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Postmodern Discourse of Post-Soviet Large Housing Districts: Modelling the Possibilities

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Abstract. **This article gives an overview of some aspects of postmodern reality, directly touching upon the large-scale housing estates, and searches for the evidence to prove such an assumption that the post-Soviet society has changed; thus, the high-quality existence in the large-scale housing estates becomes impossible without changing them essentially. The research is based on the analysis of literature, comparison of analogies: the experiences of cases of Western Europe. The result of this research is the conceptual framework for the regeneration of large-scale post-Soviet housing districts.**

Keywords: **large-scale residential districts, regeneration, globalisation, postmodernism, restructuring large housing estates.**

When studying the goals, needs and possibilities of large-scale residential estate restructuring, one frequently confronts the problem of adequate assessment of the current situation. It is apparent and has been recognised that something has fundamentally changed the world. Global events are directly related to postmodernism, which is the prevalent paradigm of thinking along with the attributes of modern society life.

This article offers an overview of some aspects of postmodern reality, directly or indirectly related to large-scale housing estates and searches for the evidence to prove the following assumptions:

1. the post-Soviet society has changed; therefore, the high-quality living in the large-scale housing estates becomes impossible without carrying out fundamental changes;
2. Soviet mass housing blocks are often overpopulated; however, this is in no way related to the quality of life in these areas;
3. the current methods of renovation of the outdated and worn living environment are nothing but waste of time and public financial resources.

The government has designed an action plan involving the restructuring of urban neighbourhoods. This top-down model in the post-industrial society is outdated, and it is clear that the main initiator of such a policy is the construction corporations because they present the tools for guaranteeing the prevalent power of government.

However, the society develops thereby altering its needs and the tools with the help of which these needs are ensured. It is, therefore, clear that *condominium* as a too complicated form of ownership of mass housing residential buildings leads to new kinds of problems and challenges, which have not existed until now. No one emphasised the need to solve the problem in the nearest future before it became universal and socially too obvious. The attention is focused solely on saving energy resources. The alternatives are not considered.

This article analyses how the globalisation affects the post-Soviet society, how this transformation of society can (and should) change the physical environment of mass housing areas, as well as the necessary and possible changes. This article is based on the postmodern urbanism paradigm.

I. Postmodernism and the Global Society of Large-Scale Residential Districts

Nowadays, the postmodern society sees the phenomenon of post-Soviet mass housing area in many different ways. Most frequently researchers choose a convenient position while providing the subjective evaluation of this phenomenon. Quite frequently they leave it not assessed at all, just classify the mass housing districts as a physical expression of a certain era and social organisation, in other words, a negotiable status quo. Surprisingly, an approach like this is generally possible in the twenty-first century, especially in the post-Soviet space. This can only be compared to the lack of judgment.

The artistic value of the Soviet time mass housing estates is researched surprisingly frequently. No value construction elements are regarded as high value decorative elements [8, *9*]. Pure rationalisation effects of mono-functional district planning are treated as an advanced urban design. Even if it does not make any sense or generates no real benefit to the objective assessment of the situation, it still reflects what today has become *the norm*, i.e., the situation where meaning disappears [15, *26*], as Jean Baudrillard has written: “more information and less and less meaning”[2].

Thus, to adequately evaluate public property (mass housing estates) one needs to understand the society itself. Otherwise, further steps in urban modelling will remain only the simulation of improvement of the existing physical environment using presentiments; all of which is likely incorrect.

The section continues with a brief overview of the modern society and its connection to the physical space of the global world conditions, including changing values, dominance of neoliberal free market logic, rupture of social relations, etc.

Globalisation. The entirety of such aspects of globalisation as **declining physical, economic, legal and language barriers, increase in mobility and disappearance of the significance of location** reveals the diametric contrasting nature of the global society, when compared to the one for which the large-scale residential districts have been designed. Any attempts to convince the members of the changed society that the *socialistic* residential environment is sufficiently humane and of high quality seem cynical in the 21st century. Separate buildings are being renovated in order to reduce waste of energy resources. There is no indication that this could be salvation from a situation, where a majority of urban population live in the worn mass construction areas, especially when financial strength of the population decreases. Globalisation is a platform of alternatives.

