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Issues of Contemporary Social Housing Problems Nowadays

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Abstract. Social housing is nowadays more connected to economy and politics than issues related to designing and architecture. This discrepancy is a problem of the modern philosophy of designing housing estates and social housing. The concept of housing and social housing as well as its axiological elements, resulting from its program content and guidelines seem to be an inspirational basis for solving contemporary problems of shaping the housing tissue in the postmodern world. An important goal is to strike a balance between social, economic and political issues. This particular balance can be reached by designing solutions leading to eliminate or decrease the "uncertainty" of the existence of local communities, including the possibility of creating and providing jobs in the broader sense of social participation. The above reflection is connected with the philosophy of designing public estates and social housing in Poland as well as in Europe. What is more, it seems that postmodern societies require the creation of new programming conditions, housing standards and housing estates. Architectural and urban planning solutions for buildings / social settlements currently implemented in Polish conditions are preliminary in nature. The search for functional and program solutions as well as formal and aesthetic solutions is in progress. In addition, in the design of buildings and social housing estates, the eco-energetic postulate gains importance. Global warming, which in the perspective means a civilizational disaster in the world must find its reflection in the search for new solutions in the field of design, including, and perhaps even primarily in the design of buildings and social housing estates. Such solutions can ensure not only the right quality of housing and housing developments, but also generate additional jobs related to eco-energy. According to the above, it is necessary to create new design concepts.

1. Introduction

Social housing for the poor and its origins can be derived from the sources of European civilization and Christian axiology. Such definite beginnings of community habitats and creating a concept of a housing estate for the poor are not fully recognized by the history of architecture. The analysis of the current situation of social housing should be considered in the context of the development of Europe's civilization and cultural heritage. Therefore, the aim of historical considerations is to compare and refer to contemporary mechanisms, activities and the search for new solutions for social settlements in the post-modern era.

The article discusses selected issues concerning the genesis and development of the concept of housing estates shaped in Europe in a certain developmental stage, taking into account modern times.

This approach also gives the opportunity to assess the situation in the future and can be a starting point for seeking solutions for social housing estates in Europe.

The contemporary situation of the development of social housing in Poland is subject to a special analysis. The general concept of social housing development in urban areas and rural areas is presented.



2. The genesis of the idea of community habitats in Europe

Greek and Roman civilizations initiated the process of organizational and structural solutions in the care of the needy. It found its continuation in the further historical development of forms of care for those in need. It developed especially in the Christian era, including taking care of orphaned children [1], elderly and sick people.

As part of the emerging civilization and Christian culture in Europe, the described mechanism has launched solutions for later artefacts for the needy, in the form of the first social settlements. Therefore, archetypes of construction for the poor took their origin basing on the community habitats of the East. Their main area of work was charity work as part of hospitals, orphanages, schools for children, hospices for travellers and pilgrims [2]. Social obligations to those in need were on the side of the Church. The then states did not take responsibility for the social needs of their citizens [3].

The development of forms of care for the sick and needy was an important component of the pioneer initiatives of Saint Basil the Great in Byzantium, who founded a housing estate in the suburbs of Caesarea Cappadocia (Greek: *Basileias*, A.D. 372) [3], [4]. This idea leads to the solutions of community settlements and monastic communities of Cappadocian Christians during the early medieval period. They are an example of the structure of community settlements founded on the Islam exposed volcanic territories since the 6th century A.D. The most spectacular example of the volcanic city is Goreme Valley in Anatolia (figure 1), in the 7th century A.D. inhabitable by 30.000 inhabitants forming monastic community [5]. The forms of care for the needy shaped in the Byzantine Empire found their continuation in medieval Europe.

During the Middle Ages, monasteries took over the care of the sick. It was a continuation of the model of care that has been presented above and which was celebrated by priests. Thus, the first institutions and architectural forms were created that concerned care for the poor, and were the examples of the first structures of social housing. The functioning of the monasteries of the East and the West refers to *Basileias*. Therefore, care for the needy, pilgrims and the poor was inscribed in the activities of monasteries.



