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THE FACTORS OF IMPULSE MODELING THE TERRITORY AS A PART OF TRANSITIONAL NATURE OF MODERN CITY PLANNING

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Abstract. The article studies the problem of a gradual change in the direction of urban discourse under the influence of critical re-considering of the heritage in modernists projecting and the range of social and technological initiatives implemented on the verge of 21st century.

Key words: urbanism, discourse, modernism, modelling, urban development.

1. Introduction

One of the features that characterizes the modern approach to urban development is a diversity of the material, dedicated to the evolution of urbanism in the 21st century (which deals with various forms of its perspective and retrospective). Such scope of data rises a lot of questions about the development of a certain system of its analysis regarding the balance of dominating topics and tasks. The given article studies the main directions of scientific approach to the current state and perspective ways of urban evolution, based mainly on the potential incorporated in the traditional industrial urban development to reflect the phenomena and changes of a post-industrial city.

2. Basic Theory

The aim of a given article is the detection of ways of topical structuring a wide range of theories, which form the discourse of a subject of modern urban development in the context of differentiation of its perspective directions which are relevant to economic and technological transformations of the verge of the 21st century and inertial which forms the basis of a modern urbanism paradigm.

3. Results and Discussion

Given the fact that though considered on the level of a general-planning structure, urban devlopment as the form of intelectual property reaches the earliest stages of civilazation, we may certainly claim that up until the end of the 19th century, it was nothing more than regulation of road networks by applying the simplest geometric techniques. The largest artificially planned metropolises of the ancient times (such as Alexandria) as well as the pre-modern ones (such as New York), were built following almost identical concepts of the functional planning, with only some slight differences in the landscapes of their formation. Urban development in modern view, as a complex system of living, industrial and residential determinants is mainly the product of New Time, as well as the notion of the city itself – the one, with the population that exceeded one million of residents.

Having differentiated between the urban development as the human experience to build large settlements on the one hand and the scope of knowledge on building the industrial metropolis of New Times on the other, we may want to look closer at how this scope of knowledge fulfills the needs of modern informatized society,

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which turned out to be the most urbanized in the history of civilization. The fact, which will later transform into the issue of adapting of ontologically industrial city to the needs of a society, the values of which are significantly different if not opposite to its nature.

The best illustration here, probably, would be the transformation of so called "The Charter of Athens", which for a long time was the main and very special quintessence of modern urban science. The history of this charter can be viewed as a perfect illustration of not just the sign of the end of the epoch of the city of 20th century, but also a naive assurance in its actuality in 21st century in terms of its directive nature.

Sixty years after the Charter's first edition in 1933, its new edition of 1994 became a statement of considerably different fundamentals, while the edition of 2003, was, in fact, the proclamation of the absolutely opposite ones [1]. While the city of the 20th century was viewed as the plane of clearly defined functional zones and large-scope geometrical generalizations, now we deal with the undefined image of constantly changing priorities, which require permanent re-considering and update; notably that the initiatiors of "new charter editions" took the resonsibility of making new editions of it every five years. Apparently, such constant and rapid change of priorities in such an inertial sphere as practical urbanism, the basement of which should be by default a long-term strategic planning, may be a sign of a disorientation of a modern discourse and loss of its essential link to the processes which trigger the development of a modern city.

All the before mentioned does not necessarily mean that urban analytics of the verge of 21st century lost the ability to reflect actual needs and phenomena of the development of urban settlements. It may be the opposite- the quantity of scientific and specialist studies on this topic is immensely large, and its contextual part is probably the richest in the sphere of all urban reflections of the preceeding historical periods. Yet, on the level of practical management of a big urban formation, this scope of material is hardly correlated with the conventional managerial stratagems, in which the master plan itself and its derivatives were developed within the paradigm of a large-scope industrial urbanism of the first waves of the industrial revolution. The reason why such irrelevance occurred most likely lies not just in the evolution of technological development or shifting the values of economics to service sector, but also in much more significant social inequality of the population in terms of its welfare. The verge of the 21st century turned out to be the period of the middle class crisis which brought up such notion as "the society of common well-being". The growth of the middle class led to the increased demand to comfortable living and relevant legal base of project activities, which in turn, created a favorable base to overcome contradictory consequences of the early industrial projecting, which also includes the heritage of the developed modernism of the initial "Charter of Athens".

