CHANGEABILITY AND UNCERTAINITY OF INTERACTIVE ARCHITECTURE

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Abstract: *ability to change and adaptive behavior is the key in modern developing society, where everything is constantly updating. This is especially crucial for interactive architecture as new trend in environmental design . Architectural environment as any other product, should be subject to post-occupancy analysis in order to perform its' functions better and meet changing requirements of consumers. The ability to change and respond to new emerging needs of people endows space with qualitatively new characteristics. Architectural environment can have an infinite number of different variations that suit for different purposes, shifting from one state to another, always dynamic.*

Keywords: *interactive architecture, adaptation, changeability, society, communication.*

НЕПОСТОЯНСТВО И НЕОПРЕДЕЛЕННОСТЬ ИНТЕРАКТИВНОЙ АРХИТЕКТУРЫ

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Аннотация: *способность изменяться и адаптироваться является ключевой в современном развивающемся мире, где все вокруг постоянно обновляется. Это особенно важно и для такой новой тенденции в дизайне окружающей среды, как интерактивная архитектура. Окружающая среда, как и многие другие продукты, должна подвергаться постоккупационному анализу, чтобы лучше выполнять свои основные функции и соответствовать меняющимся потребностям потребителей. Способность изменяться и удовлетворять новые появляющиеся потребности людей наделяет пространство качественно новыми характеристиками. Архитектурная среда может иметь бесконечное множество разных вариаций, подходящих для разных целей, переходя из одного состояния в другое, пребывая в динамике.*

Ключевые слова: *интерактивная архитектура, адаптация, изменения, общество, взаимодействие.*

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The dissolution of borders between silent and responsive, static and dynamic, emerges in society. For instance, frontiers between body and machine, interior and exterior, virtual and real tend to diminish thanks to innovation and technological progress. Nowadays, we can live at the same time in both real and virtual space. Even the cities are organized according to both physical and virtual activities. Therefore, one can wonder how to join these two extremes? How to keep the identity of place and body in such a fluctuating world? How can architectural objects keep their identity and, at the same time, be connected to the world, be everywhere? Stable identities as well as fixed space are no longer possible, because they do not correspond to the reality of today's world. This introduces a transformation of the real and mental space. Such a conversion asks for the invention of the new words and the new spaces, using new already invented techniques [1].

Bertsky argues that the statement saying that the architecture should be built for a full due, is exaggerated. He is more interested in unfinished architecture, endowed with the quality of vagueness and incompleteness, but pointing on the potential of being a complete and refined. Architecture can be considered as a set or a puzzle of particles and fragments of the world around us, that an architect can sort out in some other way, literally or virtually. The building doesn't have to elude in order to have qualities of openness. Closed, frozen and monumental architecture cuts off the ability of the buildings to be changed or augmented [2].

Thus, interactive architecture is a field of architecture, in which objects interact with each other, with space and (or) a person and can change according to the changing needs or the influence of external factors. And change can be both physical and virtual [3].

Interactivity in a framework of architectural product should be seen as an active dialogue, and as a reactive interaction, i.e. corresponding to a single request. This adaptation can be expressed not only as an immediate response to this request, but also as an assumption of the change embedded during the design process.

It is actually a matter of products: is there a possibility to make them improvable on purpose? Assuming that all products are able to be improvable, as the life of the product begins in the users' hands, the question arises: how do we design products that generate useful improvement?

The word "useful" implies that we have to introduce the idea of Tom Moran, as he assumed that the designers recently have been occupied by the convenience and ease of use at the expense of usefulness. But if we really want to design products that are useful, that can let the user in the creative process during the life cycle of the product, as users are actually the final arbiters of usefulness. Therefore the question is how designers can make products more useful by providing opportunities for adaptation?

The practice of post-occupancy evaluations (POE) is also relevant for considering this case. This entails a visit and evaluation of building after it was built and occupied by residents. Post-occupancy evaluation is intended not only for understanding how people actually use the facility together and how do they change the environment if they feel such a necessity, but also for the training of architects. It brings back the idea of the project as a process, and like the designers of they need to engage as much as possible with the products or events after they are built. Most architectural projects do not imply regular post-occupancy evaluations because of financial limits. It should be assumed that the interactive project can be carried about in a way that makes financial sense, remaining equivalent to the post-occupancy evaluations [4].

However Lynn uses a different tactic to check the improvement of design theories. He presents the preliminary results of research to his students to judge, as the best and most constructive critics. That's how the famous embryological houses appeared and the principles of their creation were tested, such as blebs, teeth, flowers, isoparm apertures, structural matrices, intricate texture, inflections and gastrulations. These eight principles are the formal, geometric, morphological aspects, which have become the basis for many subsequent projects Lynn [5].

The uncertainty principle works in Swarm Architecture (term intoduced by Kas Oosterhuis). The result of the process is not predictable in traditional sense. Although the system is playing by the rules, the game outcome cannot be predicted. There are billions of possible outcomes, all of which are adequate as a response to requests of the system. Some results are more favorable to some experts, some are more favorable to the others, who limit the solution area, though still in the theory of infinity, a specific number of opportunities/options responds within the area of solutions. Nevertheless as it happens in sports, not all of the games are thrilling and beautiful. Strong and intelligent players are required to start an exciting game, experienced designer with a strong desire is required to perform with the best result. This understanding implies that the game takes place in accordance with the principles of uncertainty, probability and chance of quantum mechanics, something unexpected always might happen. Submitted in real-time the game is set for the unfolding fabric of reality. The player can surrender, the player can be much better than expected. If the project does not start the game, it is simply just modeling [6].

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