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Transformation of Protected Urban Landscapes

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Rūta Garbaliauskaitė, Aušra Mlinkauskienė

Kaunas University of Technology, Department of Architecture and Urbanistics
Studentų Str. 48, Kaunas, Lithuania

*Corresponding author: **rutagarbaliauskaite@gmail.com**

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Protected urban landscapes are usually perceived as old parts of a town or old towns. Such historical hubs are found in Vilnius, Kaunas, Klaipėda, Kėdainiai and other towns in Lithuania. Perhaps such landscapes can be found in each state of European or the world; the most valuable are included into the UNESCO World Heritage List. History of these cities or towns lasts for centuries; however, even on these territories the transformation as a process shaping the woven fabric is inevitable. A city or a town is exposed to changes; therefore, the old parts of cities or towns should be adjusted to the life of a particular period. Because of that reason city or town centres were being rebuilt, reconstructed or regenerated. A relevant present-day problem deals with the creation of new architecture in historical environment which makes an impact on the valuable properties of old towns.

Introduction

Transformation as a process is inevitable when talking of a woven landscape fabric of a city or a town. A city is a "living organism"; something is being built, something is being demolished, some valuable properties are being revived, others are being destroyed. The valuable properties of a heritage object are closely interconnected with each other; having changed one the other will change too. A city is undergoing changes; therefore, old parts of cities or towns should be adjusted to the life of a particular period. Because of that reason city or town centres were being rebuilt, reconstructed or regenerated. Creation of new architecture in a historical environment as well as its harmony with the protected environment, lack of complex management work, construction of high-rising buildings and other issues ruining the valuable properties is a relevant present-day problem.

The present article deals with the transformations of protected urban landscape throughout the time span. The reasons for the changes on these territories as well as essential factors making impact on the changes of these protected objects are estimated; also, their interrelation is explored and the ways to solve regulation of the change of urban landscape are presented.

Various old town definitions are found in the analysis of the scientific literature: integrated heritage unique and exceptional value (Gurskienė V., Ivavičiūtė G. 2012:45); the old parts of the city, which occur between the medieval city walls, or other clearly identified outside the historic core (Vyšniūnas A. 2010:181); birthplace location and development program, which is implemented in an urban city community. Old city leads essential identity and distinctiveness features that can be strengthened or weakened by various urban development ideas (Rubavičius V. 2011:232). In this context, the historic core can be seen as a more specific place than old town or the oldest and

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most valuable part of it. The historic core - the old part of town formed the entire territory of the city, fenced defensive wall or a special mode of construction area, with legally established limits, which is around the middle of the nineteenth century (Jurkštas V. 1994. 9 psl.).

The research object: protected urban landscapes – old towns, their valuable properties and management works.

The aim of the research is to distinguish management and development principles of protected urban landscapes as old towns and their valuable properties.

The analysis of valuable properties included all protected urban objects (100) listed in the Register of Culture Values: old towns (7), historical centres (7), sites of ancient towns (38) and historical parts (48). Percentages of valuable properties of these protected sites have been calculated:

$$\frac{overall\ number\ of\ valuable\ properties}{24 \cdot number\ of\ objects} \cdot 100\%$$

_ Old towns: $\frac{81}{24 \cdot 7} \cdot 100\% = 48.21\%$

_ Historical centres: $\frac{18}{24 \cdot 7} \cdot 100\% = 10.71\%$

_ Sites of ancient town: $\frac{16}{24 \cdot 38} \cdot 100\% = 1.75\%$

_ Historical parts: $\frac{387}{24 \cdot 48} \cdot 100\% = 33.59\%$

The calculations suggest that the most valuable are old towns (48%), including 7 of them in Lithuania: Vilnius, Kaunas, Klaipėda, Kėdainiai, Telšiai, Ukmergė and Trakai. As the old town of Trakai is protected as an object territory and not as a locality, further on it will not be dealt with.

Research methods. The article presents the results of the research on transformations of protected urban landscapes that have been obtained applying the following research methods:

- analysis of archive data, examining information sources, books, scientific articles, legal acts regulating protection as well as register data;
- sociological survey of society members to find out the societal and specialists' attitude towards the valuable properties of an old town;
- research of correlation analysis grounding the interrelation of valuable properties of old towns.