Post-modernism and various forms of anti-industrialism (counter-culture of the 1960th, Eco-projecting, "new urbanism" of the 1990th) have become some of the reflections of the increased well-being of the middle class and thus established new, higher demands to its living space. In these exactly conditions, most of currently actual studies on modern urban planning emerged, which encorporate the ideas of the sustainable development, technological initiatives in the household, refrain from frequent car use, contextual green zones etc. However, the recent decade has demonstrated that such approach may prove to be unreliable, and views which were formed on its basis may turn out to be too idealistic.

Usual image of "the society of common well-being" which seemed invincible first but only until 2008, when world economic crisis enhanced the destructive processes of socially-economic consensus, which had started long time before that. Middle class that was shaped by industries and social guarantees (as well as by high wages), found itself in total deconstruction, which was caused on the one hand by globalization which enabled involvement of cheap labour from developing countries and, on the other hand, by industrial automatization and increased efficacy (robots, adaptive production methods).

As a result, a significant part of profits, which used to be distributed between qualified workers of the industrial sector moved to a small group of the owners of big enterprises, which shifted balance of social power. Statistically, in the second decade of the 21st century, half of global wealth (50 %) belonged to only one per cent (1 %) of world's population [2]. In the nearest future such dynamics will continue to develop and 99 % of humankind will get increasingly poorer. In such conditions, projecting and legal scheme of urban development, which is based on the norms of representative democracy, may be going through further destruction. As far as only very few persons globally have real financial potential to conduct effective election campaigns, this eventually allows them to manipulate their candidates with the help of their resources, both representatives of

elective power and those of executive power itself. As a result, the scope of scientifically - practical knowledge and managerial techniques, which traditionally formed the urban science , is gradually changing, step by step destroying the existing consensus. Managerial structures of the epoch of "the society of common well-being" lost their ability to maintain the system of modernist urbanism of the 20th century and are transforming gradually obtaining other qualities and functional characteristics.

This may be developing in two possible directions: on the one hand, there is a high likelihood of the gradual change of the legal field of urban development and its administration. On the other hand, in the conditions of a severe degrading (or a complete absence) of middle class, this field is not seen as a compulsory any more for the range of subjects of urban development. In the first case, this gradual change of the administrative field, declaratively, may even be characterized by the clearly defined system of measures targeted at improving of life standards which may involve technological advancements and innovations, use of which is relevant to marketing aims of their producers.

In given context, modernist urbanism is likely to encounter a wide range of new influence factors, which do not have equivalents in its constitutive content. Analysis of these factors as well as the notion of "urban development \square , leads to the interpretation of the latter as the one with ontological essence. The principle of the distribution of knowledge within the branch is one of the fundamentals of science and economics of the New Time, within the time frame of which the modernist urbanism was not only formed but also coordinated with other branches, which were meant to create socially-economical body of the epoch.

However, in the course of its further development, branch fragmentation of the knowledge continued and as a result, some sub-branches or directions started to grow out of the basis. First as subsidiary branches and later as the independent ones, equal to those from which they originated. Eventually, new notions which originated from the urban development experience, separated from it and formed the range of independent, self-sufficient branches, while urban development itself remained unchanged within the limits of it initial basis. Thus, the system of source basis of the contemporary urbanism can not be viewed single-sidedly. On the one hand, this is the scope of scientific works, which are within the frames of the branch so knowledge, which is called "urban development" in it's initial meaning. On the other hand, this is a range of various branches, which are involved in the process of city functioning. The amount and limits of those branches can not be clearly defined. Taking into account all the before mentioned we can view the scope of source base in following provisional sections: conservative, contextual, synthetic and performative.

