The Quality and Responsibility of Architecture in the Context of Emerging Ecological Challenges (Lithuanian experience)

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The eco-movement, spreading across the world, requires a new evaluation of priorities for the objectives of the three architectural directions (buildings, cities (urban development) and landscape architecture) including social and environmental responsibility. The ecological direction is not new to Lithuania, but due to former political isolation the West still knows very little about that. Lithuanian (now Kaunas University of Technology) Institute of Architecture and Construction in Kaunas (LASMI) has become and still is a scientific and ecologically oriented design centre (especially for resorts, recreation and tourism areas, national parks) of this direction. Research work and practical conceptual projects started yet in 1961–1963. The results are summarized in the author’s doctoral and habilitation dissertations and books and in the works by other students of this school, now working in Vilnius, Klaipėda and elsewhere.

In urban development, landscape architecture and land management, the author has developed and, together with his colleagues, has used the so-called landscape-ecological approach. Its main principles are as follows: 1. When drawing up planning projects for cities, resorts or larger areas, start with an analysis by isolating the areas where neither new constructions can be carried out, nor can the landscape be changed, rather than solely determining future construction zones. 2. For the remaining areas, in addition to traditional functional zoning, use the so-called eco-zoning, isolating the areas with different allowable landscape (natural or cultural) reconstruction degrees. 3. Evaluate the authenticity, “genius loci”, of nature, cultural history and society of each area. This is also important in active urban space, from which follow both urban authenticity and diversity. 4. Avoid egocentricity. The quality of the environment and its transformation is important not only to humans. 5. In addition to the prospects for urban development, assess the possible prospects for natural change of a natural complex.

This method was first applied and put into practice when drawing up the first integrated Master Plan of Neringa (later Curonian Spit National Park) in LASM Institute (1968), followed by Great Palanga seaside resort development (1989) and other projects.

The significance of eco-direction in architecture should also be emphasized in university programmes. However, the term “ecological architecture” should be avoided and other, more accurate terms could be used such as “sustainable architecture”, “tolerant” or “ecologically oriented architecture”. For ecology is a branch of science (from Greek: logos, “science”). Does it follow then that “ecological architecture” is “scientific architecture” or that “ecological food” is “scientific food”? Maybe “natural food” would be more appropriate? The topic of terminology deserves special attention in separate discussions not just there in Lithuania.

Keywords: architecture, environment, recreation, ecological responsibility, Lithuanian school.

1. Introduction

The eco-movement spreading across the world requires a new assessment of priorities for the objectives of the three architectural directions (buildings, cities (urban development) and landscape architecture), including social and environmental responsibility. The ecological direction is not new to Lithuania, but due to former political isolation, the West still knows very little about that. Lithuanian (now Kaunas University of Technology) Institute of Architecture and Construction in Kaunas (LASMI) has become and still is a scientific and ecologically oriented design centre (especially for resorts, recreation and tourism areas, and national parks) of this direction. Research work and practical conceptual projects started yet in 1961–1963. The results are summarized in the author’s doctoral and habilitation dissertations and books (Stauskas 1967, 1977, 1985, 2012) and in the works by other students of this
school, now working in Vilnius, Klaipeda and elsewhere (P. Kavaliauskas, P. Grecevičius et al.). In architecture of buildings, a time has come to review their architectural quality assessment. Yet in 1981, the World Congress of Architecture adopted a new definition of architecture. An architect faces an increased responsibility to spatially synthesise blocks of specific needs and shapes of various environments, thereby also striving for artistic value.

Ecological approach can mean that the artistic value of the building’s façade is no longer the most important quality category. On a scale of values, the quality of the building’s social substance solution would appear in the first place. In urban development, landscape architecture and land management, the author has developed and, together with his colleagues, has used the new landscape-ecological approach and eco-zoning.

2. Methods and results

The “tsunami” of electronics and cybernetics of the end of the 20th and the 21st century, and the ever more pervasive philosophy of globalisation have been affecting both architectureology and all areas of architectural practice (interiors, buildings, cities and their agglomerations, landscape architecture). There is a real danger of, first, the natural inherent interests of a man as a biological being as well as a reasoning and emotional subject (including his/her desire for harmony and beauty), being withdrawn into the background. Second, not a single physical object of architecture appears in an “empty” space. There is generally no “empty” space of land on the planet whatsoever. But there is a big variety of them – natural (climate, terrain, water, vegetation, etc.), historical and cultural environments (including cultural heritage) and those of social needs, communication and traditions. We are so caught up in the wind of change that, in the words of one European poet, we can no longer keep up with our true selves.