Figure 1. Cappadocia, Christian settlements from the period of early Middle Ages, phot. J. Halbiniak

In Western Europe, the development of monasteries contributed to the expansion of assistance activities for the poor / pilgrims by using the rule of the Benedictine order [4]. Work has become an ethos. The ethos of work initiated by the Benedictines became the foundation of success in modern times

for Western culture and civilization. Therefore, the intellectualization of work is connected with the most important premises of development - science, technology, industry [6]. This also resulted in the linkage through poverty and work on the one hand, and the development of technology on the other - the solution of future principles of functioning and shaping social settlements in the times of the industrial revolution and modern times. The above-mentioned issues were reflected in the later development of artefacts of housing estates and social buildings in the following ages.

2.1. History of social housing development in modern times – outline

The beginnings of the idea of social housing in modern times can be found in religious communities. These communities are precursory social formations that have developed functional and spatial solutions appropriate to the chosen way of life (poverty) [2].

They corresponded with the teaching developed by the Church, which was aimed at improving the social situation of people in need of help.

2.1.1 Fuggerei housing estate in Augsburg - a milestone in the development of housing estates. The Fuggerei estate in Augsburg (1521) is an important example in the history of development of social housing estates. The social housing estate, implemented by Jacob Fugger (1459-1525) [7], belonging to the new epoch-modern times, is a milestone in the genealogy of social housing. For the first time in history, solutions that appeared here, created a new quality in the formation of a housing estates: modern banks of global / renaissance financial companies (Medici in Florence, Fuggerei in Augsburg) fulfilling the role of an investment banks; the use of Christian axiology towards the poor inhabitants of a social housing estate; introduction of a modern administration and management system supervised by Fuggerei see figure 2; linking the place of residence with the possibility of performing craft work (work ethos). These principles in the area of creating, forming and managing social housing have introduced a new quality of living, as well as maintaining the existence of poor people. The possibility of working in a housing estate during craft activities resulted in the possibility of getting out of poverty.

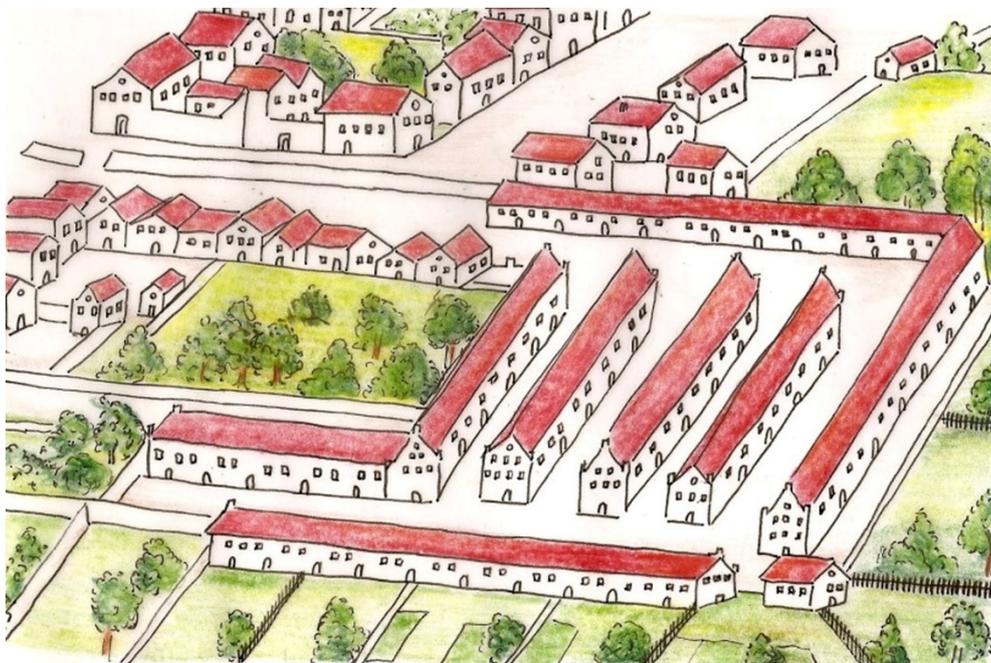


Figure 2. Fuggerei, Augsburg. bird's-eye view, A.D. 1423 (Source: M. Kluger, Die Fuggerei, Context Medien und Verlag, Augsburg 2009).