In *conservative section* we consider the scope of data, which is limited by the conventional framework of urban development notion, which acts as a branch of knowledge formed during the New Time epoch. These are, mainly, the scientific works, which operate the concept of the city as existentially monogenous structure, which in this meaning may be the object of project and complex transformation. Conceptual maxima of the conservative scope of urban planning knowledge is formation of a self-complete structure "from the scratch", in the form of instantly fully-equipped urban system, which will meet all demands of the administrative, industrial, residential and structural cycles. Such kind of sources consists of monographies and articles which view urban development as ontological phenomenon, which is closely related to the course of rationalistic thought and goes through the certain stages of adaptation to demographic, economic and infrastructural changes in accordance with natural development of a certain residential unit. Such context also allows some wider generalizations and conclusions regarding the phenomenon of a contemporary city-planning itself.

Contextual section is the reflection of the before mentioned process of fragmentation of urban knowledge and its transformation into separate, relatively isolated branches which are not always correlated with city planning or architecture. In a sense, we may say that emerging of these new branches had a beyondurbanistic ontology and can be interpreted as a developmental process of not only other scientific branches, but also of a social publicistics. For instance, we may take the book of Rachel Carson "Silent Spring" (1962), which was the example of actualizational work on a very narrow topic of pesticides in our food and eventually became a key trigger of environmental movement, which, in turn, has grown into a range of popular urban concepts. The research works which can be provisionally referred to as of contextual type, often tend to consider the scope of knowledge of their newly-formed branch as the basis for a successful development of all city planning or as its next, more effective form. ("Silent Spring A good example in this case would be the theory of sustainable development, which was formed at the end of the 20th century and grew to be a largely varied system of theoretical and practical ideas and views on residential space which consists of esthetic, economical, ecological, transport, anthropological and other models. In modern science, these branches are usually viewed separately

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and can be parts of very different spheres of knowledge ranging from economics and administration, to energy, culturology and architecture.

By *performative* section we mean sources and materials, which are not connected with the systems of modernist urbanism and create a new approach to interpretation of city planning space on the basis of a singular reality of informatized society. Despite the fact that this category of sources can not be clearly defined within a certain branch of knowledge and is open to accumulation of various data on interpretation and transformation of urban plane in the conditions of "post-industrial" paradigmatism, we should first of all consider those studies which have distinguished society-forming and city-forming features. Such kind of materials include the reflections of urban and counter-urban spontaneous formations, as for instance some residential units which appeared on the basis of street markets, and counter-urban residential units of a situational character, such as long-term refugee camps etc. All these and similar examples of parallel urbanism very often include some elements of performative interpretation of a contemporary city planning and make a valuable practical material for establishment of a contemporary urban concept.

As a rule, tranditional branch sciences are positioned in correlation with the theories of formational changes of the second part of the 20^{th} century (and the beginning of 21^{st}), which certifies their actuality and potential for practical application. However, in our context, a separate study of the scope of material on interpreting of post- (late-) industrial social system , is due to the fact that city planning in its current meaning, is, in fact, its functionally-spatial expression.

The scope of such kind of data can be divided into three principal groups: futuristic, manifestational and reflexive. The first group includes scientific and scientifically- publicistic materials, which view formational transforming as a hypothesis, which can be proved only in the future but its credibility is proven by a suggested abstract-logical scheme. Such kind of studies was typical for first of all, the early stage of the establishment of post-industrial conceptualism, their tone was determined by futuristic works of A. Toffler [4, 5], prognostic social analytics of M. McLuhan [6, 7, 8] and political economics of D. Bell [9]. Even though the main scope of these works belongs to the second part of the 20th century, rapid changes and popularity of the topic constantly prolonged the futuristic period and we can still see its features in numerous contemporary works.

