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Living Space in A City - Selected Problems of Shaping Modern Housing Complexes in Cracow - A Multiple Case Studies: Part 2 – The Case Study of High Density Forms of Multi-Family Residential Buildings

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Abstract. Publication synthetically characterises the situation of the population of Poland in the global context and the development of Polish cities, as well as 'relative deurbanisation'. Cracow - the second Polish city along with its peripheral areas is a metropolis that has a over a million inhabitants. The city, burdened with the "disease of deurbanisation", is a fitting field for the observation of phenomena that cause this process. The quality of the housing environment being offered in new large complexes of multi-family buildings that are being built within the administrative limits of Cracow, together with apartment prices, can affect the problem of urban sprawl to a significant degree. The goal of the research is the analysis of the characteristic phenomenon of the appearance of high density multi-family residential complexes in many Polish cities. Despite modern architectural forms and a higher standard regarding finishes they create a substandard housing environment. The excessive building density, and thus an excessive population density often causes the lack of the necessary functions and facilities, which should accompany residential buildings in order to provide residents with the necessary comfort and the expected quality of the housing environment. The ruthless exploitation of solutions that are allowed by current legal provisions in terms of the minimal distances between buildings or the insulation time for apartments - which are solely the result of an improper understanding of the profitability of a project - because these built residential complexes to lack the necessary common semi-public or public green spaces. In many complexes there are also no basic services - such as day care facilities, kindergartens or schools. There is also no appropriate programme of commercial services. The excessive number of the residents of these complexes, combined with insufficient access to mass public transportation, leads to a greatly increased vehicular traffic load on the road network, which is unprepared for such flows of cars. Small and medium-sized apartments dominate the apartment structure of these complexes. The magnet that attracts these residents to complexes located in the vicinity of the city centre or within downtown areas is the attractiveness of these areas of the city. Locations that are farther away - more peripheral in nature - attract residents with lower apartment prices or a close proximity to places of employment. However, it should be remembered that the young demographic structure of these complexes, combined with the known problems with paying back loans and the possibility of freely changing one's place of residence will deepen the insufficiencies regarding the lack of necessary services and recreational spaces outlined above, permanently deepening the substandard of areas that have been blocked by this type of buildings for many years. The results of the author's research and observations make it possible to state that this - in many ways -



substandard housing "offering" becomes a product that endangers the integrity of the urban space, as well as its functional, spatial and social cohesion.

1. Introduction

Cracow - the former capital of Poland, as well as the Cultural Capital of Europe in the year 2000 - a city of culture and science with the unique legacy of its material culture, whose old town urban complex, along with the Royal Castle at Wawel Hill, was placed on the first UNESCO World Heritage Sites List in 1978 - is a city with metropolitan ambitions. Cracow belongs to the group of the five largest Polish cities with a population of over half a million. [1] The city, occupying an area of over 327 km² and counting 766 739 inhabitants within its city limits¹ is the second-most populated city after Warsaw (1 735 442 residents and 517 km²) and at the same time is a representative "laboratory" for the observation of the phenomena of the shaping of the contemporary urban built environment, characteristic of the developing free market economy of Poland after the transformation of the political and economic system in the year 1989. The new Spatial Planning Act of 2003 introduced significant changes in the legal bases of the shaping of built space. By law, then-current spatial development plans ceased to be in effect. The act mandated that territorial government entities develop *Spatial development conditions and directions studies*, which are not an act of local law. The regulations of a *Study* are binding for organs of community (*gmina* in Polish - transl. note) authorities when developing local plans after the repealing of previous documents - the Act also created the possibility of carrying out development projects on the basis of *land development conditions* issued through administrative proceedings. They have become a commonly used procedure, often leading to a lack of the coordination of development efforts, breaking up the spatial and functional continuity of urban structures and the destruction of spatial order.²

Multi-family residential buildings are the dominant form of the spatial organisation of housing in large cities, currently appearing in downtown areas in the form of infill buildings, supplementing an existing structure or occupying areas covered by functional transformation - e.g. post-industrial areas. They also appear in areas of the territorial expansion of a city, in areas associated with the directions of its spatial development, as well as in the vicinity of the concentrations of places of employment. In Cracow, similarly to the majority of Polish cities, the majority of new complexes of multi-family residential buildings is being built as a part of the activity of the private sector of the economy. The use of the aforementioned faults of the new Spatial Planning Act and the minimum requirements of construction law in terms of the distances between buildings or the insulation time of apartments that are unfavourable to the quality of the housing environment that is being shaped - leads to the construction of substandard housing complexes, blocking valuable areas of a city for many years. The comparing of these built projects with numerous estates or urban complexes that were being built as a part of the urban normative standards in effect up to the year 1990 - results in an unfavourable outcome for many contemporary projects, despite more interesting architectural solutions and a higher standard in terms of their finishes and facilities. An analysis of distinct selected examples of built projects of high density forms of multi-family residential building complexes makes it possible to point out the essential flaws of these projects.