2.1.2 The period of the Industrial Revolution - shaping of social settlements. The house building that could be called social or communal began to develop in the 18th century in the European countries especially during the 1st Industrial revolution. The process of technological, economic, social and cultural changes was connected with the shift to economy based mainly on the manufacturing engineering.

The idea of social / communal housing in different periods in Europe reaches in its genealogy to the periods of:

- The end of the Middle Ages as well as in the later periods during the new divisions in Church and reformation in 16th century
- The Enlightenment (1688-1789)
- French Revolution (1789-1799) (liberty, equality, fraternity)

The changes of social consciousness caused by the Enlightenment and French Revolution became foundation for the conceptions of utopian socialism and are presented in recognizable source materials concerning to the development of social settlements in the 19th in Europe undergoing the process of industrial revolution [2], [8]. Industrial revolution originated in Great Britain (18th century) caused the appearance of the new conceptions of city planning. Different concepts of organizing the housing estates were developed. These concepts were recognized by the history of architecture therefore they are not presented in this paper.

2.1.3 Social housing in Poland in the first half of the twentieth century. In the period after 1st World War, Le Corbusier and Jacobus Pieter Oud searched for rational functional solutions for social housing. Their search focused on low-cost housing solutions in the housing crisis of the interwar years in Europe (Pessac -1925, Weissenhof - 1927, etc.). During the Bauhaus period, it was aimed at making housing architecture fast, hence prefabrication technologies that led to the formation of blocks of flats were preferred. Walter Gropius and Peter Behrens were the propagators of this method and technique of constructing housing estates. This idea had a decisive influence on the architectural form of the designed and implemented objects. The situation regarding planned and implemented flats and social settlements in Polish conditions was different. Below are examples of social housing estates essential for the development of Polish architectural thought [2]. In the area of Silesia, one of the two largest industrial and urbanized centers in continental Europe (from the 19th century onwards), mining estates played an important role. The Nikiszowiec housing estate in Katowice (1908-1912, designed by Georg and Emil Zillmann) is one of the most interesting examples of Silesian settlements. The residential and social offer, designed for about a thousand miners and their families, included a variety of functional and spatial programs. It included residential housing quarters, quarters with shop premises, a steam room, a laundry room, as well as a workers' hotel. The whole complex was completed by a school, church and police station. Miners were also provided with a form of health care, in the form of an outpatient clinic for patients and a pharmacy (Figure 3) [9].

The idea of social settlements for the working class was developed in the period after the 1st World War in the framework of the 2nd Republic of Poland (interwar period). The first pioneer settlements in Warsaw realized in international style were completed then: in Żoliborz (1925-1938, authors: Bruno Zborowski, Barbara and Stanisław Brukalscy and others) and Rakowiec (1930-1935, authors: the team "Praesens", composed of: Barbara Brukalska, Stanisław Brukalski and others).

The main goal of the designers was to develop the concept of "minimal flats" intended for Warsaw workers. The designers of the estates preferred - in accordance with the principles of constructivism and functionalism - the solution of a simple, geometrical architecture and cheap housing construction [10].



Figure 3. Nikiszowiec housing estate in Katowice (1908-1912, project: Georg and Emil Zillmann), phot. Kinga Klajber (Source: M. Zadworny, "The conception of cheap social housing for the poorest families towards their necessities in contemporary Poland", Wrocław University of Technology Press, Wrocław 2013).