Analysis of The Valuable Properties of Urbanistic Structures

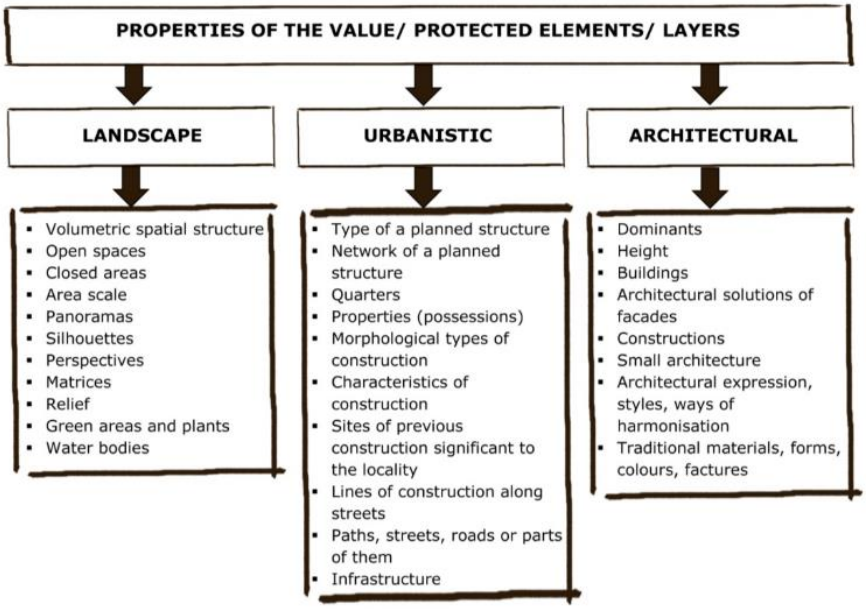
Characteristics of an urbanistic value can be named as valuable properties. The entire unity of an urbanistic structure is synthesis of its elements; its result is a historically formed cultural landscape. Having carried out detailed analysis of the archive data, we can divide the valuable properties of old towns into three groups: landscape, urban and architectural.

Grounding on the data of the Register of Real Estate Culture Heritage, the constituent elements of these properties are presented in Fig. 1.

Already protected valuable properties should be supplemented with the valuable properties that have not been recorded in the register of culture heritage, that add to and ensure complexity of protection of a protected urban landscape.

- **Valuable properties of a landscape:** area scale.
- **Urbanistic valuable properties:** characteristics of construction, lines of construction along streets, infrastructure.
- **Architectural valuable properties:** architectural solutions of façades, constructions, small architecture, architectural expression, styles, ways of harmonisation, traditional materials, colours, factures.

Fig. 1
Landscape, urbanistic and architectural valuable properties (compiled by R. Garbaliauskaitė)



Correlation analysis of the valuable properties of an old town.

Calculation of coefficients of correlation analysis of old town valuable properties has been carried out employing IBM SPSS Statistics program. First, the relevant data from the sociological survey of architecture specialists is uploaded to the SPSS program to carry out the correlation analysis.

Valuable properties of an old town having moderate and weak correlation relations are complex because they have more or less significant relations with other valuable properties. The results can be assessed in separate groups of landscape, urbanistic and architectural valuable properties. It was noticed that architectural valuable properties had only weak relations with landscape and urbanistic value properties. Moreover, valuable properties of a landscape had weak interrelations only.

After carrying out the correlation analysis, it was found that 21.88% of weak correlation relations, 3.9% of moderate correlations relations had been obtained; however, even 67.97% of correlation relations were insufficiently significant. Valuable properties with moderate correlation relations and a 0.01 significance level can be singled out as more important valuable properties of an old town because after carrying out the same *Spearman* coefficient correlation analysis involving more data, even 99% of obtained results would be identical.

According to *Spearman* correlation's moderate relations of coefficients, their numbers, the relations of a 0.01 correlation significance level and old town valuable properties that are highly valuable to society and architecture specialists, we can point out the following essential valuable properties forming the fundamental of the value of an old town (Fig. 2):

1 Open areas (landscape valuable property);

2 Type and network of a planned structure (urbanistic valuable property);

3 Quarters and possessions (urbanistic valuable property);

4 Architectural expression, styles and ways of harmonisation (architectural valuable property);

5 Small architecture (architectural valuable property).

The obtained valuable properties of old towns are attributed to all three (landscape, urbanistic and architectural) groups of valuable properties. We can draw a conclusion that the basis of the old town value consists of the interplay of all three groups and properly performed management works ensure protection, usage of an old town as a protected cityscape and the passing of it to the future generations.