¹ http://www.krakow.pl/biznes/1140,artykul,liczby_o_krakowie.html : Magiczny Kraków – data provided by GUS - first half of 2017

² In 2003 only 2% of Krakow's area had a local plan in effect. Currently - on the 20th of February 2018 - after 15 years, 51,7% of the area of the city is covered by approved and enforced local spatial development plans (165 plans, 2 plans awaiting approval, with 60 more plans being in development), however, many development projects are still being carried out based on land development conditions; Planowanie Przestrzenne - *Biuletyn Informacji Publicznej*; <https://www.bip.krakow.pl/?id=412>; retrieved on 24.02.2018

2. Salwator City – Future City³

Salwator City is a residential complex with downtown characteristics and an attractive contemporary architecture, located in Cracow in the district of Bronowice, on an area of around 3,0 ha. It is located between Armii Krajowej Street from the west and Bronowicka Street from the north - at a distance of around 150-300 m from those streets when measured in a straight line, as well as Zarzecze Street from the south, which is located around 250-500 m away. Access to the complex is provided by Stańczyka Street, which surrounds the area and is connected by right turns with Armii Krajowej Street and through an intersection with traffic lights with Bronowicka Street. Public transport means - bus lines, with a bus stop along Armii Krajowej Street (at a distance of around 220-300 m from the western border of the estate) as well as tram lines along Bronowicka Street (tram stops at a distance of around 300-450 m). We can thus state that the isochrone of access to public transport stops is appropriate, although access paths - pavements - do not provide good comfort to pedestrians, are winding and narrow, running along busy access roads. This remark does not apply to the main compositional axis of the estate, which has been devised as a wide promenade with a long line of concrete benches for sitting, situated on both sides of a narrow belt that separates them, featuring flower pots, compositions of stone forms and even a small water table in the centre. The site development and street furniture elements have been designed and built with much care for both detail and form. The modern atmosphere of the site's development blends well with the attractive architecture of buildings, featuring contemporary forms and a rich detail in the characteristic top parts of the buildings or of the legible commercial ground floors. The dynamically extended cantilevers of the balconies form the vibrating texture of the facades, while the clear accentuation of the building cornice through material and colour compositions, dividing the facades with horizontal white belts which combine levels into sets of two with dark surfaces of glass and wall fragments, are measures which are conducive to the obtaining an architecture that is attractive and has a fresh climate, and at the same time in the reception of the reduction of the height of the buildings.

The promenade inside the estate shortens pedestrian paths and improves their comfort, connecting all the elements of the complex both compositionally and functionally. It is an offering of an open public space for walks and rest - although, similarly to the other parts of the complex and despite much care for form and detail, one can feel the crushing atmosphere of a stone desert without trees or bushes, surrounded by tall, high-density buildings, with a scale that is disproportionate to the interiors of the so-called urban blocks. A large number of parking spaces has been situated in the internal space of the complex - probably due to their insufficient number in the garages underneath the buildings and underground when compared to the high density of the buildings and their useable floor area. The main axis does not have a compositional focal point - to the west, in the extension of the axis of Stańczyka Street, it is directed towards the gable wall of an accidental five-storey apartment block on the other side of Armii Krajowej Street, a part of Osiedle Widok. The wide promenade also does not have a good connection to the bus stop near Armii Krajowej Street in the form of pavements that run along Stańczyka Street. One of the pavements is almost always completely occupied by parked cars, due to a lack of parking spaces in the Future City complex. The complex is separated from this street by a wide (around 150 m) belt of allotment gardens - fenced off and inaccessible to residents. And although, when viewed from the external circulation artery - Armii Krajowej Street - it stands out in terms of its contemporary high quality of architectural form, the buildings of the Future City complex only appear to rise above park-type greenery - it does not provide the residents with the desired functional values associated with access to green recreational spaces within the complex. The aforementioned public pedestrian promenade would gain in compositional and functional significance if one could, at its extension, use pedestrian crossings to get to the pavements located on either side of the western part of Stańczyka Street and further along its extension through Armii Krajowej Street, using an underground passageway or elevated footbridge. This desirable integration if both urban complexes can still be obtained. It would

