ABSTRACT

From the point of construction-urban history, architecture has a significant role and importance when it comes to forming an urban environmental landscape. However, modern way of urbanization keeps imposing the domination of inhuman architectural influence.

The users describe numerous settlements as places where ''one can live, but there is an inevitable wondering if one can dwell there as well''? Various observations done by some authors reveal that architectural objects within physical urban-environmental structure (in)directly affect human health. Negative effects of physical contamination are most visible in urban chaos surroundings.

Harmful effects are derived and generated by proselytical copying and predomination of high-built structures and objects at the expense of eco-reciprocity; thus, dense units reveal various negative effects made by the installation of numerous and powerful systems that increase noise, chemical and physical pollution and overcrowding.

That is why this work points out the quasy professional marginalization of eco-reciprocity and unsustainable 2D typology of physical structures, since these problems represent the causal link with pseudo-urbanization, pseudo-regulation, degradation and deregulation of sustainable organic, architectural, cultural, spiritual, esthetic, ecological, sociological and human dimension of urban environmental structure, volume and landscape.

Key words

Urban environmental landscape, sustainable architecture, sustainable eco-reciprocity, physical structures
Introduction

In the process of planning both growth and city transformation, as well as their architecture, morphology and structure of their urban environmental landscape, Dobrivoje Tošković was the first to recognize and describe “this moment of transition from two-dimensional (hereinafter 2D) to three-dimensional (hereinafter 3D”).[1]

Therefore, integrative design in the 21st century is based on unsustainable combination of sustainable 3D and unsustainable 2D terminology, since 2D education, literature and other publication forms have dominated unsustainably. This leads to unsustainable affirmation of combining sustainable 3D and unsustainable 2D skills and knowledge, 2D patents, 2D regulation and speculative terminology,[2] which inevitably initiates and ‘produce’ 2D pseudo-regulation, pseudo-management, pseudo-urbanization,[3] deregulation and degradation of urban environmental structure, volume and landscape.

Without education and knowledge about sustainable eco-reciprocity

The concept of sustainable eco-reciprocity is not a new expression when it comes to 3D space management, eco-urbanistic and eco-spatial design. But, when we mention 2D urban design and spatial management, influenced by quasy-professional unsustainable 2D theories and pragmas, 2D terminology, 2D regulation and 2D patents, it is obvious that sustainable eco-reciprocity is totally marginalized and unknown. In other words, sustainable 3D eco-reciprocity is simply unknown in the field of 2D urban design and space management, which means that it cannot be and it is not of interest for 2D theories, education, knowledge and pragma.

It clearly shows that 2D theories, pragma and space management are based on the outdated 2D surface plan without the third dimension and profound urban opinion on space,[4] without knowledge or vision about sustainable local 3D eco-reciprocity between landscape, low and high built structures, facilities or artifacts, without knowledge and vision about sustainable global 3D eco-reciprocity between urban, rural and landscape...
environmental physical structures, units and volumes. This is why, ever since the second part of the 20th century as well as the 21st century, the increasing quasy professional attention and support has been directed toward unsustainable speculative 2D anti-system of the so-called greenery, the so-called green-space, the so-called unbuilt, the so-called free and open space, and many other forms of the so-called speculative 2D green-surface 'patents’, that is – green squares per one inhabitant.[5]

Besides, 2D educational programs at the universities of Serbia and the neighbouring countries fail to recognize sustainable eco-reciprocity by ignoring it and not analysing it, which is directly provoked by the apparent domination of poor 2D theories and limited scope of 2D knowledge and experience based on speculative, quasy professional, unsustainable 2D patents, 2D terminology, 2D regulation and 2D publication.[6]

2D urban and regional design in relation to sustainable eco-reciprocity

Unaware of sustainable 3D eco-reciprocity, 2D professionals in the field of 2D management and urban and regional design prefer dealing with virtual tracts about speculative 2D anti-system of the so-called unbuilt, the so-called open and the so-called free surface, based on untenable principles of the outdated, popular and established 2D so-called surface design without profound opinion and attitude toward space.[7] It clearly confirms the presence and usage of still actual unsustainable 2D theories and pragmas that neither comprehend nor analyze such a significant concept of sustainable relations between urban, rural and landscape physical 3D structures in terms of living environment, or in other words – between landscape, high and low built physical 3D structures on local urban environment design, in the field of management and the field of urban and regional planning.

