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How does concept transform into product? An appraisal of analogy-based design practices in architecture education

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Abstract

When defining the concept of 'metaphor' as 'an intuitive abstraction of uniqueness in diversities', Aristoteles also creates a common-sense in comprehending analogy-based design processes. Therefore, as in all design practices, drawing analogies -with/to/between- by generating metaphors is also an important tuition for learners/students in architectural design education. Starting from the question of 'how a designer's initial concept is transformed into an architectural product', this study generates a discussion on architectural thinking and designing practices based on analogies, aiming at creating perspectives with regard to architectural design education which primarily intends to improve students' designing abilities by providing the sustainability of current environmental data through the subsequent designs. In this education, the students are firstly directed to reveal metaphors in their specific studying areas by gathering inspiration from directly formal and physical environmental data or from indirectly informal and contextual data; and secondly expected to transform analogies into spatial decisions with architectural programs. In this sense, this study is methodologically carried out in two sections. The first part analyses the stages of the process that lead students from concept to product in the education of architectural design by emphasizing the relational potential of design by considering analogies/metaphors. In the second section, six student studies/products selected from design education studios are appraised in context of the metaphors they captured in their study areas and the analogies they created –or in other words, the reasons they asked for to design-. Among the consequences of the study are the inferences to be made on how to transform design practices, in which the students interrelates between environmental data, into architectural products.

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Keywords: Analogy; Metaphor; Design practice; Architecture education; Architectural product

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1. Introduction

According to German architect Oswald Mathias Ungers (2013), scientific discoveries consist of seeing analogies where others only see plain phenomenons. In this context, according to Ungers artists who think and design through analogies and metaphors pave the way for more creative thought processes. Just as architects such as Antoni Gaudi, Mies van der Rohe, Bruno Taut, Rudolf Steiner, Frank Lloyd Wright and Le Corbusier highlight the unifying role of designing through analogies while metaphorically using in their designs the bees, who represent ideal society, division of labour and organized work, and the bee hives, which are created with harmony and balance by them (Ramirez, 2000). In this context, according to Kant the analogy that builds a similarity between two phenomenons that are different from each other is sine qua non for widening knowledge; and, according to Ungers (2013) creating new concepts and contexts is only possible by thinking while setting up analogies.

Thinking and designing by drawing analogies through metaphors, therefore, has been a powerful path finder in uncovering the different starting at periods where even Aristotle was attracting attention. The metaphor defined by Aristotle as an 'intuitive abstraction of uniqueness in diversities' (Ungers, 2013) is a formulation that occurs where two different thoughts function together according to French philosopher Paul Ricoeur (1981) -or it is a vehicle used in the expression of a description by being transferred to a different object (Broadbent, 1973)-. In this context, it creates a change of meaning and interaction in the term where it is used (Boys-Stones, 2003).

In this context, it can be said that drawing analogies between things/objects by generating metaphors is also a method of expression/creation in architecture practice as in all design practices. Therefore, as in all design practices, drawing analogies -with/to/between- by generating metaphors is also an important tuition for learners/students in architectural design education. Starting from the question of 'how a designer's initial concept is transformed into an architectural product', this study generates a discussion on architectural thinking and designing practices based on analogies, aiming at creating perspectives with regard to architectural design education which primarily intends to improve students' designing abilities by providing the sustainability of current environmental data through the subsequent designs. In this education, the students are firstly directed to reveal metaphors in their specific studying areas by gathering inspiration from directly formal and physical environmental data or from indirectly informal and contextual data; and secondly expected to transform analogies into spatial decisions with architectural programs. In this sense, architectural products are required to be evaluated as a result of the dialogues in between every single student and his specific study area.

This study is methodologically carried out in two sections. The first part analyses the stages of the process that lead students from concept to product in the education of architectural design by emphasizing the relational potential of design by considering analogies/metaphors. In the second section, six student studies/products selected from design education studios are appraised in context of the metaphors they captured in their study areas and the analogies they created –or in other words, the reasons they asked for to design-. Among the consequences of the study are the inferences to be made on how to transform design practices, in which the students interrelates between environmental data, into architectural products.

2. Process -going from concept to product- in architectural design education: Extracting information from place, linking one to the other through metaphors/analogies, generating architectural products

Throughout architectural design education students are expected to understand the current context of the place that is worked on and to generate an architectural design that can be integrated with this context. In this sense, the design problem faced by students during the education process can be defined as how the context of place can be transformed into an architectural product. During the solution process of such a design problem, students are directed to perform an in-depth analysis aimed to understanding the context of the place they are working in. Understanding the context of the place also requires revealing the superposed information that is hidden in the place. This information contains, in addition to the physical and terrain specific features of the place, its historical, cultural, social, geographical and even its climatic, natural, experiential features. The context of the place is the total of all these phenomenons; it is hereditary and is constantly being transformed. Therefore, students are directed to consider the architectural product they will design in relation to their conceptual and abstract characteristics in addition to the