³ Authors: B2 STUDIO – Kraków; Developer: Spółka Mieszkaniowa „Salwator” Sp. z o. o Kraków;
<http://architektura.muratorplus.pl/zycie-w-architekturze/2012/salwator-city/573/> retrieved on 25.11.2017, 23:23

be more difficult to correct the compositional and functional relations between Stańczyka Street along this section and the previously discussed internal pedestrian promenade.

Commercial spaces have been located on the ground floors of the buildings from the western side, while along Stańczyka Street - a large SPAR grocery store (formerly Alma), a pizzeria (Fabryka Pizzy), a pharmacy and a dental clinic. These comparably modest services, while also attracting clients from the city - do not meet the basic needs of the residents. There is a lack of some services and facilities required in such a complex - like a kindergarten or an arranged open recreational space for the residents. On the eastern side of the Future City complex, the only area that is currently free from buildings, with an area of around 1,25 ha, is also assigned for building up in the site development design - the construction of the **Oaza Bronowice**⁴ housing estate has already begun - featuring a similar density as in the existing complex - although with somewhat lower buildings, with 4 - 7 storeys. From the west - from the side of the Future City complex - freestanding tower-type six-storey buildings are being built, situated parallel to the internal access road. Perpendicular to them - in every complex - a longer and taller seven-storey building has been placed, connected with a four-storey building parallel to the external street and the nearby existing five-storey apartment blocks. The architecture of the designed buildings features attractive contemporary forms with rich tectonics, with strongly articulated grey building cores, crowned with an expressive roof surface. White, four or five-storey boxes have been suspended in the cores, featuring perforated walls for one or two-storey complexes of porte-fenêtres or terraces with recessed glazed partition surfaces and vertical divisions made out of wooden cladding. The bases of the buildings, with commercial spaces in the ground floors, are also strongly accentuated. The architecture draws attention and attempts to convince us of the formal attractiveness of the offered housing environment. From the planned layout of buildings, we can assume that the previously discussed compositional axis - a public pedestrian promenade - will obtain a compositional and perhaps also a functional focal point.

In the discussed residential complexes of **Future City** and **Oaza Bronowice**, the authors of the designs and the developers have undoubtedly achieved a formally attractive fragment of downtown space that is contemporary through the character of its architecture, which reflects its name well. The estate is not "gated" - access control is performed by entrances to buildings. However, this built project's flaw is its high density, the effect of which is an evident lack of green areas meant for the residents' recreation. The deciding factor in the shaping of the climate of this place are the proportions of interiors and spaces between buildings in relation to the height of the buildings themselves.

The adopted high building density is not justified by good accessibility to public transport, nor the offer of publicly available services or attractive open public spaces. The flaws of contemporary residential projects arising from the excessively high building density were also written about by other authors. "Immense efforts are required on behalf of both the cities and communities responsible for the shape of urban space so that complexes in the style of Salwator City - without greenery, services, schools and kindergartens and extraordinarily densely built up - do not become the widely accepted model of *future cities*". [1] (Figure 1)

3. Osiedle Widok⁵

Osiedle Widok (The View Housing Estate in English - transl. note) located on the western side of Armii Krajowej Street, in the vicinity of the described Future City building complex, is the complete opposite of the conditions created in the previous complex. Of course, we are not discussing the architecture of its buildings, which fits in a different style, associated with the period of the construction of this urban complex. This housing development, built almost entirely in the 1970's and based on the then-enforced urban planning normative standards - has a clear composition with a main axis in its centre, constituting an expansive zone of park greenery. The housing estate is located between Armii Krajowej Street (from

⁴ Developer: Oaza Bronowice Etap II Sp. z o.o., spółka komandytowo-akcyjna, Kraków, Stańczyk Street 13/1; architecture: B2-STUDIO; <http://oazabronowice.pl/sites/default/files/Prospekt%20Informacyjny%20ul%20%20Stańczyka%207%20wzór%20%281%29.pdf>