The question is why? Well, because 2D theories and pragma in the field of urban and regional space design have been the main base and starting point of this quasy professional and unsustainable marginalization of the exact science about sustainable 3D eco-reciprocity between various types and subtypes of physical 3D structures on local urban environmental and global living plan. In this way, 2D urban and regional design and 2D space management is fundamentally based on unsustainable but unbelievably established speculative and quasy professional 2D ‘’patents’’, such as: 3D=2D and vice versa;[8] planned-designed-built = ostensibly non-built = ostensibly free = ostensibly open; that is planned – designed - built = speculatively incomplete = speculatively free; 3D park object = ostensibly 2D intended area or the so-called green surface, and so on... These very principles consequently served as a base for unsustainable 2D education, 2D terminology and 2D regulation. That is why it can be said that all these are basic reasons that keep taking away and supressing, in this quasy professional way, the third dimension of landscape built structures, as well as, though rarely, the low-built physical structures, objects or artifacts.[9]

Integrative design in relation to sustainable eco-reciprocity

Unfortunately, this is just another field of interdisciplinary, integrative urban design and space management where sustainable 3D eco-reciprocity is marginalized.

The question is why? The basic problem is the fact that integrative and regional design and space management prefer unsustainably established 2D terminology and 2D ‘’patents’’ (3D=2D and vice versa), or in other words – it supports in a quasy professional way this one-
sided 2D space design. Such ignorant and unsustainable starting point, through the above – mentioned unsustainable 2D surface design without profound urban attitude regarding space, supresses the third dimension of landscape structures, and also, but less frequently, low-built physical (3D) structures, objects or artifacts.[10]

Still, integrative urban planning and space management, in comparison to unsustainable 2D planning and management, does have a specific characteristic – it is based on unsustainable combination of sustainable 3D and unsustainable 2D terminology, i.e. theory and pragma. This is where sustainable 3D terminology is exclusively designed for high-built and partly for low-built structures. However, in the process of integrative urban planning and space management, unsustainable 2D terminology is exclusively designed for landscape built structures only, and partly for low-built structures.[11]

Such partial implementation of 2D theories and pragma in relation to low-built structures means that speculative 2D terminology is used and applied when necessary. Depending on speculative interests and needs of corporatocracy, investor urban planning and lobby, speculative 2D terminology, in a specific case, varies in unsustainable and pseudo-democratic way, in favor of pseudo-urbanization, pseudo-regulation, degradation and deregulation of space and existing social and urban communities. Thus, the usage of speculative 2D terminology in the field of low-built physical structures, objects or artifacts, is not extremely degrading, as is the case with planned, designed and built physical structures, objects or artifacts of landscape architectural construction, creation, culture, art and culture-park heritage.[12]

The Concept of sustainable 3D eco-reciprocity

The above explanations lead to a logical question: what does a sustainable 3D eco-reciprocity mean? Based on the sustainable 3D eco-urban and eco-spatial design and 3D space management, based on 3D integrative, compatible and complementary theories, experience, knowledge and pragma, 3D education, 3D terminology and sustainable 3D regulation, there are: sustainable 3D eco-reciprocity in the narrow sense and sustainable 3D eco-reciprocity in wider sense.

However, it should be pointed out that so far there are only few 3D works in scientific journals, and hardly any 3D principles, concepts and understanding the physical features of all types and sub-types of urban environmental physical structures, as well as physicality of environmental surroundings, or worldly existential space, especially in the field of protection, design and management of this valuable resource.[13]

In the narrow sense, sustainable 3D eco-reciprocity is connected to human settlements or urban environmental habitats (villages or towns), while in the broader sense, sustainable 3D eco-reciprocity implies environmental habitat (global, planetary or existential space).

Therefore, sustainable 3D eco-reciprocity, in the narrow sense, on local urban environmental level, represents mutually balanced relation between high, low and landscape built urban physical 3D structures, objects or artifacts. It is exclusively connected to urban environment and it can be defined as local sustainable 3D eco-reciprocity.

However, sustainable 3D eco-reciprocity in the broader sense, on global environmental level, is mutually balanced relation with rural, urban and landscape-environmental physical
structures, units or volumes. It exclusively implies environmental habitats and can be defined as a **global sustainable 3D eco-reciprocity**.

It clearly reveals that there are only slight differences between local and global level of **sustainable 3D eco-reciprocity**. Namely, local level is connected to the balance of physical 3D structures within urban environmental habitat (landscape, low and high built structures or units, objects or artifacts, volumes or capacities) and global level refers to mutual balance of physical (3D) structures within environmental habitat (rural, urban and landscape structure or unit, volume or capacity).