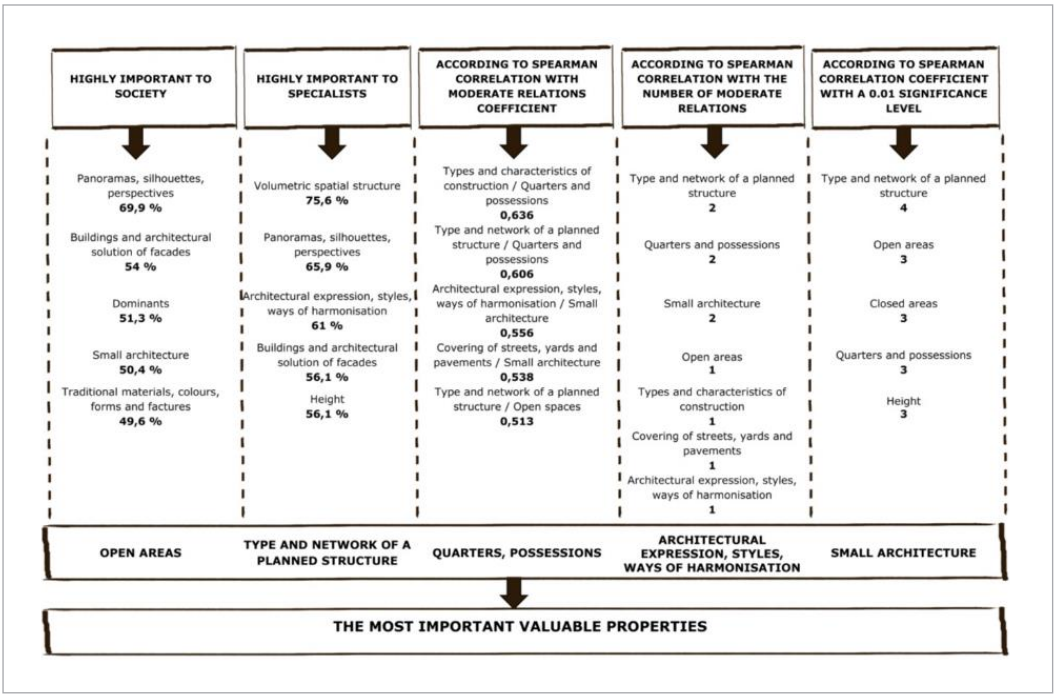


Fig. 2

The most important valuable properties of an old town (compiled by R. Garbaliauskaitė)

On the ground of ***the results of the sociological survey of society and architecture specialists,*** urban valuable properties are indicated by the specialists as the most valuable among old town valuable property groups. They single out the volumetric spatial structure of an old town as the most worth protecting.

The attitude towards new architecture inside old town differed between society and specialists: specialists advocate that new architecture inside old town should be based on the principle of contrast, and they support further development of old towns. Whereas society members think that new architecture inside old town should resemble architecture of old buildings, and do not support further development of old towns.

Valuable properties depend on each other. Their interrelation can be significant or insufficiently significant to influence the transformation.

Management Works and Possibilities for Development

Management works can be divided into two groups: protection and usage priorities. The essence of the protection priority management works lies in protection of authentic properties. The priority function is protection, the minor function is usage. The essence of the usage priority management works is usage because, primarily, by using protected objects we can ensure their protection. Here, the priority function is usage, the minor function is protection. Management works focused on protection and usage are presented in Fig. 3.