⁵ Kraków – Bronowice, Osiedle Widok, author: arch. Krzysztof Bień – designed in 1969-70.

the east), Balicka Street (from the north), Zarzecze Street (from the south) and Na Błonie Street (from the west). The internal space of park greenery, along with areas near two schools and two kindergartens, amounts to around 7,0 ha. The buildings, with an east-west orientation, provide cross-ventilation to the area and the expansive space of inter-block greenery considerably improves the comfort of life in this complex. The residents of Osiedle Widok have at their disposal numerous walking paths, traced through greenery, an amphitheatre, a church and a library branch.⁶ The lack of a commercial centre, which, like in the majority of housing estates from this period, had not been built, was for some time being compensated by a single-storey retail pavilion located in the centre of the estate, near the internal belt of park greenery. Numerous service facilities have been built near the tram terminus in the north-western part of the housing estate, near Balicka and Na Błonie streets. Connections to the city through public transport are provided by tram lines with stops at the terminus and near the viaduct (a walking isochrone of about 500 m) as well as bus stops along streets that surround the housing estate.



Figure 1. Cracow, *Future City Salwator*

⁶ The Jan Kanty Parish Church – arch. Krzysztof Bień, 1983 – 1992.

If we compare the living conditions in both complexes - we can describe them as polar opposites. Osiedle Widok is a housing environment saturated with greenery - it is living in a park. The previously discussed residential complex is living in a large city downtown space - perfectly arranged, but lacking in greenery and not offering its residents contact with nature. The residents of many new housing complexes built by private developers, built in the first decades of the twenty-first century, constituting building enclaves that are small in terms of area, but quite often featuring high density, usually do not have many basic services characteristic of housing estates and residents are encouraged to use already existing services that are either in the vicinity or further away. The characteristic spatial conditions of the housing environment in complexes built as a part of the enforcement of urban planning normative standards (up to the year 1989) as well as those of the later period were discussed by Hanka Zaniewska in the publication *Ewolucja koncepcji urbanistyczno-architektonicznych budowy osiedli mieszkaniowych (Evolution of the urban planning and architectural concepts of the construction of housing estates)*. [3]

4. Osiedle Europejskie ⁷

Osiedle Europejskie (European Housing Estate in English - transl. note) - located in the south-western part of Cracow, stands out through its extremely strict concept of segregation - through the individual fencing off of each of the six blocks it is comprised of. In this complex access roads surround each of the individually gated blocks, effectively decreasing the green - biologically active surface area that could potentially be obtained between these 6 - 9 storey buildings with small interiors. The classic urban-block-based building layout has a clear composition, with a main axis that is legible in the layout of buildings, which could be an important public space, integrating the residents of the separated and fenced off urban blocks in an external walking path with services in the ground floors of buildings. Such a solution could have been obtained through a binder-like circulation of the urban blocks composed of access roads located outside of the estate and the use of the dead walls of the tall building bases associated with the slanting of the terrain, for services. Unfortunately, this space in the built development is a circulation space with two one-way access roads and parking spaces. The high density of the buildings makes the interiors of urban blocks - particularly in the central and southern part of the estate - appear to be too cramped and unfriendly. The estate is, however, an estate only in name - as it does not provide its residents with the necessary basic services and open-air facilities, which should accompany residential buildings - such as a kindergarten or school, or an open green recreational space. New segments of this "estate" are currently being built, constructed by the same developer⁸ - a building complex of similar size has been built, replicating the flaws of the previously described one. In this part of the "estate" the land development is dominated by the asphalt surfaces of access roads, often doubled, along with parking spaces, which surround each of these so-called "urban blocks". Greenery covers barely symbolic patches of the surface that has not been built up. Both complexes occupy an area of around 13,0 ha. For such a large complex only a relatively small commercial and retail pavilion has been built near the entry road from the north - near Michała Bobrzyńskiego Street, in front of the fence, while a small private kindergarten has been built in the southern part.

Similar conditions of excessive crowding and the doubling of access roads can be found in the nearby building complexes located to the east and south of the two-carriageway artery that is Michała Bobrzyńskiego Street, near Chmieleniec, Jana Szwai and Lubostroń streets. Near Jana Szwai Street, a large, multi-space parking lot directly touches the facades of residential buildings (Szwai Street 7), which significantly lowers the quality of housing conditions and is not compliant with current regulations. To the west of this small housing complex, Jana Szwai Street, which surrounds it, almost touches with Lubostroń Street, which runs parallel to it, probably only because they are on separate properties.