The World Architecture Congress in Warsaw, and its adopted resolution (Resolution 1981) can be considered an official result of architectural community’s concern. By general consensus, it was decided to change the definition of architecture itself (including its primary objective). Instead of the traditional Greek definition, stating that “Architecture is the art of construction”, the Congress declared that “Architecture is the art and science of shaping the environment in space”. Thus, it means any environment, which, as we know, will always be clean in substance, size, shape (form) and the cultural or natural heritage. In addition, architecture is “art and science” (italicised by author). This stresses the importance of analysis, shaped or reconstructed space, and environmental examination before making decisions on a project.

However, the word “environment” is still too vague. Actually, not only do architects have to analyse, but also to create or supplement the complex “environment”, space. It is the combination of at least three other environments – social, natural and technological. Social groups of people are very different from each other (customs, ways of life, financial situation, etc.), so is a variety of specific client objectives and financial possibilities. The variety and importance of natural factors have already been mentioned above. Technological environment is also inevitable. Therefore, the quality of outcomes of our, architects’, activity occurs only by creating harmony - harmony of comfort and aesthetics, art and science (Fig. 1).

Among spatial compositions, there can be cases of a contrast principle. But contrast could also occur or occurs only through analysis, weighing the need of emotional impact, taming our own egocentricity in a civilised manner as a priority. Harmonious space is in itself scientifically “ecological”, i.e. that which has considered all human physical and cultural (including aesthetic) needs. But both historically and today, architects have had to design buildings or their complexes, or manage the landscape intended for other living beings. “Eco” in Greek means “habitat”, housing for all in general. Naturally, we will neither design a stork nest nor a foxhole, but still, in ancient times, for example, the architecture of stables was not very different from that of manor houses. So, why should not modern barns, fishing pools, and so on be beautiful and “ecological” at the same time?

Aesthetic quality of spaces (indoors or outdoor, such as berths or parks) is particularly important in recreational (leisure and tourism) areas. Here, a guest wants to take a break from daily work or worries at home and he/she has a lot of free time. Here, a person is able to feel free and be himself/herself – just John and Mary, not an engineer, a doctor or a factory worker. They are free to choose friends (not necessarily co-workers). They have the desire and time to feel the beauty of hotels and the area, not only comfort for relaxation. Therefore, the eco-harmony principle in the overall complex of tasks for architects should be also supplemented with the specifics of interests for leisure (Fig. 2).

In landscape architecture, eco-harmony and attention are important to the widest range of living creatures. In the World Congress of Landscape Architecture (IFLA, 1984), a famous Finnish architect (actually more of a buildings architecture specialist) said, ‘Why do we think that the water in lakes and rivers must be clean so that we could swim in them? After all, they are far more important for fish! Or that the woods near cities are foremost important to

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1 This term began to be used in the first decade of the 21st century in Lithuanian Institute of Architecture and Construction and the Faculty of Arts at Vytautas Magnus University (instead of the former term “Architectural History and Theory”) (Stauskas 2009).
our own recreation. Or maybe they are most necessary to the roe deer?" (Stauskas 2012).

Thus, we see that the “Eco” concept of a healthy, comfortable and beautiful (here only for a man?) habitat includes not only the objectives of “nature reserve” or “tolerance to the environment”, but also those of social (human) comfort and convenience for other living creatures in architecture.

The “Eco” notion, which is becoming more and more pervasive and appreciated across the globe, presents the challenge of setting a new priority to the quality and evaluation of buildings architecture. Unlike, for example, the art of sculpture, an architectural piece of work is primarily aimed at the convenience of man in it. Whatever ornate the façade or a play of volume shapes (forms), it will not be valuable in the cultural, social or even financial market unless it is good for use and a person’s well-being. Therefore, on the scale of architectural value of a building, it is not the shape or façade that should pass in the first place, but the social and usability comfort, serving the purpose. This is the quality of a building’s substance (1). Then follow 2) the aesthetic quality of a volume shape (form) and façade; 3) the interaction between substance and shape (form); 4) the interaction between substance, shape (form) and environment (cultural or natural); 5) technical solutions and efficiency (Fig. 3). (Stauskas 1998).

In the ocean of architectural globalisation, in terms of the humanitarion (or “eco”) aspect, there is a gradual rise in the value and significance of the field of the so-called “regional architecture” (Buivydas 1999). Some of its interesting examples can be found in different continents, but Lithuania seems to be closer to the school of Scandinavian countries and Finland. It should not be understood as an interpretation of ethnic architecture though. The understanding of a national character, historical development and uniqueness of nature complex does not hinder our understanding of professional, modern and tolerant architecture to its own natural (in other words, climatic) environment (see examples of R. Erskine, Sweden or A. Aalto, Finland). I have stressed the importance of regionalism in recreational architecture in particular, where the use of the still remaining original ethnic architecture is primarily beneficial in terms of not only patriotic, but also educational aspects and commercial tourism, as an important link in tourism complex infrastructure (Stauskas 1994, 1995).