2.1.4 Social housing in Poland in the second half of the twentieth century. In the post-war period, the issues of designing and implementing social housing estates gained some dynamics. The article presents selected housing solutions that are important examples - artefacts of residential structures in Poland. The urban foundation of the Nowa Huta working district (Cracow) represents an example of the "model" city of the Polish proletariat, realized in the convention of socialist realism. In the post-war period, the work of Oskar Hansen is a unique example of the design and implementation of social estates in Poland. The Hansen concept of an "open form" is an important contribution of the Polish architectural concept to the world architectural and cultural heritage. The idea of the "open form" of Hansen was related to the possibilities of architectural changes, without the need to involve unnecessary resources [11]. Hansen's 'openness' concerned individual objects as well as multifunctional urban areas that would meet the needs of users.

The concept of Hansen's "open form" had little chance of being fully utilized in the implementation of Polish housing estates, due to the political and economic realities of the time. Few examples of the implementation of the idea of an "open form" are: "Przyczółek Grochowski" housing estate (1963-1968, authors: Oskar Hansen, Zofia Hansen) and housing estate of Lublin Housing Cooperative in Lublin, (1964-1966, authors: Oskar Hansen, Zofia Hansen), etc. (Figure 4).

An important contribution to the development of design ideas in Poland was made by H. Skibniewska. Her projects focus on the design of apartments / buildings with flexible systems for developmental families. Her concepts have a pioneering character, by including ecological issues in the design process. By concentrating these design elements, it has obtained a new quality in the methodology of designing the structures of housing estates. Beginning in the 1960s, the approach to environmental issues in design has overtook the era and gave its activities a precursory character. This issue seems to be extremely important in view of the contemporary requirements and guidelines for the design of housing estates in the 21st century.

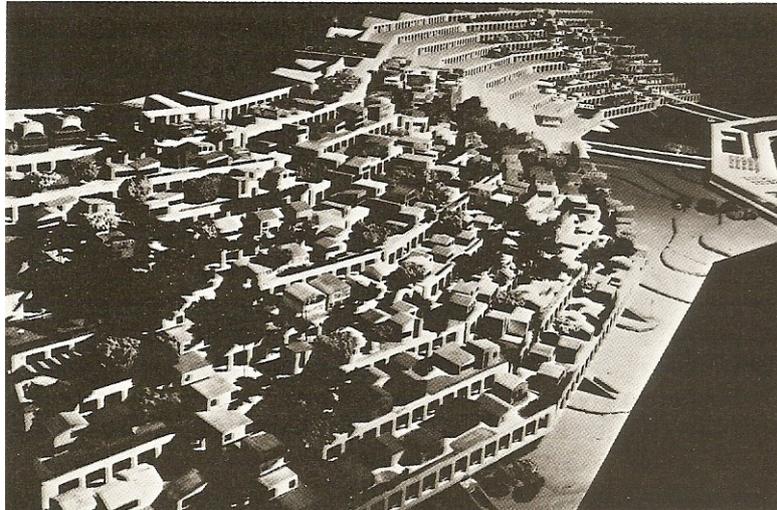


Figure 4. Fragment of the development of the eastern Continuous Linear System in the region of Przemysł, authors: Oskar Hansen's team (Source: T.P. Szafer, "New Polish Architecture", Arkady Press, Warsaw 1979).

3. Contemporary issues of social housing in Poland

The concepts of housing estates and flats presented, as well as the axiological elements contained in them and the program content and guidelines flowing out of them, are an inspirational basis for solving contemporary problems of shaping social housing estates.

In the period of Poland's political transformation, starting from 1989, a certain regression was observed regarding the social development of housing. A development gap was observed in the creation of flats / social estates. The issue of housing began to be subject to new mechanisms - including free-market ones, losing largely the status of socialist allocation of cooperative flats. In the conditions of the global market, it was decided to subject the housing to the principles of its impact. The possibility of developing housing in its social dimension has been lost from the field of view. An unquestionable obstacle was the economically and socially difficult period of economic transformation (first half of the 1990s) and the doctrine of monetarism and neoliberalism. The number of newly built social flats fell sharply compared to, for example, the 1970s.