The second group includes works that are affirmative and promotional in nature, and are often combined with the promotion of various technological and engineering solutions, mostly of the areas of communications and energy innovation. Formational transformation is presented as a kind of self-evidence, maximum statement of which increases the value of the proposed solutions and ways of adaptation. Sources of manifestational nature generally prevail also in domestic scientific literature that correlates with the current state and problems of development of various branches of science and industry. This is mainly due to the late acceptance of domestic science concepts underpinning post-industrial movement only from the end of 1980, when ideologically deterministic Soviet culturology gave place to a pluralistic approach, openning access to, at that time, already quite developed formational discourse on West.

Reflective group of sources is usually based on a critical analysis of already implemented formational transformations. Although, in this case, we often encounter signs of futurism and manifestationism, applied nature of reflective sources, especially those related to the experiments with the urban planning plane is the main argument for prioritizing such materials for modern urban studies.

An important part of the systematization of source database is positioning of relatively significant social changes that occurred on the boundary of XX–XXI centuries, due to the combined growth of the service sector, communication technologies and various forms of self-organization of small and large groups of population.

Currently sociologists and economists have not reached consensus in interpretation of economic and cultural effects of such changes, however, analysis and personal experience of the author with various groups of inhabitants of a large settlement, enable affirmative assessment of the trends of detachment from the paradigm of economic determinism. The economy can not be viewed as a unique and exceptional basis on which derivatives of social and cultural phenomena are developing. [10] Communication technology led to the creation of self-organized civic structures, which, having different objectives and scope, affect directive hierarchical structure of the industrial era.

In this context, the research on potential ways of modern urban planning, raises the problem of studying the before mentioned phenomena and incorporate them into hypotheses about the design of a large city. Several studies, notably social futuristic and those which refer to the values of sustainable development, present the idea of transformation of the role of a city-planner as a designer to the one as a communicator. The experience of this way of forming the living space (for example in works of Alejandro Aravena), at the first sight, provides the basis for positive attitude to such shift of emphasis. However, some, still rare though, examples are often evaluated from exceptionally egalitarian standpoint and require some additional testing in the conditions of lack of the communicator of professional knowledge in the sphere, which is affected by communal activity.

Strengthening the role of communicatively cohesive civil communities also brings a change in a valorization plane. There are changes in categories and selection criteria, perceptions of value and means of their transmission (distribution). Formed in this way social system begins to act not as an "add-on" the economic "basis" but as it is equivalent to the value unit. On the other hand, it can be perceived as an evolution of the "base" itself whose content constitutes "egocentric" or "sociocentrical" functional system [11].

Although this terminology can cause concerns and probably needs to be improved, it defines the horizon that separates the phase of capitalist-industrial formational model from the consumer-individualized phase.

Works of Angus Deaton and his research into the problems of poverty, wealth and life satisfaction showed the existence of "insensitivity" threshold to wealth, after reaching a certain level of it (Deaton calls the figure of 6,500 dollars a month per person). After reaching this threshold (which guarantees basic consumption needs), individual behavior changes greatly as change the priorities of his choice [12]. Widespread recognition of Deaton's works in the world of science, can testify the achievement of some consensus on specification of the limits at which begins "sociocentrical" functional model and its inevitable approach, even in those countries that demonstrate the lowest GDP per capita and Human Development Index (HDI).

Given the above mentioned, we may outline possible sources that are associated with modern urban existence within the social stratigraphy which replaces the procedural one (it is worth noting that it does not mean the disappearance of procedural factors but their transition from the main categories to the category of auxiliary).

However, it is necessary to make some clarifications concerning the semantic content of concepts that are considered. In traditional industrial city of the twentieth century, the living space was also, in many ways, "egroeconomic". As part of the procedural stratigraphy, where industrial enterprise served as a basic element, whose needs created other elements of urban development plane-transport networks, residential areas with the appropriate infrastructure, administrative and management clusters. This company was the key to personal development, which, in the form of wages and some social security (pensions, scholarships, hospital, etc.) made it possible to maintain a certain level of consumption that was higher than the consumption level of rural residents. The ability to increase the level of consumption was associated with increased skills in vocational education. Thus education was mainly focused on a narrow industrial specialization, which individualized personality and gave it some social value. In this sense, the term "egroeconomics" is probably more correct than in theorists of post-industrial paradigm.