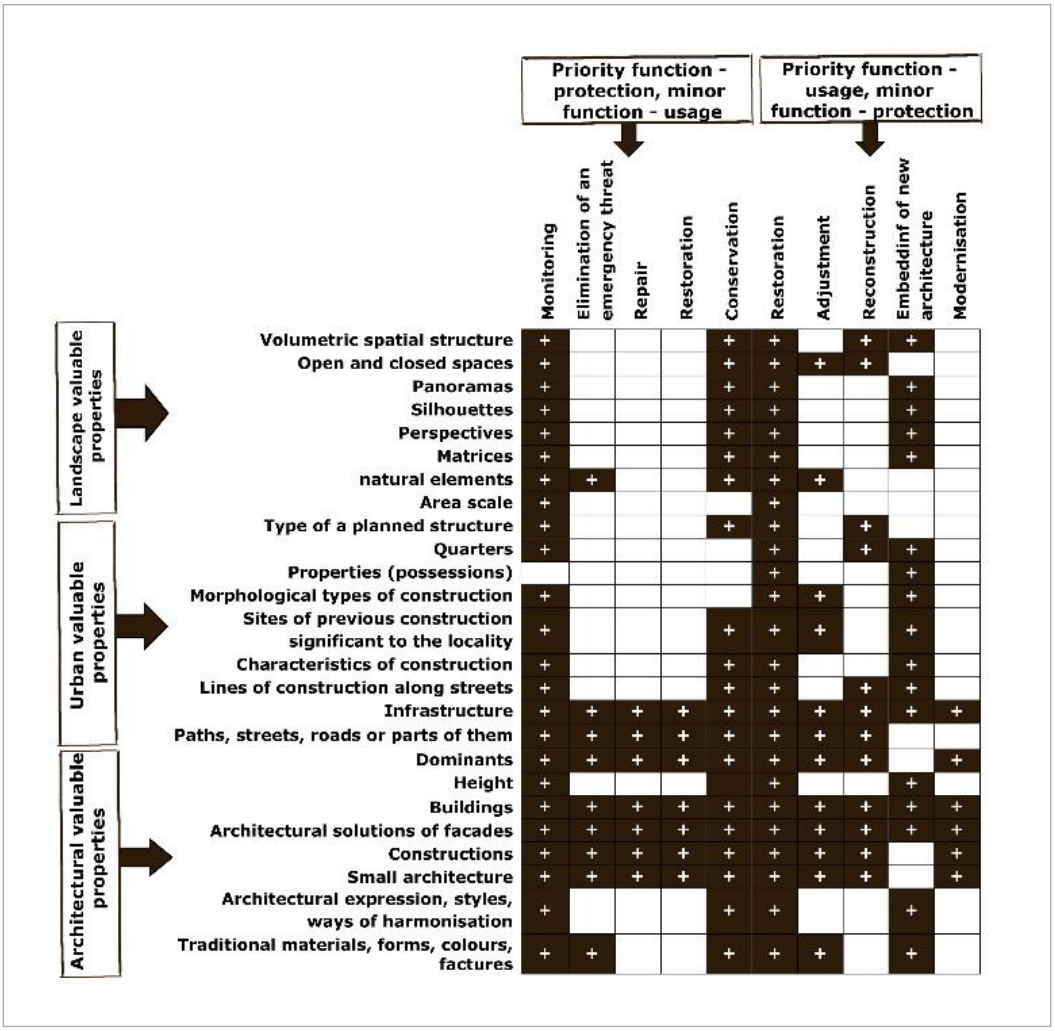
First of all, particular objects under analysis must have detailed historical, landscape, urbanistic and other research done; and only then they will be the ground for application of management works in different groups of valuable properties.

One object may encompass valuable properties of all the groups and management works. Each separate element must be individually decided on how it will be managed, what materials, means

will be used, what the ways of adjustment to the surrounding environment can be used (similar, neutral, contrasting). Moreover, harmonisation among different valuable properties must prevail.

Fig. 3

Application of management works in different groups of valuable properties (compiled by R. Garbaliauskaitė)



One of the key objectives of old town management is protection of valuable properties and identification of essential properties because these are the fundamental of the value of old towns. In the process of management of old towns, interdependence of valuable properties is highly important; they directly depend on each other, and when changing one, others may change too. This makes impact on the transformation of an old town.

Development works mean the mending of streets, squares, improvement of engineering infrastructure, the issues of transportation and parking lots, projection of new construction. All this must be coordinated with protection of the authenticity and particularity of the urbanistic value (Glemža, J. R. 2002:150-151). Currently, the problem of cities is enclosed in their development proceeding in the direction of suburbs; however, when drawing strategic development plans, it is important to note densification of a city (Pakalnis M. 2000) within existing limits. Usually, old parts and old towns of cities are attributed with the lowest density of residents in a city. This is influenced by low buildings with residential upper floors and lower floors allocated for

commerce. Special plans are being drawn to legally regulate activities in protected cityscapes.

Urban development through particular physical elements can emphasise or level specificity of visual expression of landscape, including the unity, uniqueness of the landscape character (Laukaitytė-Malžinskienė, G. I. 2008:110).