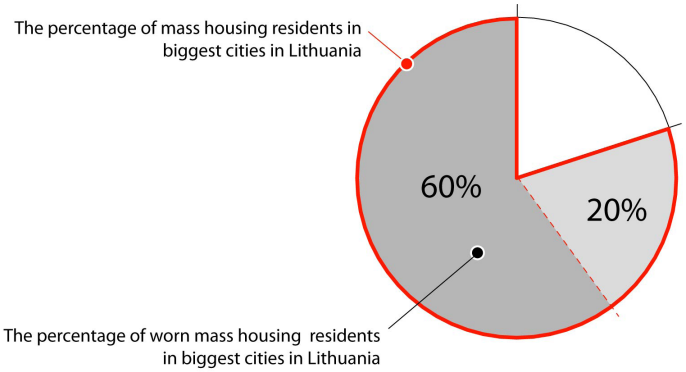

Fig. 1. 60% of the population of major cities live in post-Soviet housing residential districts in Lithuania [1, 11]

However, it also dictates the dominating ideology, i.e., **globalism** or, in other words, the **neoliberal globalisation** [10, *171*]. This means that the various residential media have become favourable to powerful bureaucratic and political institutions and corporations. Thus, along with the growing social and economic integration [15, *75*] the society is forced to adapt to the rise and domination of the rich class, which controls the major part of the corporations. From one point of view, it is a transition from a personal to impersonal control form [15, *126*]; yet, from another point of view, it is the dictate of capital. Firms owned by one person are now changed by companies, so at present corporations are usually owned by banks and insurance companies. Thus, even under favourable conditions created to rehabilitate living environment, it is unclear who can participate and take responsibility in this process. The role of the state and of the one who gets the benefits is unclear as well. M. B. Steger notes that commercial interests have begun to dominate in the society and the ruthless logic of the free-market that successfully separates economic activity from social relations. Profit became the only intention. Of course, this is the negative aspect of assessing the mass housing opportunities of conversion.

Both of these aspects are assessed negatively. It can be stated that globalisation grants the following:

1. new possibilities to easily use alternatives when choosing the place and type of residence;
2. turning the private capital away from the "profitless" area, i.e., reconstruction of the large-scale residential districts;
3. increase of the distance between the strata of different financial capacity. The occurred possibilities for the residents to increase their capital have the opposite effect on the estimated one: rather than investing the money into the current residential environment the residents are simply relocating.

These aspects confirm that the large-scale residential district is a place of residence, which is rather easy to relocate from; however, the economically disabled part of the society (i.e., the elderly, residents with lower levels of education and immigrants) becomes "*imprisoned*" in the large-scale residential districts. It is difficult to estimate whether or not the occurred interaction of social tension and depreciation of physical environment is going to cause the current processes in the West to be repeated in Eastern Europe. However, one thing is clear: **globalisation has created the state of society inherent in postmodernism**.

Mass construction of residential districts has become the economic inevitability of the Soviet government's socialist provision of affordable housing. Construction of impressive scope has been achieved. These areas have still remained the usual place of residence for most of the urban population (Figure 1). However, this does not mean that these areas are suitable for today's society. Obviously, the large-scale residential areas are a poverty environment. It is, however, tolerated only because a large part of society is still unable to afford alternative residence [5].

Postmodernism employs the instruments provided by globalisation to fight against the "vulture-like" version of globalisation. Unfortunately, regardless of persuasion that the globalisation has a "human face", most of globalists remain associated with the corporative globalisation ideology. Their reform proposals, even if they were implemented, were essentially just symbolic [10, *199*]. The fact that **postmodernism as a trend of thought and daily occurrence is essentially a novelty, turning point and chance to distance away from the modernity** [15, *238*] merely confirms that the "rules of the game" have changed. Within the scope of the present research, this is nonconformity **of the large-scale residential districts to the needs of the contemporary society.** Moreover, the purport of the renovation of single buildings is highly dubious.