In urban development, landscape architecture and land management, the author has developed and, together with his colleagues, has used the so-called landscape-ecological approach. Its main principles are as follows: 1. When planning projects for cities, resorts or larger areas are drawn, an analysis should be started by isolating the areas where neither new constructions can be carried out, nor can the landscape be changed, rather than solely determining the future construction zones. 2. For the remaining areas, in addition to traditional functional zoning, eco-zoning should be used through isolating the areas with different degrees of allowable landscape (natural or cultural) reconstruction. 3. The authenticity of nature, “genius loci”, cultural history and society of each area should be evaluated. This is also important in an active urban space, from which both urban authenticity and diversity follow (White 2003). 4. Egocentricity is to be avoided. The quality of the environment and its transformation is important not only to humans. 5. In addition to the prospects for urban development, the possible prospects for natural change of a natural complex should be assessed.

This approach is particularly important in areas or settlements with a status of protected areas, for example, in National and regional parks, culture or nature reserves. This is especially true in Europe, where due to intensive historical human activity, instead of the natural landscape formed the so-called cultural landscape (except perhaps the zones in northern Scandinavia, Finland and Russia). Nevertheless, human activities have also enriched the physical and aesthetic-emotional substance of previously “wild” landscapes (Stauskas 1996).

The most beautiful, natural and cultural landscapes are especially important and popular in recreation and tourism. Coastal recreational areas and resorts are distinguished by their attractiveness and abundance of visitors. Yet in his works between 1961 and 1963, summarised in the first
doctoral dissertation (Stauskas 1963, 1967), the author substantiated and proposed a new approach to urban development and land management – the so-called “deep-clustered” planning system at the extensively used seaside. In contrast to the monotonous coastlines, congested with structures (for example, Jurmala near Riga in Latvia, the Mediterranean coastlines, or recreational suburbs of Copenhagen in Denmark), new recreational and residential “buildings” should be concentrated into clusters, while maintaining or creating green areas anew both on the coast and in between those areas. Urban development, if such occurs, is not parallel to the shore, but goes deeper into the continent (Fig. 4). This would save or create new green spots and most beautiful landscapes on the coast among the centres of urbanisation and help achieve holidaymakers’ closer contact with natural elements. Going deeper into the continent is a promising trend in urban development.

The transit transport highway is shifted to 2–2.5 km from the shore line. To the coastal resort strip lead only indicative roads (or streets). The living quarters of support staff are closer to the highway. Such a system provides favourable conditions for the order of priority and gradation in construction. The load of recreational beaches is flexible and variable “wavy”, which allows holidaymakers to choose quiet or contact sections (Stauskas 1963, 1967).

Eco-zoning methodology was first introduced in Lithuania while drawing up the first complex Master Plan of Neringa (later the Curonian Spit National Park) in the history of the Curonian Spit (Stauskas et. al. 1968). The Master Plan distinguished 6 categories of territories that required different operational or protection programmes, ways of allowable human “intervention” and intensity. Into category I fall strictly protected landscapes, such as future nature reserves, category II consists of spare future reserves (natural and ethnocultural). Category VI represents existing or viable construction zones (Fig. 5). Of course, these are not the same, but more detailed at the level of analysis and proposals. Variety possesses not only a physical but also an emotional-aesthetic value.

By the way, the use of the Russian language in several articles and conferences, as a language which is more widely known in the world than Lithuanian, has helped to spread this concept way further outside Lithuania. I have seen my first book in the bookstores of Finland, Poland and other countries. Maybe it is just a coincidence, but following 3-4 years after my first articles had been published, we noticed that a rather similar system was adopted in designing a new Mediterranean resort area of Languedoc-Roussillion region of France. There is an attempt to apply a similar approach in Sochi resort in Russia, the Georgian coast and elsewhere.
In case of the Curonian Spit National Park, this methodology was consistently maintained throughout the follow-up stages of urban and landscape design in 1980, 1994 and 2008. However, in the most recent Master Plan, the method is more detailed, highlighting (maybe a little bit too seriously) the specific micro land parcels and their management programme. This is called “management zoning” (Kavaliauskas et al. 2008).

The definition of ‘eco-zoning’ includes particular elements of both natural and cultural landscape as well as the originality of architectural (including urban) creation and values of humanitarian harmoniousness. Thus, for example, the value of urban and historical monuments and old town districts are understood not only in terms of now entrenched commercial tourism, but also as enormous value of the environment for the local residents, often the location spirit, “genius loci” of the native environment. This is starting to be recognized by professional foreign architecturologists (I. B. White)

The current “eco” or “green” trend in urban development is quite closely related to “Garden city” and similar ideologies of the late 19th and early 20th century (E. Howard, A. Peret et al.) (Vanagas 2012). The urban project of the new capital of Australia, Canberra, did not start from buildings but from formation of artificial lakes and development of the plantation system (architect W. B. Griffin, 1912–1927). The green oasis of lakes, canals and parks in the city centre was thus named after Barley Griffin.