In Poland immediately after 1989, there was no coherent concept that would clearly and legibly define the principles of obtaining cheap social housing. Attempts to reactivate housing in the social dimension began in the late 90s of the last century. The so-called Social Housing Societies (Polish: Towarzystwo Budownictwa Społecznego – TBS) that were created at that time undertook initiatives regarding the construction of apartments and social housing estates. Successful implementations of social residential complexes were created, constituting a new formula for continuing the principles of housing social housing in the new political conditions (Figure 5) [2].

For several years, however, the activity of TBS in the implementation of new housing resources has been halted. In Poland, a more friendly housing policy should be run, in which the state is the guarantor of the idea of social development of a cheap flat / housing estate.

In Polish conditions, over half of the population does not have financial resources that would allow to buy a flat. This shows the scale of the housing problem and social expectations regarding the solution to the housing crisis. Housing policy in the field of social housing, also in the aspect of its financing by the state is ineffective. The National Housing Fund which allowed to build around one hundred thousand apartments was closed in 2009.

Currently new solutions such as "Flat +" program are being introduced. It's assumptions however leave a number of doubts as to the idea, method and mechanism of this concept which is based on the use of developers' actions (who in principle do not display the "nonprofit" attitude).

It seems that architectural solutions and urban planning of buildings / social settlements currently implemented in Polish conditions are still preliminary. The search for functional, program as well as formal and aesthetic solutions is in progress.



Figure 5. TBS residential and service complex in Katowice (Source: M. Zadworny, "The conception of cheap social housing for the poorest families towards their necessities in contemporary Poland", Wrocław University of Technology Press, Wrocław 2013).

In addition, in the design of buildings / social settlements, the economical, ecological and energetic postulate is becoming more and more important, which becomes necessary in creating new design concepts for this type of architectural structures.

4. Preliminary concept of housing estate / social housing in Poland

Creating a concept of acquiring cheap social housing in Poland is one of the key projects for the country's development at the moment and in the future.

The above remark makes sense in the case of linking / including the concept of solving the housing / social housing problem with the strategy of modernizing Poland. It is therefore a multidisciplinary activity and concept.

This issue is complex in that it is related to the economy and politics, more so than with issues related to architecture and architectural design. It also requires the involvement of resources at the disposal of the state, local governments, public-private partnership investors or aid foundations.

Certain relative undermining of Poland in relation to Western European countries is also a chance for development, which was described as a following rule: If we are to design a sustainable ecosystem in which the society as well as the environment will benefit, we should question the foundation of our economic system. For instance, is it possible for a society to increase its material well-being simultaneously reducing by half its resource consumption? This is the so-called Factor Four inspiration mentioned by the Roman club [5]. This path seems to be the only one that gives hope to solve the problem of the balance of the ecosystem and the community - including its economic activity nowadays.

The proposed concept of a cheap social housing assumes, to some extent, the described example of the Fuggerei estate, as an archetype, showing the balance between residence and the function of the handicraft (not yet burdening the environment and its resources). In the case of both cities and villages,

the application and use of energy from renewable energy sources linked to distributed energy transforms users into employees (change of precariat in prosumers).

This is the new model of social settlements connecting the place of residence with the workplace (see the Fuggerei housing estate).

The key issue here is the location of the energy area which is the basis of economic and social innovation. It is a key element in the post-modern conditions for the social, economic and political development of each country. In Polish conditions, this means a modernization stroke and the need to adapt to the EU's energy policy towards the so-called the decarbonisation of Member States [12]. Dispersed energy is the sector of modern economy that offers labor consumption [12], and therefore generates new workplaces in Polish conditions, leading to the reduction of unemployment.