It would seem that the altered model of lifestyle may present a partial solution to the problem presented by the large-scale residential districts. The people are free to move around and relocate to wherever the residential environment (economic, social, etc.) satisfies their needs. However, this causes no physical changes in the large-scale residential districts and they remain the same. All the more so that the attributes of the post modernistic lifestyle and the freedom to choose such attributes without any restraint create groups of residents, who obtain distinct types of lifestyle that are clearly different. The most important ones of these resident groups are the following: educated people of employable age, people of employable age with low levels of education, families with children and elderly people. The groups of people, who will most probably move away from the large-scale residential districts, show the ability to utilise the possibilities granted by globalisation. This does not happen due to the more advanced nature of other residential environment forms but rather because the free market fails to guarantee the possibility of transforming the large-scale residential districts into the desired residential environment. Moreover, the skills to use the mobile and communication devices allow dampening the experienced discomfort when living in remote locations. The resident groups of the large-scale residential districts, who are unable to change their place of residence, most often become affected by the negative postmodernism aspects. These groups are relatively easy to control by imitating the modernisation of their places of residence. Differently from the advanced part of the society, the majority of the residents of the large-scale residential districts are fed with "white noise" masking the underlying information [15, *156*].

When drawing the initial conclusions, it is important to note the following several aspects that are of significance to the analysed topic:

- After the *de facto* prevalence of globalisation, the post-modernistic lifestyle model has become the only possible method of survival under the market conditions;
- The prevalence of the new lifestyle model confirms the mutation of the society. This is noticed much more drastically in Eastern Europe due to the sudden change in the political and economic systems;
- The current urbanistic structures will be forced to submit to the post modernistic conceptual models; otherwise, they will be gradually turned into ghettos.

The change in circumstances may grant the chance for new ideas to be born. Up until the total globalisation, the dogma that **the bureaucratic organisation is a condition for effectiveness** [6] was prevalent. The speed of the economics of the globalisation is too rapid to allow for the existence of such cumbersome establishment while the competitiveness is too high to condition the luxury of having bureaucracy of several stages [15,89]. This means that **globalisation allows the post-modernistic society to dismiss the need of bureaucracy**. The strength of the post-modernistic society, in general, is that it finds the forms of mutated environment and activities agreeable, which are open to multiculturalism, accepting multiplicity and demanding multidisciplinarity. This is especially relevant when deciding on the fate of the large-scale residential districts [12, *83–91*]. Postmodernism grants the possibility to manage the large-scale residential districts by introducing new concepts and forms and applying various scientific and cultural potentials. However, time is of importance here: if delayed too long, there will be high probability that the large-scale residential districts will turn into ghettos, where the prevalent social problems will become larger than the problems of the physical environment and the restructuring and modernisation of these districts will become much more difficult to implement.

A conclusion is drawn that the urbanistic logic **is perfect for the areas, where the ownership relations and social needs are clear; however, it is not easily adapted in the areas, where the ownership relations and social needs are too ambiguous**.

The real needs of the population and changes of living conditions in reality challenge to create a new type of algorithm steps for modelling restructuring scenarios for large-scale residential districts. Such a scenario can not be based solely on energy-saving ideas because:

- saving energy resources has little to do with the creation of a comprehensive residence;
- the economic potential of population is difficult to predict; therefore, the claims that massive construction of residential areas will remain attractive for a long period of time is doubtful.

The society has changed along with the desired attributes of a place of residence. Although it is difficult to imagine these desires to come true, it is clear that the modernisation of several separate apartment buildings is not the way to go.

II. Experiment

The large-scale residential districts have also become a *de facto* urbanistic problem [12, *12–13*] for the cities of Western Europe in the 21st century. Differently from the post-Soviet medium, the countries with the avant-garde style of architecture are considering this problem seriously. The researchers from Utrecht University present a systemised experience gathered while analysing the large-scale residential districts of the cities of Western Europe and modelling the possibilities for modernisation and restructuring. By accentuating that the current situation in Eastern Europe **is not adequate** to the one in Western Europe, van Kempen *et al*. summarise: "The physical design of large housing estates followed the design proposals of the Modern Movement in architecture. At the time large housing estates were considered a symbol of modernity and improved the living conditions of residents. After some decades of use and, in some of the cases, little maintenance, the decay of the buildings is evident and **the estates are no longer state of the art**." [12, *97*]

The analysis of the need of investments into restructuring is stated in the RESTATE project. In many cases, the need for additional investments to make certain changes in policy is identified as well. It is offered to direct the attention towards the costs of different attitudes and possibilities. Several of the scenarios are utopian due to their exceedingly high prices. The remaining scenarios may be classified as the issue of long-term or short-term strategy arrangement. Also, the perspectives of the change in market demand must be perceived as well. Van Kempen *et al*. conclude [12, *98*]: "If existing poor quality dwellings are merely patched up with low levels of investment, will this solve problem or merely postpone it?"