⁷ Osiedle Europejskie – designed by: B2 STUDIO, under construction since 2002.

⁸ The developer of the estate is the AFI Europe NV international real estate development group https://pl.wikipedia.org/wiki/Osiedle_Europejskie#cite_note-4 ; retrieved on 01..03.2018

5. Nowa 5 Dzielnica⁹

Nowa 5 Dzielnica (New 5th District in Polish - transl. note) - is also a contemporary housing complex with large-city properties that is currently being built in Cracow between Wrocławska Street from the south, Raclawicka Street from the west and the Kraków Główny - Balice railway line from the north. The construction of 11 residential buildings with a height of between 6 to 10 storeys with underground parking facilities and commercial spaces on the ground floors of some buildings is planned on an area of around 5,0 ha. A total of 1450 apartments are to be built in this complex¹⁰, featuring a diverse structure - from small one and two-room apartments to large family apartments, including penthouses on the uppermost floors with expansive terraces and views of the city. Over 1000 parking spaces are to be built in underground garages and 150 parking spaces on the surface, near the access road. On the site development plan we can see great care for the maximum use of the site and the minimisation of paved surfaces to include only the necessary access roads, parking spaces and pedestrian paths to preserve the greatest possible amount of biologically active surfaces. In order to compensate for the loss of space occupied by buildings, their designs feature green roofs. This concept, however, improves the unfavourable balance of biologically active surfaces in relation to the planned building density and number of residents to only a slight degree. The part of the complex that has currently been built up to its shell stage - five buildings, makes it possible to state that the buildings will be excessively cramped and that there will be a lack of appropriate open spaces for the residents that will soon appear here.

On an adjacent plot, with a surface area of around 4,0 ha near Poznańska Street, a new complex of residential buildings, composed of 8 buildings - which have mostly been finished - is also being built. In this complex, the so-called **Kamienice Herbowe** (Coat of Arms Townhouses in Polish - transl. note) have been built with a pleasant architectural climate characteristic of residential buildings (Poznańska Street 6 - 8) - as three buildings with 7 to 8 storeys¹¹. The building at **Poznańska Street 10**, with a height of 8 to 9 storeys stands out through the modern architecture of its form, detail and the site development of its extraordinarily small open areas¹². Three 9 to 10 storey buildings called **Murapol - Poznańska**¹³ are another enclave of buildings in this complex, which is meant to feature a total of 883 apartments, as well as - proportionally to this number - around 500 - 700 parking spaces in the garages underneath the buildings. Ultimately, a high density building complex is going to be built in this area, which, after subtracting building footprints, the surfaces of access roads, parking spaces, pedestrian pathways and paved surfaces associated with walkways to buildings - does not offer an open, green recreational space apart from small portions of areas with a green - grassy surface.

This remark applies to the entire area between Wrocławska Street (from the south), Raclawicka Street (from the west), the railway line (from the north) and Łokietka Street (from the east). Combined with existing buildings, probably at least 7 000 - 8 000 residents, which will have no access to fundamentally essential services that accompany residential buildings like kindergartens and schools or the necessary recreational areas and facilities will live on an area of around 11,5 ha. This means that there will be around 1,5 m² of gross land area per resident and no more than 1,0 m² of open areas - calculated along with paved surfaces. Compared to the standard offered by the complex at Czarodziejska Street¹⁴, where the comparable indicators amount to 55,5 m² of gross land area per resident and 42,5 m² of open areas -

⁹ Krakow – Krowodrza, Nowa 5 Dzielnica – developer: Centrum Nowoczesnych Technologii from Sosnowiec; land development conditions – B2 STUDIO; technical designs: ION ARCHITEKCI sp. z o.o.; BRIT-PLAN sp. z o.o.; ARCHIKWADRAT sp. z o.o.