However, in the process of improving of industrial production and its replacement as a major source of employment in service sectors, already high consumption, provided with industrial production growth was further developed by the increase of not material, but intellectual consumption. For example, eateries that by the end of the twentieth century were considered only as a place for a meal, in the context of formational transition has been regarded as a place to obtain experience: visual, auditory, cognitive and communicative. Formation of proposals on intellectual consumption has become much more dynamic environment of capital accumulation, individualization of personality and the acquisition of social importance.

In this regard, at the beginning of the XXI century "procedural" urban model has undergone significant changes. The growth of services has changed the travel priorities, residential units, the requirements for the living space and many more. Service and non-industrial activities, mainly concentrated in central parts of cities, created new infrastructure challenges, which can not be solved within the modernist paradigm. The main reason is the high degree of variability of "non-industrial" activities, success factors of which are not stable and do not require constant creative search.

Thus, individual-oriented "socio-economics" ("egoeconomics") is the foremost system of communications, which provides not only for a physical consumption (like in agricultural epoch) or physical and limited intellectual consumption (as in industrial epoch), but dominant intellectual consumption, which requires other infrastructure solutions and management methods of a large residential unit.

At the moment, we can say that the source base, which applies to this body of knowledge is very unstructured and not formed. Many of these are distributed between different segments of knowledge from independent power supply to the "theory of happiness" and require more basic research that would have laid the foundation for a universal understanding of the phenomenon of "egoeconomics" or "social economics". This article considers only those aspects of the subject that overlap with existing architectural examples of urban planning practice as well as those non-empiric concepts, which relate to different types of self-organization of "social economics" that may be important to city planning in the future.

Here, above all, we are talking about experiments around the so-called "cash-strapped economy", or "gift economy", which involves establishing physical sequels of already created in communicative network, correlations. In this sense, individual-oriented paradigm can enter the systemic conflict with the policy structure of city management, as certain groups of local residents, hypothetically, can independently order the planning projects for functional areas in which they live and to implement them in their own requirements. This possibility opens up the prospect of a radical revision of the concept of centralized modeling of urban development and competence of state bodies, which will operate it. In this context, especially important are the works that trace the changes in the structure of livelihood of the individual and small groups of local residents after they leave the traditional system of industrial relationships.

However, the version of the city development that fully complies with the above-mentioned forecasts, is very unlikely. Practical observation and experience in ontologization of post-industrial principles, indicates that the formational layers do not change but overlap, gradually synthesising and creating a more complex logistics structure. Although in social-system aspect, previous layers marginalize due to the continuous technological improvement, which, however, does not mean that they will disappear, because, the objective need for their existence is the same.

Therefore, the study of contemporary urban concepts requires prognostic structuring and reflective material according to its degree of interconnectivity, which examines the effects of the previous formation as relevant and important to the functioning of the main. In this connection, those works which study adaptation and transformation of old structures after the loss of their main economic and administrative role, seem to be very perspective and trigger self-discovery of the potential of a certain territory.

As an example of such approach to modelling a city plane we may take a development concept of residential blocks of north-eastern part of Lviv, based on the phase transformation of a small building of a former jam factory, which was suggested by the author.

The concept envisages the development of microstructure concentrated within a building by gradually taking control of the space by the features incorporated in it to the size of the adjacent quarter limited to three streets (Fig. 1).