The observed changes towards the use of renewable energy technologies in the planned housing / social housing estates in Poland, as well as launching the full potential resulting from energy efficiency, is a key issue. An important role is played by the issue of user participation included in the future model of distributed energy, understood as a method of shaping social housing / estates by users. Methods of "social participation" and "advocacy planning" can support the methodology of designing apartments / social housing estates. In Polish conditions, the eco-energy model of a social housing / social building should be linked to heat maps, which will give an answer to the question about the type of heat resources that are at the disposal of the considered areas of location.

This means remodelling the design concepts of social estates, taking into account the paradigms of dispersed energy and creating new heat / energy maps and maps adapted to them on the scale of the commune / region / country. Currently in Poland heat map issues are under consideration (first reports).

The proposed model of housing estates / social housing therefore prefers the use of small energy sources. Comparative advantages seem to have biogas plants that may arise in every social housing estate (in particular in rural and small towns). Biogas plants connected with gas heated buildings, where electric turbines are supplied, supplying energy to housing [12]. In these buildings you can also use other solutions such as heat pumps, electric photovoltaic cells, etc.

In rural conditions, residents of housing estates as biogas producers have a chance to obtain work in their place of residence. The estimates refer to the possibility of creating 100,000 jobs in the energy sector [12]. The proposed implementation of several thousand housing estates in the conditions of villages / small towns would seem to solve the problem of living and creating productive jobs at the same time. Due to the technological simplicity of the solutions, the production process can be introduced in the 2-3-year mode, in connection with the method of building cheap social housing estates.

Biotechnology solutions are proposed in cities. In urban conditions, one should take into account the model of housing estates / social flats taking into account participatory design and integrated with the distributed energy system and renewable energy sources (RES) as a safety imperative. For Polish conditions, it seems very interesting to combine high technology infrastructure with traditional building technologies, implemented in the "vernacular architecture" convention [5]. In urban conditions, designed housing estates / social flats should use unconventional sources with the indication of the following energy sources: solar energy (passive, active), heat pumps, thermal water, waste incineration plants, gas acquisition from landfills, biomass, including wastewater treatment plants, etc.

5. Conclusions

A retrospective look at the historical origins of social housing allows us to construct summaries of current and future trends related to their design. Reaching in this context the achievements and the phenomenon of the European settlement, finds its basis in the Middle Ages. Here you should refer to the solutions of the religious formula and early solutions of nursing homes for the poor. The presented materials lead to conclusion that shaping a social housing estate existing in the modern and postmodern era is subject to significant changes. Post-modern societies require the creation of new qualitative program conditions and housing standards.

The conducted analyses clearly show that the social and economic context should be taken into account. The way of using energy to create the architectural and urban project of housing estates / social

flats, different from historical solutions in the period of the first and second industrial revolution, is a variable creating and denoting new housing estates / social housing.

The above issues are in relation to local energy resources such as: open water, underground thermal water resources, heliactive resources, wind energy, energy resources of energy agriculture, etc., which should be included in the preparation of preliminary pre-design assumptions for this type of investment. It should also be noted that morphological and climatic connotations (location, raw material resources, including the use of local materials, etc.) are necessary to define design guidelines.

Such solutions should be drawn from available resources, based on local culture, should meet the conditions of co-creation of artefacts of the mentioned culture, in the meaning of active participation of precariat in the process of creating residential architecture, as well as meet economic, ecological and energy requirements. Looking for a balance between social, economic and political issues also means seeking solutions that reduce the "uncertainty" of existence within the community, including the possibility of joining job positions and social participation.

The connection of the design that participates with the electricity production system from unconventional sources may therefore be a chance for permanent work for precariat stratum. The issue of housing model in Polish conditions is different from Europe, since the scale of the demand for social housing estates is incomparably bigger and it is strictly connected to energetic safety, therefore the presented model of social housing should be included in the strategy of modernization of Poland.

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