The identification of the problems and difference between the social and physical problems in the studied area is presented in the RESTATE project [7] as the first objective of the regeneration process. The following allocation of the different physical intervention types is suggested:

1. Revitalization;
2. Reconstruction.

District revitalisation tools for improvement of physical environment. The look of the buildings is restored and a new quality for energy saving is formulated. Improvements to individual buildings, common spaces and utility services, and development of the areas between buildings are performed. It is determined that any delays in implementing such "minor" intervention cause the necessity for more expensive and drastic tools, i.e., demolition [13, *42–43*]. The experience shows that **in most cases** minor intervention is not enough.

The status of the large-scale residential districts in post-Soviet states was accurately characterised by Sigurds Grava: "The irony of the Soviet legacy is that there are not enough mass-produced apartments, and everyone hates these buildings. This is not really a paradox. The housing shortage still exists; people fight to get a new apartment, and, once they secure one, they see all its inadequacies:

- Construction is sloppy, thus, some units may be in danger of falling down, but almost all need capital repairs and expensive maintenance, particularly to the plumbing, elevators, windows, and wiring.
- The buildings are massive and overwhelming, beyond any human scale. Families with children continue to have difficulties adjusting.

Fig. 2. The mass housing district of *Gellerup*, Århus, Denmark

Fig. 3. The image of rebuilt *Gellerup* district [4]

Fig. 4. The site plan of rebuilt *Gellerup* district [4]

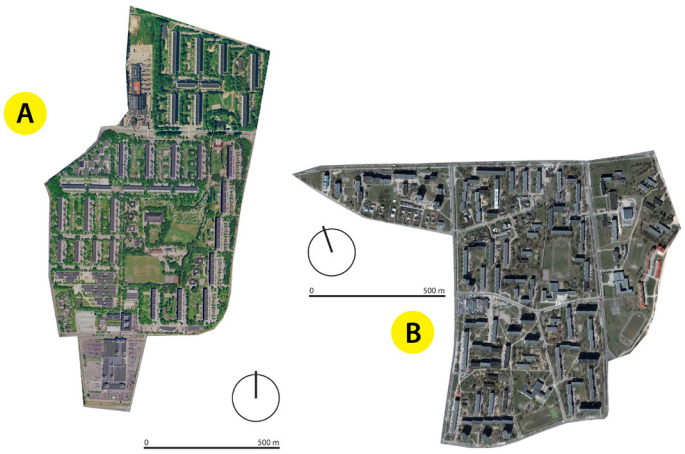

Fig. 5. *Gellerup* – the largest Danish mass housing residential district (A) and a relatively small Lithuanian analogue – *Putinai* district, Alytus. Source: Google Earth

- The apartment layouts tend to be uniform and inflexible, so that the units can not be modified. As living standards improve, residents will want larger apartments and more rooms. The heavy concrete bearing walls preclude interior reconstruction.
- Crime is rampant and burglar-proofing is difficult.
- Parking areas are remote, particularly in the older projects.
- Provisions are inadequate for washing and drying laundry. Garbage disposal is primitive.
- Public transport is inadequate." [5]

Most probably, the *mild* regeneration will not serve its purpose in the large-scale residential districts of the Soviet type; therefore, special attention should be devoted to the second type of physical intervention indicated in the RESTATE [7]:

District redesigning tools may be the necessary solution, when the district lacks any strong positions in the real estate market (hereinafter referred to as the RE market) and when the revitalization tools may not be applied due to high costs or complicated transformation of the buildings. The partial redesigning and reconstruction of the large-scale residential districts may change its position in the market if the following is to be performed: creation of new types of housing, new commercial and other premises, new public spaces, built-up reorganisation by relinquishing the monotonous and repetitive architecture, formation of favourable circumstances, etc. Reconstruction demands a higher level of intervention and larger investments when compared to renovation.

Demolition is a tool with a heavy impact upon the surrounding areas. The process of demolition is long; therefore, it is important to clearly understand the desirable goals in each case. Demolition gives new possibilities to the physical environment but it is impossible without the political willpower. Successful strategies improve living conditions and the functioning of the society. However, the demolition process is hazardous, extra expensive

and must be implemented only as the most effective method to reach the set goals. In most cases, it is likely that many reasons may occur to change the situation by employing the demolition tool in the districts, where monotonous build-up is dominant and no variety of building types and height exists.