Therefore, both local and global eco-reciprocity is significant and complex; they are mutually equal, integrative, compatible and complementary systems, without proselytism, since both strive for achieving the balance between living communities and physical (3D) structures, as well as sustainable development and survival on both local and global level.

When it comes to the level of sustainability of local and global 3D eco-reciprocity, it must be pointed out that small urban systems of physical (3D) structures are complex and balanced regarding settlement capacities, as a narrow space, and that large regional and environmental systems of physical structures are complex and balanced regarding regional, planetary capacity, as a wider space, memory, landscape, geography and volume.

**Imbalance of physical structures to the detriment of sustainable architecture of urban environmental landscape**

Obviously, experiences and pragma in the field of urbanization development after industrial revolution, indicate fundamental differences on both local (urban surroundings) and global (environmental) plan, especially in the second half of the 20th century and beginning of the 21st century, under the influence of ‘'viral capitalism’’,[14] corporatocracy, investment urbanism and lobby,[15] 2D theories and pragma regarding design and space management[16], anthropogenic factor significantly undermined the original and previously balanced and the only relevant and sustainable concept of eco-reciprocity, as an essential paradigm for sustainable development and subsistence of local and global community. These are the main reasons to explain the impairing of the balance between intriguing, layered and complex social activities and subordinated high, low and landscape built urban environmental physical 3D structures, objects and capacities, especially in the second half of the 20th century and onward, on local urban environmental plan. These reasons exert negative effect on social-architectural complexity, healthy urban life and safety, urban beauty image and memory as well as sustainability of urban landscape architecture.[17]

The users describe many settlements as places where ’’it is possible to live, but the real question is – is it possible to dwell there as well’’. [18] In the second part of the 20th century, it turned out that Heidegger, Doxiadis, Norberg-Schulz,[19] Supek, Fridman, Korać, Newman[20] and others, thought alike, expressed similar critical opinions about important issues of sustainable architecture, ekistecs,[21] appearace and organic dimension of urban environmental micro-ambiens and landscape.

Their observations revealed that the architectural objects in the physical urban environmental structure (in)directly affect human health. Negative aspects of urban landscape physical contamination are extremely visible in urban chaos conditions. However, there are
also the issues of "urban stress" or some other consequence in cultural, spiritual, sociological, phenomenological and behavioral sense and context.[22]

Special harmful effects are derived and generated by proselytical copying and excessive domination of high-built structures and objects, which is harmful for eco-reciprocity. Therefore, dense areas suffer from various negative effects due to installation of numerous and powerful systems that increase noise, chemical and physical pollution and overcrowding. Freedman notes that high buildings and cold, dehumanizing, uncomfortable for living,[23] while Korać and Newman insist that high buildings create the atmosphere of tense, since they have no homestead and the space between is uncontrolled and unprotected.[24] Pegan says that cities are lost in the so-called green areas, which makes them lose their identity and weaken social connections, because they lack the features of garden and parks,[25] and it leads to their being eternally (read - speculatively deserted).[26]

All these problems are significantly more difficult by 2D planning documents of urban and regional design, which has marginalized the same level of detail efficiency between landscape, high and low built physical (3D) structures for decades. For example, in 2D planning documents that are focused on territorial organization, urban design and space management on local level, the same level of detail efficiency is not so apparent in case of the known types of physical structures (landscape, low and high built). In the same way, such discriminatory behaviour between planners and urbanists regarding the same level of detail when it comes to landscape, low and high built structures, objects or artifacts, have negative effect on the already mentioned eco-reciprocity between physical (3D) structures on local level as well as social-construction complexity, beauty of urban image and memory, and overall safety, attraction and sustainability of urban environmental architecture.[27]

This means that such planning urbanistic 2D documents contain proselytism and domination of high built structures, in comparison to landscape built ones. When it comes to low built structures, objects or artifacts, the same problem is also present but to a lesser extent. However, as for low built physical structures, a specific problem is New Belgrade where there is a need for at least one, maybe even more city squares. This problem has existed for almost seven decades, since its founding in the second part of the 20th century.

Also, the planning 2D documents of regional design, as well as territorial organization and space management on regional levels, the same level of detail for familiar types of physical structures (landscape, rural and urban) is not visible. Such unsustainable attitude of planners and urbanists toward the same level of detail for landscape-environmental, rural and urban structures, units and capacities, exert negative effects on eco-reciprocity between physical (3D) structures on regional and environmental level, as well as on complexity, beauty and sustainability of architecture on regional and global environmental landscape.

