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INTERDISCIPLINARY DESIGN MODELS IN URBAN PLANNING, ARCHITECTURE AND PRODUCT DESIGN FOR ORGANIZED HOUSING PROGRAMS

MODELI INTERDISCIPLINARNOGA PROJEKTIRANJA U PODRUČJU URBANIZMA, ARHITEKTURE I DIZAJNA U ORGANIZIRANOJ STAMBENOJ IZGRADNJI

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The central theme of the research is interdisciplinary design approaches in urban planning, architecture, and design of organized housing programs. Housing is a basic human need and fundamental human right, and it is also the largest user of urbanized space, therefore, the availability and quality of housing is one of the main tasks of every civilized society. Given that housing encompasses a wide range of human activities, and that numerous and complex processes are involved, both in its creation and in its consumption, interdisciplinarity is taken as a fundamental principle in the procedures for planning and designing living spaces and forming a living culture.

Interdisciplinary work is seen as part of the technical heritage, namely in the following areas: of the mind – in the procedures of theoretical elaboration of an interdisciplinary approach; oneiric – in the desire to improve the quality of life through the application of mechanical and industrial production; and constructional – in which the principle of interdisciplinarity is established as a practice.

By systematizing, analysing, and comparing European and domestic examples of interdisciplinary approaches in the procedures of organized housing, eight hypothetical models are proposed based on four criteria: interdisciplinarity, authorship, rationalization and recognition, and social sustainability.

According to the criterion of interdisciplinarity, four models are defined: architectural-urban model; built environment synthesis model; built and product environment synthesis model and urban ambient forming model, that is, the environmental model. According to the criterion of authorship, two models are defined: autonomous model and collaborative model. According to the criterion of rationalization, one model was defined: cost and construction time rationalization model. According to the criteria of recognizability and sustainability, two models were defined: model of social sustainability and settlement identity creation, and as a hypothetical future model, the model of resilient communities is defined, which is based on the positive experiences of "historical" models established by research.

The architectural-urban model includes the integration of the disciplines of architecture and urban planning for the purpose of creating a functional, harmonious, and well-connected built environment and corresponds to the oneiric area of technical heritage. Examples are mainly present in the interwar period. The strengths of the model lie in an integrated approach to urban planning and architecture, however, green infrastructure, accompanying social standard amenities and urban design are neglected. Projects are often a result of collaborative work.

The built environment synthesis model means planning and designing, in which urban planning, architecture, landscape architecture or horticulture are integrated, and is characteristic for the periods of the first and second Croatian modernization. Settlement projects are mostly a result of collaborative work. The advantages of the model are in the integration of the built environment and green infrastructure, which creates functional, well-connected, harmonious, humane, and sustainable spaces.

The built and product environment synthesis model is characterized by the connection of urban planning, landscape architecture, architecture and interior design, and most often appears in the interwar period. They are characterized by standard, and prefabricated construction, as well as furnishing the interior with standardized objects of everyday use. The value of the model is reflected in collaborative work and the quality and higher standard of interior living spaces.

The urban ambient forming model, that is, the environmental model, includes planning and designing in the field of urban planning, landscape architecture, architecture, and urban design, and is the result of collaborative work on projects. The model focuses on the creation of sustainable outdoor spaces that are an extension of the traditionally understood living space limited to an apartment. They are richly equipped with accompanying amenities with social purpose, arranged, and equipped with green and public areas and are a contribution to the humanization of the environment.

The autonomous model implies projects signed or created for the most part by one author. Although rare, it appears mostly in the interwar period, namely in the "built environment synthesis model", the "architectural-urban model" and the "built and product environment synthesis model". The advantages of the model are greater control over the project and work, easier decision-making, and flexibility in the process.

The collaborative model is characterized by the involvement of several authors or authorial teams who participate and collaborate in settlement planning and design projects. The advantages of the model are increased creativity and insight into housing issues from the perspectives of different disciplines.

The cost and construction time rationalization model is characterized by the use of typical, prefabricated, and standardized elements. It appears in all periods, but it has the greatest momentum during post-war reconstruction period, when the need for massive and rapid construction is most evident and urgent. The advantages of the model are fast and economical construction and affordable housing.

The model of social sustainability and settlement identity formation includes the participation of future users in the planning of new settlements, the existence of social purpose content, typological and form diversity, preservation of the ambient values of the space and an affirmative attitude towards the found space. The advantages of the model are precisely in the transdisciplinary and interdisciplinary approach in which the needs of the inhabitants are considered in creating a quality and sustainable environment.

The model of resilient communities is a hypothetical future model of interdisciplinary design that combines the advantages of historical models and corresponds to contemporary ones. As a basis for creating the model, it is possible to use the positive historical experiences of the "urban ambient forming model" ("environmental model"), the "cost and construction time rationalization model" and the "model of social sustainability and settlement identity creation". The advantages of the model are affordable and high-quality housing in a thought-through and harmoniously planned and designed environment.