Excessive contemporary (I do not think that it is a synonym for “modern”) urban development, except for the already mentioned “eco” ideology, particularly threatens the most intensive seaside resorts – from the south of Nemirsėta to Šventoji and Būtingė in Lithuania and Latvian border in the north. We were pleased that the so-called new “clustered-deep” spatial management system, which had been prepared and proposed in collaboration with the staff of “Miestprojektas” in Vilnius and was twice used in drafted development projects in Palanga (later Great Palanga), was understood and used in practice, accepted and approved by the Lithuanian Government of that time (and the new one in 1999). Its simplified model is presented in Fig. 6.

This “green” urban concept has opened a legal (land management) and practical door in saving the diversity of coastal forests, dunes and the beach strip, even areas, untouched by significant reconstructions, and has helped to protect hydro- and forest parks. Resort’s slogan: not “parks in the city”, but “a city in the park”.

Unfortunately, the hastily drafted new Lithuanian laws on social development and territorial management failed to assess the uniqueness of recreational areas and their exceptional importance to all residents of Lithuania and the entire Republic, especially when it has the shortest coastline of the Baltic countries. The start of an urgent storm of land privatisation, even the laws on land transfer (!) and private land parcels and fences have all almost destroyed in practice this and the green, humanitarian-oriented concept. Land laws and real estate financial colossus have become more important than spatial planning laws, and the new land management (Fig. 7) has begun commanding to urban...
development as to a humble servant, which, by the way, we do not see happening in other countries close to us (such as Norway).

Privatisation in itself is not a bad thing, but in resorts, recreation and tourist areas, the significance of public spaces and their relationship with the private ones has to be specific.

In order for the humanitarian and much broader “eco” trend to strengthen at all levels of architectural science and art, there must exist a rather pronounced orientation towards university degree programmes and their update. Only by properly orienting the new generation – our students – will we be able to achieve new results in areas of contemporary science of architecture – architecturology – and design practice in particular (Stauskas 1995). Incidentally, Lithuania already has a manual for students in the field of recreational architecture – *Rekreacijos kompleksai gamtiniėje aplinkoje* [Recreational complexes in the natural environment] (Staniūnas and Stauskis 2011).

Finally, I want to draw your attention to some of the aspects of architectural (and other) terminology. Perhaps the readers will have noticed that nowhere in the article did I use the word combination “ecological architecture”. But I did use the combination “ecological approach” or “ecological trend in architecture”. What is the difference? Indeed there is a significant and even essential one. The term “ecology” is composed of the words “eco” – habitat (I have already mentioned this), and “logos” – science. As in biology, geology, philology, etc., it refers to the *science* of living creatures and their relationship to the environment. No more. Surely, the term is quite broad in the sense that it includes all creatures of the planet Earth (from an ant to an elephant) and *any* environments important to them (from a cave to a city). Thus, “ecological” architecture is “scientific” architecture? Does it follow then that “ecological” food is “scientific” food? Or maybe it is just natural food? Sometimes it goes as far as an “ecological” car... Does a truck also fall into the same category? Does an excavator? By analogy, what about a novel we liked? Is it a “philological” novel? It is worth not rejecting the usual term which is closer in meaning - “sustainable architecture”, or something more accurate, for example, “tolerant” or “contextual” architecture? I think that architecture researchers and practitioners will find it a worthy subject for our later conference, and not only in Lithuania.

3. Conclusions

The new and increasingly growing problem of man’s relationship with his/her living environment in the global context of globalisation and technisation requires a change in attitude towards the responsibility for the humanitarian architecture (including social) and its relation to the natural and cultural environment. And the new definition of architecture – as the art and science of shaping the environment, space – adopted worldwide in 1981, raises this priority. Therefore, the assessment of architectural quality of a building raises the importance of quality of its social comfort, its substance and the quality of living or working in it.

In city and regional planning (urban development), the tasks scale expands even more. The focus on the natural and cultural quality of the environment increases, while synthesizing the interests not only of the human ego, but those of other forms of life. Eco-zoning methodology (along with the usual functional zoning), proposed for design practice could help that. It has been known and used in Lithuania for over 40 years, but we notice that similar methods are being reinvented abroad.

The humanitarian “eco” approach (both in natural and cultural landscapes) is particularly important for resorts, recreation and tourism (recreation) areas and settlements, National and regional parks. Lithuania’s experience on the Baltic coast and lake areas is likely to be useful for colleagues abroad. As we know, the world has observed a decline in the popularity of hyper-urbanised old major resorts.

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