It means that, when it comes to planning, design, physical structures building and space management on local, regional and global plan, unsustainable 2D theories, knowledge, experience and pragma still dominate and provoke immense consequences. Therefore, in the 21st century, unsustainable 2D theories, knowledge, experience, regulation and pragma on local urban environmental plan implement and affirm the existing proselytism of high built structures over landscape and low built physical (3D) structures, objects and capacities. As for regional and global environmental level, there is an apparent proselytism of urban structures in relation to rural and landscape physical (3D) structures, units and volumes. [28]
If it were not for this domination of harmful form of proselytism of one type of physical structures over the other types or vice versa, on urban environmental (local) and environmental (global) level of the 21st century, there would not be such dominant damaging effects, on both local and global volumes, which deepen negative ecological heritage. There would also be no consequences of the "green house" effects, including cataclysmic indications and effects. Furthermore, in various megapoles and other similar cities throughout the world there would be no urban chaos in the form of imbalance of physical capacity between landscape, high and low built physical structures, objects or artifacts that are degrading all social-architectural complexity, healthy urban life and safety and the beauty of urban image and memory as well as overall sustainability of urban environmental landscape architecture.

Certainly, after several decades of working, researching and dealing with this very field, the author reveals in this work, for the first time, the relevant meaning of local (urban) sustainable 3D eco-reciprocity between inevitable and complex local social heritage and urban environmental creation, such as landscape, low and high built physical (3D) structure, objects and capacities. It is necessary, since their sustainable balance directs and defines architectural-urban production and territorial organization of integrative, compatible and complementary physical (3D) structures, objects or artifacts, as well as the entire social-architectural complexity and layers of urban environmental habitat, healthy and safe urban life, beauty of urban image, surroundings and memory, stage attraction of urban micro-environment, and also- overall sustainability of urban environmental architecture.

Speaking of the same contexts, this works also points out the relevant meaning of global (planetary) sustainable 3D eco-reciprocity between causal, inevitable and complex global social heritage and environmental creation, such as physical (3D) structures of landscape, rural and urban settlements, units and capacities (volumes). In the same way, in this global context, sustainable balance directs and defines global architectural-urban production and territorial organization of integrative, compatible and complementary physical 3D structures of landscape surroundings, rural and urban settlements, units and capacities, as well as the entire complexity of environmental and living volume, the beauty of landscape image and memory, stage effects and vivacity of regional or environmental volume, including the overall sustainability of regional and environmental landscape architecture.

Conclusion

Regarding this short analysis, conceptual meaning of local sustainable 3D eco-reciprocity, implies there is no proselytism between high, low and landscape built physical 3D structures, objects or capacities, i.e. hierarchical positions that would adversely affect some of the mentioned ones.

Also, conceptual and factual meaning of global sustainable 3D eco-reciprocity, also implies that there can be no proselytism between high urban, rural and landscape-environmental physical 3D structures, units and volumes, i.e. hierarchical positions that would adversely affect some of the mentioned ones.

However, the increase of negative ecological heritage on local level (urban environmental) led to a decades long marginalization and deficiency of landscape and loe built physical structures. As for regional and broader environmental level – there is an
obvious deficiency of sustainable landscape-environmental physical structures, units and volumes.

Therefore, when it comes to local (urban environmental) plan, as well as architectural, urban, social and living pragma, so far there has been no proselytism of landscape and low built physical 3D structures, objects and capacities in relation to over-dominant high built structures and capacities. In the same way, the regional and environmental plan, architectural-urban and living-functional pragma, do not involve proselytism of landscape environmental physical 3D structures, units and volumes in relation to over-dominant high urban and rare rural structures and capacities of the 21st century.

Regardless the fact that the mentioned form of imbalance on both local and global plan is nowhere to be found in practice, it has to be noted that local or urban environmental plan do not include or accept any form of proselytism of high built physical structures in comparison to landscape and low built ones or vice versa. Also, regional and broader environmental (global) plan cannot and do not include any form of proselytism of high urban in relation to rare rural and reduced and degraded landscape physical structures, units and capacities, and vice versa.