In conclusion, it may be stated that the RESTATE research [7] is a **systemised and professional post-modernistic approach towards the large-scale residential districts**.

The case of Århus. The Danish architects EFFEKT suggested their own solution for the tender held by the Århus municipality in 2009 for the preparation of the Gellerup district reconstruction vision [4].

The largest residential district in Denmark was designed and constructed during 1968–1972 from sectional structures as an ambitious "modernistic dream". Currently, the district image is poor: concrete buildings, dead ends and car parking lots are dominating the area. Radical changes are suggested as follows: new streets for the large-scale use of the area, the increase in the build-up density and the variety of functions and building types. Such changes are radical – the EFFEKT team says at their webpage [4]. The reconstruction of the devastated spaces was designed to be turned into city streets, promenades, courts and the revitalised "green areas". The new main street is intended to house business premises and 1000 new workplaces. The typological variety of public spaces is suggested. The central park is restored and renewed with both infrastructure and biodiversity with the goal to introduce possibilities for various experiences. The buildings of the new type will present new lifestyle forms and types, and the residents will have a choice in the building types and building location in the district. The old panel buildings are transformed into new designs with contemporary lofts, etc.

The case of Alytus. When comparing the large-scale residential districts of the Republic of Lithuania with the European ones, it is evident that the physical depreciation of the large-scale residential districts causes the increase in social problems. The European practice shows that the critical level of depth of such problems leaves only one way out, i.e., reconstruction. This is hardly possible in post-Soviet states due to the *condominium* model chosen during the privatisation of houses, the uncertainty of the land ownership in the large-scale residential districts and the absence of the state urbanistic policy regarding this matter.

The attempts [3, 14] to envisage the possible scenarios do not leave the safety of the academic medium, and their implementation lacks the political willpower. The further studies of this field are related not only to the socioeconomic environment but particularly to the special urbanistic modelling. A building group of Alytus large-scale residential district was chosen for the study of such a type. The physical parameters were assessed during the study. Also, a high level of discrepancy between the official and non-official renovation prices was detected during the study. The difference between the lowest possible price and the highest noticed price of renovation is four times and though it has no influence on the urbanistic modelling it denotes the limits of the socioeconomic possibilities. The aforementioned limits are significant when modelling the possibilities for area restructuring.

According to the public data, the average cost of renovation for the entire *microrayon* is EUR 12.9 million. Theoretically, part

Fig. 6. The part of Putinai district. Chosen area for the concept is marked

of the budget can be covered through EU funds and the national residential building renovation programme. The studied portion will need 14.75% of the aforementioned amount; therefore, attraction of additional funds is a goal as well. Part of this amount should be used for modelling the urbanistic solution of the regeneration process on the basis of cooperation between the society and local government.

The experience in identical processes and recommendations, as well as the critical assessment of local socio-cultural medium in the context of globalisation were employed in creating the scenario for the hypothetic area regeneration, which is presented below. Also, the experience, gathered while working in the academic environment and during internship with the colleagues from the Urban Research Lab at Vilnius Gediminas Technical University, Department of Urban Design (hereinafter referred to as the UAML), was applied. During the period 2005–2010, under the guidance of Professor A. Vyšniūnas, scientific feasibility methodology was perfected and widely applied to various practical urban regeneration and urban restructuring projects from visual identity of the city assessment and improvement to the working with local territorial communities. The details of this experience are the object of a far more comprehensive scientific work. Thus, a feasible theoretic model reflecting the needs of the changed society and the ratio of these needs with the unused possibilities of urbanistic structure is presented. The model is systemised into four steps, which denote the action limits. In each particular case, these limits may be expanded or constricted:

Situation identification

- The studied building group consists of seven five-storey buildings and one non-economic nine-storey building (362 apartments) constructed in 1968. The physical status of the buildings is poor. Although all of the Soviet panel buildings can be called uneconomic – still the high ones

