

كلية/معهد : كلية الفنون الجميلة

قسم : الديكور

عنوان الرسالة

مفهوم العمارة الداخلية للوحدات الانشائية الخفيفة و تحويلها وظيفيا لتتوائم مع النشاط

رسالة علمية مقدمة

ضمن متطلبات الحصول على درجة دكتوراة الفلسفة فى

الفنون الجميلة

مقدمة من

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العام
2020/2021

Abstract

The study covered three theoretical chapters and one practical chapter. In the first chapter, the first axis of the research was studied, which is the design of light structural units, their classification and the history of their emergence and development. After that, the relationship between light structural units and environmental simulations was studied, as the reason for its emergence as light structural units is the simulation of the human skeleton in terms of its ability to carry the weight of the body with all its fat, water and other contents despite the light weight of this structure. In this chapter, the types and levels of simulation have been studied, and they include three levels: **Organism Level** -**Behavior Level**- **Ecology Level** . Each level contains standards that differ from the other. The realization of the idea of simulation does not depend only on one scientific direction, but it requires cooperation between various disciplines to ensure its success. The simulation is not carried out by transferring the apparent behavior or reaction and embodied in architecture, but it is carried out in stages that must be gradually followed until the required results are reached, in short, the natural inputs in the design process must be simulated to reach the required outputs.

In the second chapter, the second axis of the study and the first type of manipulation , which is the formal manipulation, were studied. The idea of manipulation in architecture aims to reach the best means for the survival of the origin, as it changes to fit and harmonize with its environmental surroundings, and this is one of the most important principles of sustainability. Through the chapter, the meaning of the formal manipulation and how to achieve it were examined with the study of the most important concepts related to such as visual illusion, shape, types of shapes and movement in architecture as a type of modification. Form follows imagination. Through the chapter, a set of models

related to achieving formal changes in the design of lightweight installations were presented.

And in the third chapter, functional manipulation was studied, as this type of manipulation expresses a change in the character of the thing in general, and from an architectural point of view, it includes modification and change of the characteristic of the origin and its activity, so this change may be permanent or may be temporary. Functional manipulation includes units recycled and modified for another activity, as is the case in shipping containers, which transforms from just a huge metal box to transport huge parcels such as equipment and tools from one country to another to an architectural facility with internal spaces, as well as concrete pipes, which are transformed from pipes. To transfer wastewater to a lightweight facility that can be treated into architectural facilities in which many activities can be carried out.

This was followed by the practical study, and the study ended with a set of findings and recommendations related to the four chapters.