Therefore, it is highly important to facilitate full harmonisation among the landscape and valuable properties, protected, non-protected and newly designed buildings.

Conclusions

- Having carried out the search for protected objects included in the register of culture values, examples of old towns in Lithuania have been explored, their already protected valuable properties have been singled out and other additional properties have been suggested to be included into the register of culture values for the purpose of protection: area scale, characteristics of construction, lines of construction along streets etc.
- After carrying out research, it was found out that the most valuable properties were dependent on each other. Their interrelation can be significant or insufficiently significant to make impact on the transformation. Valuable properties of an old town having moderate and weak relations are complex because they have more or less significant relations with other valuable properties. The valuable properties having moderate strength correlation relations (from 0.5 to 0.7) and a 0.01 significance level can be more important valuable properties of an old town because after carrying out an identical *Spearman* coefficient correlation analysis including more data, even 99% of obtained results would be the same.
- Having analysed the data of sociological surveys and correlation analysis, the most important valuable properties of old towns have been singled out: open spaces; type and network of a planned structure; quarters, possessions; architectural expression, styles, ways of harmonisation; small architecture.
- The fundamental of the old town value consists of the interplay of all three (landscape, urbanistic and architectural) groups of valuable properties and properly carried out management works ensure protection, usage of an old town as a protected cityscape and the passing of it to the future generations.

References

Gurskienė V., Ivavičiūtė G. 2012. Kraštovaizdžio planavimas. Kauno r.: Akademija. 169 p. ISBN 978-609- 449-031- 6. Access via the Internet (accessed on 25-09-2015): http://dspace.lzuu.lt/bitstream/1/1985/1/Krastovaizdzio_planavimas.pdf

Vyšniūnas A. 2010. Šiaulių miesto centrinė dalis ar urbanistikos paveldo saugotinos teritorijos. Town Planning and Architecture. 181-194 p. ISSN: 1392-1630. Access via the Internet (accessed on 29-10-2015): http://www-tandfonline-com.ezproxy.ktu.edu/doi/pdf/10.3846/tpa.2010.18 .

Rubavičius V. 2011. Vilniaus senamiestis – gyvosios kultūrinės atminties šerdis. Town Planning and Architecture. 231-237 p. ISSN: 1392-1630. Access via the Internet (accessed on 29-10-2015): http://www-tandfonline- com.ezproxy.ktu.edu/doi/pdf/10.3846/tpa.2011.24.

Jurkštas V. 1994. *Senamiesčių regeneracija: architektūros harmonizavimo problema.* Vilnius: Technika. 138 p. ISBN 9986-05-139-8.

Glemža J. R. 2002. *Nekilnojamojo kultūros paveldo apsauga ir tvarkymas.* Vilnius: Vilniaus dailės akademijos leidykla. 150-151 p. ISBN 9986-571-84-7.

Laukaitytė-Malžinskienė G. I. 2008. *Kraštovaizdžio vizualinės raiškos savitumo apsauga didmiesčio priemiestinėse teritorijose*. Town Planning and Architecture. 110 p. ISSN: 1392-1630. Access via the Internet (accessed on 18-11-2015): http://www-tandfonline-com.ezproxy.ktu.edu/doi/pdf/10.3846/13921630.2008.32.103-112

Pakalnis M. 2000. *Miestų užstatymo tankinimo metodikos parinkimas ir Vilniaus naujamiesčio tankinimo programa.* Urbanistika ir architektūra, Vol. XXIV, No. 4. 149-162 p. ISSN: 1392-1630.

About the authors

RŪTA GARBALIAUSKAITĖ

Master student

Kaunas University of Technology, Faculty of Civil Engineering and Architecture, Departament of Architecture and Urbanism

Main research area

Protected urban landscapes

Address

Studentu 48, LT-51367 Kaunas, Lithuania
Tel. +37064496835
E-mail: rutagarbaliauskaite@gmail.com

AUŠRA MLINKAUSKIENĖ

Assoc. Professor

Kaunas University of Technology, Faculty of Civil Engineering and Architecture, Departament of Architecture and Urbanism

Main research area

Protection of immovable cultural heritage objects; research of values of cultural landscapes and urban structures; evaluation of protected areas

Address

Studentu 48, LT-51367 Kaunas, Lithuania
Tel. +370 684 79181
E-mail: ausra.mlinkauskiene@ktu.lt