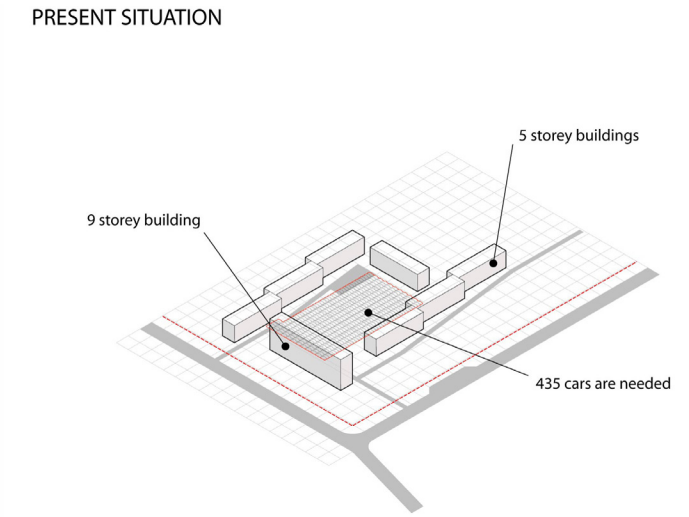

Fig. 7. Assessment of the situation

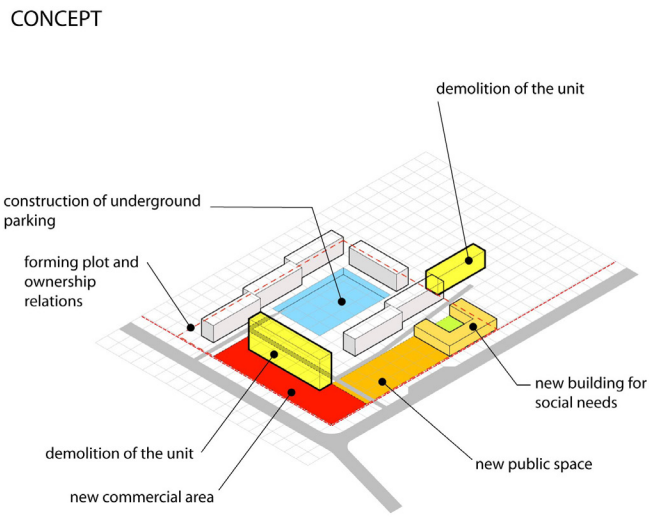

Fig. 8. Concept – an action plan for the project, the first physical intervention

have outdated lifting systems, which require relatively high investment. Also, high buildings require more complex care. Territorial reserves allow replacing them with lower ones. It has a positive impact on the city's image.

- The status of the premises and their equipment is critical.
- No land ownership.
- Open spaces belonging to nobody and used for car parking are dominant. According to the standards of the Republic of Lithuania, 435 spaces for vehicle parking are intended for the houses with 362 apartments.

Concept: an action plan, project and the first physical intervention

- A structure is built for temporary residence.
- The structures to be demolished are identified, new buildings of various functions are designed and public spaces are formed.
- The land lots are formed and the ownership limits are defined.
- The construction of the underground parking lot is performed.
- The pre-selected buildings are demolished.

Phase 1: Modernisation

- The structures that are not to be demolished are modernised: the application of the ground floors for the non-residential purposes, construction of attics and apartment expansion for current residents. The buildings are expanded according to the situation; additional apartments are built, etc.
- A community building with a hall and with premises designed for various functions is constructed for future local community activity and cultural organisations.
- Public spaces are constructed. A private courtyard with a square is designed.

Phase 2: Development

- The second phase of constructing the community house: social dwelling is constructed.
- A HUB is constructed: a structure with an easily transformable interior for provision of social services and contemporary business and production.
- New polyfunctional buildings are constructed: the lower floors are designed for business premises and the upper ones for residential purposes.
- The temporary structure is transformed according to the needs, e.g., the elderly nursing home is established, etc.

The presented scenario is hypothetical and its implementation possibilities depend on various factors. However, under favourable conditions and in the presence of political willpower this scenario is realistic and, in essence, it complies with the needs of the post-modernistic society. Separate details may be further discussed in the close circle of professionals.

When trying to answer the question **what the** large-scale residential district **(in Lithuania) is in the post-modernistic society**, it is important to first agree on how the phenomenon is perceived in general. In the present studied case, the question was raised while perceiving the large-scale residential districts as:

- Depreciated residential urban structures, which cause a negative visual and semantic image of the Lithuanian cities and, first of all, deplorable living conditions;
- Obstruction (taking up incredibly large urbanised areas of the cities) in implementing more advanced urban ideas while using human and environmentally-friendly technologies;
- The space for society's existence, the depreciation of which is partially not being solved on purpose, which in turn causes the naturally increasing dictate of capital and leads to the situation when the small group of society members get rich not by the way of high level technologies and brainstorming but rather with the help of "white noise" of information by exhausting the society materially and socially.