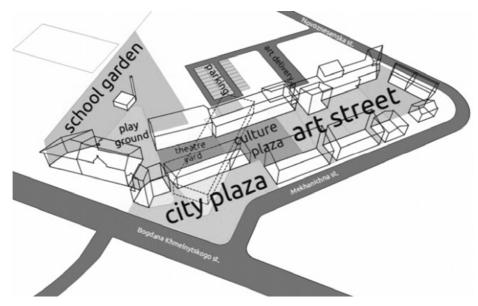


Fig. 1. Concept of the quarter development based on the deployment of the functions inherent in impulsed site - a former jam factory building

The project involves two stages of deployment of functionally-dimensional plane comprising five phases -two during the first stage and three in the second (Fig. 2).

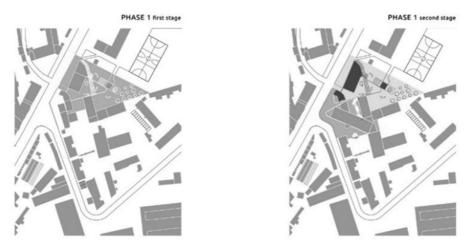


Fig. 2. Phases of the first stage involve re-valorization of old building and concentration of the primary functions within a small surrounding area: business activity, culture, public space, services, trade and so on



Fig. 3. The second stage of impulse development of the quarter with incorporation of metabolic qualities of further performative expansion to other areas in north-eastern outskirts of the city Lviv, (new street area, square, the local community center, children's and educational institutions)

On the second stage, the features incorporated in the first phases are growing and getting more complex, developing geographically to the quarter with the square of 3450.05 m² (Fig. 3). Thus a city formation is created, with its own area and community center further down the street. The planning and spatial structure of the formed territory is organized on the principle of evolutional metabolism, that each cluster of the final quarter which contains unfinished items for a possible further expansion in space and transforming the entire space of the south-eastern outskirts of the city, which is composed of abandoned industrial enterprises and low quality buildings.

4. Conclusion

- 4.1. We revealed the main factors of transformation of a contemporary urban discourse that are related to a) a shift of balance between the middle class and big capital that damages the stability and effectiveness of the regulatory field of administration of urban planning processes; b) activities of technological companies that distribute their products using urban reasoning; c) new horizontal connections between residents, which resulted in the development of new types of interactive communication.
- 4.2. We determined the main principles of structuring an array of a contemporary urban planning discourse based on chronological-branch fragmentation of modernist base of the first half of the twentieth

century, which in the coming decades, came to the distinction between individual self-contained spheres of knowledge, which were self-realized as a starting point for future urban evolution. In this connection, we can differentiate between the four groups of sources that can be described as conservative (generally reflect the features inherent in the modernist tradition), contextual (considering specific industry experience as nomogenous), synthetic (attempts to combine and balance various branch experiences in some universal base of knolwedge and recommendations) and performative (suggest relatively autonomous from modernist inertia ways of modelling of a contemporary urban planning plane).

4.3. We found that one of the key segments of knowledge that influences the formation of a contemporary urban planning discourse is the analysis of the evolution of the social system (or socially-economic formation). Such kind of knowledge formed the basis for numerous attempts to instrumentalize it on the level of city planning, which in turn lead to the emergence of the range of urbanistic programmes. It is established that such sources can be divided into three groups: futuristic (considering formational transformation as a hypothesis, final proof of which belongs to the future, but its probability stems from the proposed by the authors abstract-logical scheme), manifestational (affirmative and populist by nature, and are often combined with the propagation of various technological and engineering solutions, most often from the areas of communication and energy innovation) and reflective (based on critical analysis of already implemented formational changes).

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ЕВОЛЮЦІЯ УРБАНІСТИЧНОЇ ДУМКИ В СИСТЕМІ ПОСТ-ІНДУСТРІАЛЬНОГО ДИСКУРСУ

Анотація. Стаття розкриває проблему поступової зміни спрямованості містобудівельного дискурсу під впливом критичного переосмислення спадщини модерністського проектування та низки нових соціальних ы технологічних ініціатив межі XX—XXI століть.

Ключові слова: урбаністика, дискурс, модернізм, моделювання, міський розвиток.