes, are a frequent phenomenon. The change of the political system after 1989 influenced the legal changes in the area of single-family housing – among other things primary limitations of usable space were no longer in force.

We can distinguish several basic forms of building transformations, observed in the analyzed housing complexes, and which also took place in other similar housing settlements of the Polish Socialism period [16]:

1. Thermo-modernization – the basic and most common form of modernization, aimed at improving house energy efficiency, aesthetics or state of preservation. The analyzed buildings were erected in accordance with socialism standards of thermal protection of buildings, which have expired. This is why buildings from this era need to be insulated and modernized. Thermo-modernization is usually associated with a change in the color of the elevations and their material solutions, which can be observed in the analyzed house complexes.

2. Replacing windows and doors – this is a frequent measure to reduce the energy consumption of a house [28]. Currently, original wooden windows are being replaced with plastic ones, which are cheaper and require no maintenance. In the analyzed examples, we observe the replacement of the woodwork, associated with a change

in the layout and size of windows or doors. This interferes with the overall image of the front elevation, especially in semi-detached or terraced houses, which are no longer symmetrical and repeatable. Fortunately, this is not a common procedure.

3. Building extension or superstructure – aimed at increasing the usable area of the house, but also turning visually a cubed form house into a traditional form house with a sloping roof (Budowlani Estate, Wrocław).

The analysis of the house complexes show that semi-detached buildings or single-family buildings are the most susceptible to extension. This type of housing enables various types of extensions of the existing shape of the house. In terraced or atrial housing, the range of such activities is much more limited. However, here too, small changes to the original design are introduced successively, and the fact that most of the segments are subjected to them makes the whole building undergo visual change. Finally, it has an impact on the spatial settlement structure and landscape aesthetics, both in the city space and also in the rural areas, where similar transformations appear [29]. However, as the examples of house complexes Youth Estate in Wrocław and terraced house from Grabiszyn in Wrocław show, it is possible to modernize and design house extensions in a controlled and coordinated manner by an architect for the entire settlement.

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Abstract

Spontaneous transformation of single family house settlements from 1970–1989 on the examples of Polish cities

The article presents a problem related to uncontrolled and spontaneous transformation of the landscape of single-family house complexes from the period of Polish Socialism. Analyzed transformations are the consequences of the need for house condition improvement, by thermo-modernizing them, building extensions or window frame replacement. These instances of building interference are unavoidable, due to poor house conditions. Currently there are no regulations and criteria describing the correct and effective modernization of single-family buildings in the context of the whole house settlement. Due to uncontrolled renovation of particular houses, chaos enters the unified and transparent layout of house complex. The article presents the current condition of several single-family housing estates from the years 1970–1989. The author intends to find an answer to the following question: is it possible to modernize and extend individual buildings belonging to one coherent housing estate, maintaining its integral character and spatial harmony?

Key words: single-family house complexes, residential complex, modernization, socialist architecture, residential common space

Streszczenie

Spontaniczna transformacja zespołów zabudowy jednorodzinnej lat 1970–1989 na przykładzie polskich miast

Tematem artykułu jest proces niekontrolowanych i spontanicznych przemian, jakie zachodzą w zespołach domów jednorodzinnych z okresu polskiego socjalizmu. Analizowane przekształcenia są konsekwencją konieczności dostosowania budynków do aktualnych wymogów i poprawy ich standardu poprzez termomodernizację, rozbudowę czy wymianę stolarki okiennej. Te ingerencje budowlane są nieuniknione ze względu na pogarszający się stan techniczny analizowanych budynków. Obecnie brakuje przepisów i kryteriów opisujących prawidłową i efektywną modernizację takich budynków, także w kontekście całego zespołu mieszkaniowego. W wyniku niekontrolowanej renowacji poszczególnych domów, w jednolity i przejrzysty układ zespołu domów wkracza chaos. W artykule przedstawiono aktualny stan zachowania kilku zespołów zabudowy jednorodzinnej z lat 1970–1989 z Wrocławia, Katowic i Szczecina. Celem autorki jest również znalezienie odpowiedzi, czy możliwa jest modernizacja i rozbudowa poszczególnych budynków należących do jednego spójnego osiedla przy zachowaniu jego integralnego charakteru i harmonii przestrzennej.

Key words: zabudowa jednorodzinna, osiedle mieszkaniowe, modernizacja, architektura socjalizmu, osiedlowa przestrzeń wspólna