Conclusions

The large-scale residential district is:

1. An inadequately assessed residential area, the residents of which feel no natural connection to it, do not cherish or enjoy it, etc. However, this is nothing new: the large-scale residential districts have never been the indicator of pleasant residential environment and lifestyle during the Soviet times.

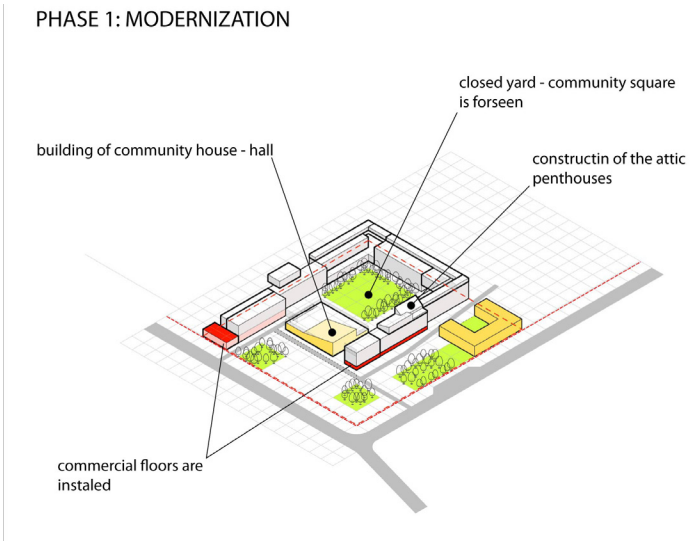

Fig. 9. Phase 1: modernization

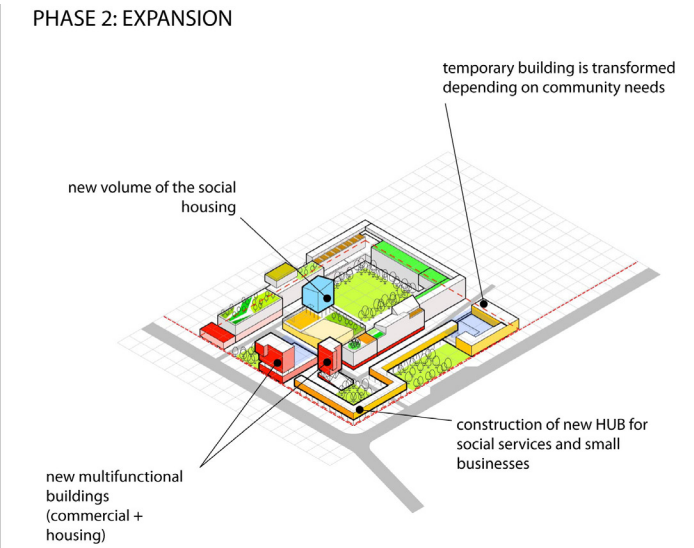

Fig. 10. Phase 2: expansion

2. A perspective area kept hostage by the state. This happened due to the endless land restitution with elements of criminal nature and the chosen "partial ownership" model, i.e., *condominium*, during the privatisation of former state apartments. Both of these moments are crucial when finding solutions for the possible integrated modernisation of districts.
3. A lifestyle form rejected in the consciousness of the post-modernistic society: non-flexible, unable to house more people, with no outlook for investments, etc.
4. A platform for the analogues occurring in the West, which will grow ever stronger in the future: social disintegration of the residential areas on the basis of which the multiculturalism is shrouded in mystery.

Monofunctional units of urban structure, in which the retaining and exploiting of the post-modernistic cultural forms existing *de facto*, are on principle quite impossible. It can be explained by the excessively static and monotonous physical environment, in which no tradition of successful administration exists (even under conditions of economic boom).