¹⁰ <http://www.urbanity.pl/malopolskie/krakow/nowa-5-dzielnica,b12770>

¹¹ Kamienice Herbowe – design by: Skoczek & Wojdacki, designed during 2006 – 2010; 175 apartments, 151 parking spaces in the underground garage, usable floor area 75 879 m²; developer: KCI Development; <http://pewa.pl/projekty/budynki-wielorodzinne/kamienice-herbowe/>

¹² Kraków – Poznańska Street 10 – residential building, authors: B2 STUDIO; construction 2016; 139 apartments, underground garage and commercial spaces on the ground floors; developers: Terra Casa S.A. <http://poznanska10.pl/contact/#content>

¹³ Kraków – Poznańska Street, the Murapol – Poznańska buildings: 569 apartments, several hundred parking spaces in underground garages; developer: MURAPOL S.A.; <http://www.urbanity.pl/malopolskie/krakow/murapol-poznanska,b9226>

¹⁴ Jacek Gyurkovich, „Living space in a city - selected problems of shaping modern housing complexes in Krakow - a multiple case study. Part 1 - Urban villas.”

we are dealing with polar opposites in terms of housing environment conditions. A different typology of buildings to some degree justifies these deliberately compared strikingly different standards - however, it does not allow us to accept solutions which - with some degree of permanence - transform sizeable areas of a city into substandard spaces with low quality housing conditions, despite the good, contemporary architecture they are comprised of, in addition to the often significant care for the standard of site development. The currently ongoing modernisation of the road network will not improve the accessibility of this area in terms of road traffic - both individual and mass. The perceived housing comfort will also be worsened by the significant number of cars (1500-2000 cars), which will be trying to reach the buildings or leave the area. The disadvantage of this high-density location, apart from the abovementioned spatial and programmatic shortages, is the lack of comfortable access to municipal public transport. In the complex that is being described, the matter of whether individual buildings or complexes thereof will be "gated" or not is completely secondary - as this will neither worsen nor improve their housing conditions to a significant degree.

The residential complexes being discussed have been built in areas for which there are no local spatial development plans in effect - based on land development conditions obtained through administrative proceedings. A general level of compliance of the buildings with the guidelines of the Study can be confirmed, as it assumes that the post-industrial areas between Wrocławska Street and the railway line can be developed into multi-family residential buildings with an "urban-block-based layout" with an increased density in the vicinity of railway (and underground railway) stops, and a height locally increased above 25 m in cases justified by already existing buildings in the vicinity.¹⁵ One of the plans of the Cracow underground railway features a station in the area of the intersection of Wrocławska and Kijowska streets, but it is currently difficult to determine the time perspective of the carrying out of this project. The Cracow-Łobzów municipal rail stop, located at a distance of around 600 m, with bus stops in the vicinity, is indeed accessible. Tram stops located along Króleweska Street are at a distance of around 1200 - 1500 m. However, in these complexes it is difficult to find the "commonly accessible arranged greenery" and "public spaces" that were postulated in the Study. The programme of the commercial services planned on the ground floors of buildings, due to the amount of space reserved for such premises - will probably not be sufficient for such a large group of residents. There is a clear lack of educational services - schools and kindergartens. We should associate this fact with the excessive building density in the analysed area despite partial compliance with the regulations in the Study. Grażyna Schneider-Skalska [4] „She points out to the negative phenomena which have emerged in these areas, such as spatial disintegration, excessive concentration of development or absence of structural continuity, which are often combined with an attractive architectural form, high quality building materials and fine architectural detail.”

6. Conclusion

In many new residential complexes that are being built in Cracow in varying parts of the city we can find spatial solutions that negatively affect the quality of the housing environment that is being shaped. The flaws of these solutions have been characterised in the text of the article. They primarily include excessive building density, overcrowding, the lack of green areas for rest, which are necessary in residential complexes - and which, in the case of the lack of basic services, causes the appearance of many substandard built up areas. Space, which is a common, non-renewable good, is being destroyed in order to obtain the highest possible profits. Despite the flaws of the Spatial Planning Act, construction law and the economic pressure of developers - the remaining participants of the development process are also responsible for this state of affairs. The aforementioned flaws of the development process in Poland were characterised by Sławomir Gzell: "Planning, which acted in the role of a coordinator in terms of the economy and ecology of cities, which were sprawling beyond the borders of imagination,

¹⁵ Unit: 7; Name: Łobzów; Directions of change in terms of spatial structure; https://www.bip.krakow.pl/?dok_id=63717

was rejected. The concept of public interest was also rejected, as it foreshadowed control of the market, while in Poland there is constantly talk of the communist provenance of all manners of regulation", [5].

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- [5] S. Gzell, „The city of the future – I would not like to live in” , *Technical Transactions*,1-A/2014, pp. 31-45