It clearly shows that anthropogenic factors are not be find in houses and settlements only, but also on the planet Earth – since it is the relevant existential space and environmental form and capacity where all other parts of earthly biodiversity are equally involved. Therefore, apart from significance of human habitats (houses) and residences (settlements) as well as relations and balance between urban environmental physical structures, there is also the importance of territorial organization, spatial relations and balance between rural, urban and landscape physical structures within existential or environmental space.

Taking into consideration the above revealed facts, it is not difficult to conclude that, when it comes to urban environmental habitat, it is important to establish a sustainable matrix of physical structures with relevant concept of sustainable paradigms, forms, capacities, solvencies, legality and energy efficiency of architecture, on the level of local urban environmental landscape and regional and environmental (global) space and landscape. That is why sustainable local and global 3D eco-reciprocity is important, because it equally affirms the balance between anthropogenic and other living communities and immanent landscape, architectural, urban and spatial physical structures on local and global level.

However, unsustainable marginalization of these facts, from industrial revolution to the present times, led to overutilization of existential space and increasing eco-urban (–non) culture on both local and global plan. In relation to the presented facts about unsustainable imbalance of physical structures, urban and other living communities through centuries-long marginalization of sustainable local and global 3D eco-reciprocity, since 1970’s, the UN high levels have been articulating and insisting on taking care about sustainable survival of biodiversity. Basic sense of these activities is to establish a sustainable 3D eco-reciprocity between social and other living communities and immanent urban environmental structures, aimed at sustainable life on both local and global plan, as a relevant precursor of all worldly rights, democracy, freedom and other human values.[29]

Such emphasis on the mentioned problem regarding quasy-professional marginalization of eco-reciprocity and unsustainable 2D typology of physical structures, shows that all these problems condition pseudo-urbanization, pseudo-regulation, degradation and deregulation of
sustainable organic, architectural, cultural, spiritual, esthetic, ecological, sociological, health and human dimension of architecture as a relevant urban environmental structure, volume and landscape.

Therefore, the creators of sustainable architecture of urban environmental landscape are facing a very responsible task – to articulate and affirm what is ”the best from its past and the best from its present” through its social, architectural, urban, cultural, design and physical complexity and structure”. Since planning and design, especially the construction of landscape, low and high built physical structures, objects or artifacts affect urban environmental landscape, as the narrow form, and environmental as the broader form, it is possible to see enormous historical responsibility of contemporary constructors.

It is very important for enormous possibility to affect sustainable future and survival of human communities and biodiversity in general. Thus, responsibility of architects, urbanists, landscape architects, planners and other participants in that field, is additionally articulated. It could be said that the former concept of architecture: ”form follows the function”, in the field of sustainable construction of urban landscape architecture, should be transformed into a new principle: ”form follows eco-reciprocity and energy”.

Knowing that a planned, designed, high, low and landscape architecture represents something more than a pure texture, implies a responsible attitude and analyses. Such concept can lead to a turning point in the field of design, planning and building urban environmental physical structures. Therefore, the solution to the mentioned problematic issues cannot be achieved through the same approach and way of thinking.

This motto of Einstein’s is significant for establishing and affirming the presented principles of sustainable 3D eco-reciprocity, which will gain positive repercussions on the so fat apocalyptic indications and threats regarding local and global survival in cities and life in general. Certainly, as for sustainable architecture of urban landscape, there are numerous issues and relevant scientific - research activities to pay attention to.

Still, there are many unanswered questions and can any competent answer can be seen after supporting further scientific – research activities aimed at excluding 2D theories and pragmas, since they negatively affect the increase of ecological heritage ob local and global level. Also, at the same time a special scientific attention is to be paid in order to affirm a sustainable 3D eco-reciprocity that prefers and affirms sustainable development and survival of urban environmental habitat. At the same time, the scientific and research attention should be paid to affirm sustainable 3D eco-reciprocity, since it is the only form that prefers and affirm sustainable development and survival of urban environmental habitat.

Since 2013, due to the information received by PIPAUGS group[30] (PIPAUGS Group Member), it is useful and good news to initiate a scientific – research activities, as well as competitions and innovations regarding the presentation of acquired knowledge and skills as a part of the project named: Urban revitalization of mass housing, started in 2013 in the beginning of September, by UN-Habitat (“Urban revitalization of mass housing”).[31]

Another important project is Sustainable infrastructure, Current practice and future plans in the field of housing, health care and education ESTATES, initiated by 9 Scottish universities including the leading Glasgow Caledonian University (“Sustainable infrastructure: Current practice and future plans in housing, helathcare and education ESTATES”).[32]
Literaturu


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