References

1. **Bardauskienė, D.** Miesto bendrasis planas ir ekspertiniai vertinimai. *Urbanistika ir architektūra (Town Planning and Architecture)*, Vol. 31. No.1, 2007, p. 119–130.
2. **Baudrillard, J.** *In the Shadow of the Silent Majorities, or, The End of the Social and Other Essays*. New York: Semiotext(e), 1983. 95 p.
3. Archive of Urbanistinės analizės mokslo laboratorija (UAML) VGTU AF department of Urban Design. Užsakomasis darbas "Kvartalo tarp Tuskulėnų, Minties ir Žirmūnų g. Vilniuje kompleksinis atnaujinimas. Visuomenės įtraukimo į planavimo procesą modelis" (Autoriai: M.Cirtautas, P.Dževrus; Užsakovas: Vilniaus miesto savvaldybė, Būsto ir Urbanistinės plėtros agentūra BUPA). Vilnius, 2010. 20 p. (Case study "Integrated renovation of urban block between Tuskulėnų, Minties and Žirmūnų str. in Vilnius. Model of community involvement in the planning process. Authors: M.Cirtautas, P.Dževrus; Client: Vilnius Municipality, Housing and Urban Development Agency BUPA).
4. Architectural proposal GELERUP [online]. *EFFECT architects web page* [cited 19.07.2012]. http://www.effekt.dk/ (Additional resource on project: http://www.helhedsplangellerup.dk/da/Gellerup-in-English.aspx)
5. **Grava, S.** (1993) The Urban Heritage of Soviet Regime: The Case of Riga, Latvia. *Journal of the American Planning Association*, Vol. 59 No. 1 (Winter), p. 9-30. http://dx.doi.org/10.1080/01944369308975842
6. **Held, D., Mcgrew, A., Goldblatt, D., Perraton, J**. Global transformations: Politics, Economics and Culture. Cambridge: Polity, 1999. 138 p.
7. Restructuring Large Housing Estates in European Cities: Good Practices and New Visions for Sustainable Neighbourhoods and Cities [online]. *RESTATE* [cited 19.07.2012]. http://www.restate.geog.uu.nl
8. **Ruseckas, D., Čiulionienė, I.** Aukštybinių monolitinių pastatų renovacijos Vilniuje specifika / Danas Ruseckas, Indrė Čiurlionienė // *Urbanistinis forumas*. *T.3*: Būsto modernizavimas: nuo pastato iki miesto at(si) naujinimo. Vilnius: Lietuvos Respublikos Aplinkos ministerija, 2009. ISSN 2029-3399. p. 8-9. (Available also from internet: http://www.am.lt/VI/files/0.577071001291287969.pdf)
9. **Ruseckaitė, I.** Sovietinių metų gyvenamieji rajonai Vilniuje: tipiškumo problema. *Urbanistika ir architektūra (Town Planning and Architecture)*, 2010, Vol. 34(5), p. 270–281.
10. **Steger, M. B.** Globalizacija. Labai trumpas įvadas. Vilnius: Eugrimas, 2008. 207 p.
11. *Valstybinio audito ataskaita : Daugiabučių namų atnaujinimas (modernizavimas)* (Lietuvos Respublikos Valstybės kontrolė). Vilnius: Lietuvos Respublikos valstybės kontrolė, 2010, 49 p.
12. **Van Kempen, R., Murie, A., Knorr-Siedow, T., Tosic**, I. Regenerating Large Housing Estates in Europe: A guide to better practice. Utrecht: Utrecht University, 2006. 192 p.
13. **Van Kempen, R., Dekker, K., Hall, S., & Tosic, I., eds**. Restructuring Large Housing Estates in Europe, Bristol: The Policy Press, 2005. 380 p.
14. Archive of Urbanistinės analizės mokslo laboratorija (UAML) VGTU AF department of Urban Design. Užsakomasis darbas "Gyvenamųjų rajonų ir pastatų renovacijos metodinių principų ir kriterijų sistema" (Autoriai: A. Vyšniūnas, M. Cirtautas, P. Dževrus; Užsakovas: Lietuvos architektų rūmai LAR), Vilnius, 2010, p 3. (Case study "Program of rehabilitation of environment. Methodoligical principles and system of criteria for renovation of residential districts and separate building" (Authors: A. Vyšniūnas, M. Cirtautas, P. Dževrus; Client: Architects' Council of Lithuanian LAR).
15. **Webster, F.** Informacinės visuomenės teorijos. Kaunas: Poligrafija ir informatika, 2006. 324 p.

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