

THEORY AND HISTORY OF ARCHITECTURE, RESTORATION AND RECONSTRUCTION OF HISTORICAL AND ARCHITECTURAL HERITAGE

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SUBURBAN NOBILITY ESTATE AS A FUNCTIONALLY INTEGRATE ARCHITECTURAL AND TOWN-PLANNING OBJECT

Statement of the problem. The article raises the problem of preservation and utilization of historical and cultural heritage, i. e. nobility estate. An estate is regarded as a special system of organizing people's activities in contact with natural and artificial (architectural) environments by using the system concept of integrity.

Results. A system analysis in the study of the spatial construction of provincial estates at different levels of the hierarchy (object, historical and cultural complex, spatially large items), allows one to obtain objective results in order to develop an algorithm of designing modern objects with such a complex multi-level organization.

Conclusions. Applying a system analysis and retrospective analysis to the study of historical farmsteads in Russia, it is necessary, given the experience and achievements of previous generations, to develop functional ontological model and adequate guidance on the creation and design of modern ancestral estates.

Keywords: architectural heritage, country estate building, system analysis, model.

Introduction

Previous research of estate architecture in this country was based primarily on a comprehensive analysis that “made it possible and necessary to sum up all the factors contributing to the formation of structures” [1]. This principle was fundamental to a number of scientific research by N. A. Belyankina, S. E. Guseva, T. A. Tretyakova, I. V. Krasnobaeva and others [2—5]. The subjects under investigation were the architecture of owners' houses, principles of the design of country estate parks, landscapes, heritage sites, lifestyles of their residents.

L. V. Kriger in the book “Estates of the Voronezh Region” gives a full understanding of estates as heritage sites and puts them into the context of their history, preserved buildings, principles of garden and park landscape design.

L.V. Kriger argues that up to now country estates have been studied according to the following principles: as part of heritage site conservation, as part of regional studies: “the study of villages, personalities and... associated country estates”, as part of academic studies of the Voronezh region where “land ownership data are included in scientific research” and finally as part of nature conservation effort which saw 18 country estates of the Voronezh region dendrologically classed and being in need of state maintenance and surveillance [6].

None of the existing methodological approaches has regarded a country estate as a special system of the organization of people’s lifestyles in close contact with the natural and artificial (architectural environment). There should be a retrospective analysis using a systematic approach.

Historically, a lot of country estates were also economically beneficial as they provided their owners with a regular income. L. V. Kriger sees that as one of the most typical features of country estates of the Voronezh region. Besides horse plants which were about 190 in the late 19th and early 20th centuries when in the country estate grounds there would be “sheep shed and other livestock farms as well as various processing enterprises ranging from large sugar plants (Ramon, Olkhovatka, Sadovoe), distilling plants (Krasnoe), steam mills, small butter or cheese-making plants” [7]. Nowadays this is an increasingly growing trend in farming lands of some of the regions of the Russian Federation.

The favourable conditions for industrial country estates would be a state-funded initiative for agricultural development in the years of 2013—2030 which would include support of new farmers, development of family-run animal farms as part of farming households, bank loan funding for small farms, land privatization by farming households [8].

1. System principle of the integrity of a demoecosystem

Just as hundreds of years ago, the same process is taking place in country estate households which can be classified into four groups: industrial, household, recreation and communication processes. According to G.I. Lavrik, the first three categories are referred to as “demoecosystems” which are “an important aspect of architectural activities and define it as

“population-environment” system including three function and space subsystems: artificial (architectural and city construction environment), natural environment and population [10].

The last component, which is population, is most important as the object of the study, which is a country estate, is not a technological system which is merely controlled using a number of technological and economical indicators, which is often a case in designing these days. It is caused by a lower consumer value of a site, shorter durability, and poor performance. Therefore the results of biological, social and geographical indicators should be analyzed to make further studies more goal-oriented.

In country estates as a system of the man-environment interaction, it is human optimal criteria that have to be at the heart of future studies as well as designing. Therefore the use of a comprehensive analysis raises a number of issues.

The method was based on the transition to deduction, i.e. analysis of a larger number of factors and identification of “weigh coefficients” to define their significance.

The first problem is the subjectivity of the way the coefficients are determined and the second one is a larger number of possible parameters which a human is capable of getting their head around. Unlike a comprehensive analysis, a system approach makes it possible to neglect alien components and connections and thus get a better understanding of the object of the research, which is crucial to the first stage.

2. System approach and analysis in the study of a country estate as a demoecosystem

G.I. Lavrik in his works defines a family country estate as the first hierarchical level in a rural site system calling it “a functional and integral formation, i.e. a city construction element” which is followed by a family estate, community, administrative district and administrative region [10]. That is another proof that the study of an estate as well as other architectural and city construction systems require a new methodological approach, i.e. a system analysis. If the object of the research is an estate as a demoecosystem, its subject would be “the population’s response to the organization of an artificial environment, resulting changes in the natural environment, mutual influence of the artificial and natural environments, methods of studying” the system [1].

A demoeological approach in system analysis requires splitting an integral system into the components according to the two major properties, i.e. a functional and spatial. All of the ele-

ments of a demoecosystem “should indicate functionally necessary (systematic) activities describing it as a self-organizing system”. The next stage is to determine the mutual connections and influences of the identified components of a demoecosystem as well as to determine the internal and external factors contributing to the way it functions and develops. All of these are expected to result in a more rational design of a functional ontological model of a country estate.

Nowadays in this country and abroad people tend to move out of town. According to the data by All-Russian Research Centre, 57% of respondents in answering the question “If you could choose, what type of house would you like to live in?” polled for a small-storey private home with small land [10]. Due to environmental and transport issues, degradation of architecture, a city becomes an employment hub. So it raises an issue of revisiting the idea of a country estate. So, in the Belgorod region there is already a law “On Family Estates” making it a legal term in the Russian legislation and thus defining it as a certain range of activities and lifestyles typical of a family estate as well as stipulating its support and maintenance by the government.

There is also a growing number of farming households in this country, i.e. industrial estates. In the Belgorod region the first three levels which are below an administrative district were defined as a family estate, a community. A family estate is a functional and integral object (unlike a city flat). One of the major components of family estates is a land of no less than a hectare. Several estates can further be made into a family community. This can bring together people of the shared background, interests, business pursuits, etc.

Up until 1917 in Russia there was the following hierarchical system of residence: estates, settlements and communities, districts, small rural districts, regions. These days several regions are united into larger districts.

Conclusions

The research showed that due to the renewal of estate architecture, there is an issue of improving their planning structure, architectural design and internal organization. This means that studying country estates gains a larger significance.

While using a system analysis and experimental method [11] for studying historical country estates of Russia, it is necessary to consider the experiences and achievements of the previous generations, to develop functional ontological models and adequate guidelines for designing and constructing country estates today.

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