Between Concept and Form: Learning from Case Studies

Chih-ming Shih

Associate Professor, Department of Architecture, National Taiwan University of Science and Technology, Taiwan R.O.C.

Abstract

Case studies have been used as a means to inspire design activity. Design is about the creation of form that integrates aesthetic intention, functional performance and material durability into a spatial entity. Because the appearance of a building is easier to evaluate than its other intangible qualities, case studies are often simplified into an analysis of form that emphasizes the abstract perfection of an ideal form itself. This makes case studies a systematic way to provide ideal architectural forms to copy rather than inspire original design. A form involves not simply what is done, but also how it is done. If the purpose of case studies is to inspire creation, the conception of form that translates a concept into physical and spatial form, therefore becomes the focus of case study analysis.

The paper proposes a case study analytical model. Through analyzing the key words found in a discourse and the corresponding formal expressions in a chosen architect’s works, what we can learn from a case study is the coherence and legitimacy of the relationship between concept and form.

Keywords: architectural conception; architectural design; design thinking

Introduction

Architecture has two levels of expression: verbal/conceptual and visual/representational. Architectural education and practice spread visual expressions through plagiarizing and imitation. For instance, architects or students usually browse books, journals, or actual buildings in search of design ideas or elements that appeal to them. They are looking to appropriate visual expressions that they might exploit from within their own themes.

Traditionally, students are asked to use more visual representation (making) than verbal expression (talking) to present their works in the design studio. However, one of the most perplexing aspects of architecture is that we cannot avoid using linguistic terms in discussing architecture at almost any level. Verbal expressions insinuate themselves into architectural discussions, especially in the design studio when considering a student’s range and deployment of visual expressions.

In fact, verbal expression becomes more important for architectural design because, unlike artists, architects are more frequently asked to deliver a verbal presentation on their own works. They must express their idea to clients, the public and media. Although there is no reason to encourage students to make greater effort in expression than design, it is necessary for them to learn how to talk about their concepts and to express their concepts through drawings and models in a coherent way.

To initiate students to architectural concept formation, a studio teaching method has been developed at the Department of Architecture, National Taiwan University of Science and Technology. Both verbal expression and visual representation are emphasized as concrete expressions of architectural thinking and both interact with one another in transforming our concepts about architecture. The design studio method is based on case studies to provide students an appropriate model to learn architectural concept formation. By the appropriate model, I mean examples through which students can learn the coherence between verbal and visual expressions in architectural concept formation and the legitimacy of the relationship between the concept and form in architectural concept embodiment.

Architectural concept and form

Literally, conception means the act of forming an idea, plan, etc. A Concept, a thought, idea or principle as defined, is the key to conception. Before reflecting upon how the concept can generate a creative design process, it is necessary to distinguish scientific concepts from common concepts. The main difference between a scientific concept and a common concept is that the first is constructed. This means that the first task is to eliminate obstacles in the language that interfere with precise meaning.

Architectural concepts are not intended to establish scientific theories describing how the world is but for generating architectural thinking to elicit inspiration and possibility rather than realities. Obviously, an architectural concept seems more likely a common concept rather than a scientific concept. However, this
does not mean that any common concept can be an architectural concept. The point lies in if a “design conjecture”: a formal conjecture embodying a functional prediction, can be developed. In other words, architecture is a creative design process that inspires designers to map from knowledge of formal possibility to a conjecture for formal specificity, and also from knowledge of functional probability to functional prediction (Hillier, 1996: 426).

An architectural concept is therefore not a theoretical formation but a comprehensive understanding of specific design issues resulting from an intellectual process engaged in projecting appropriate architectural forms. The importance of an architectural concept for generating a creative design process has attracted greater attention. In his famous essay, *Displacement of concepts in Le Corbusier*, Alan Colquhoun analyzed Le Corbusier’s creative process and demonstrated the general concepts that can be formulated through a reinterpretation process, rather than creating in a cultural void (Colquhoun, 1981: 51).

To show how new architectural concepts are developed, the works of famous architects’ are considered as a reliable source from which new concept can be derived. While this kind of case study shows how to create a new concept without regarding any specific design issues, the complex relations between the concept and form are too simplified. This makes case studies a means to ensure formal reproduction through which cultural meanings can be carried forward in addition to inspiring the design process. This reveals the complex relations between concept and form.

### An analytic model for case studies

The emphasis on the importance of case studies in design education can be traced back to the *École des Beaux-Arts*. Although the stylistic interpretation of historical forms penetrates the visible through to the intelligible and formulates abstract composition, architectural conception principles from which forms are created is completely ignored in the Beaux-Arts’ method of studying precedents. Influenced by the Beaux-Arts’ tradition, case studies restricted to a mere analysis of form still prevail (Rowe, 1976; Baker, 1984; Clark and Pause, 1996).

The qualification of case studies consists in not only of form as a good example for the actuality and concept, which generates a design process to create the form. In the absence of concept, case studies, as an analysis of form, become nothing more than given forms to copy. To become the basis for speculation, creative enquiry and a useful tool for teaching design, the case study must comprise three aspects: discourse analysis, form analysis and design evaluation.

Normally, there are two apparently very different but closely interrelated kinds of activity that can be identified in the design process. Concept, as a generator of the design process, produces both discursive/verbal and non-discursive/visual modes of activity. The use of key words to express a concept during the design process serves to promote understanding, communication and problem solving.

Design issues referred to by verbal expressions give useful information about what concerns a designer the most and how the concept is related to the specific design. The translation of any specification into design at some stage must take the visual thinking form. Formal strategies, usually proposed through a series of sketches or drawings as possible solutions to the problem in hand, can demonstrate how the form is implied by a concept. This is a way of merging what is coming directly from the tangible part and indirectly from the intangible part of the concept. The form involves not only the aesthetic dimension but also functional, technical and spatial design issues corresponding to the specific design case.

Discourse analysis provides an understanding of the text concerning the relationship between concept, design issues and formal strategies. Through form analysis, an understanding of the work involving the relationship between the concept, design issues and formal strategies can be constructed. Design evaluation is based on an understanding of the text and the work, provided by discourse analysis and form analysis.

According to E.D. Hirsch’s distinction between the meaning and significance, “...meaning is that which is represented by a text; it is what the author meant by his use of a particular sign sequence; it is what the signs represent. Significance, on the other hand, names a relationship between that meaning and a person, or a conception, or a situation, or indeed anything imaginable.” (Hirsch, 1967:8) Understanding generally embraces not only the perception of an author’s meaning, but also the perception of how that meaning fits into his world or our own. Therefore understanding is a perception or construction of the author’s verbal or non-verbal meaning. To perceive significance is the function of “judgment”, which implies an act of evaluation.

Design evaluation is always intrinsic to the particular formal strategy that makes it possible for form to embody concept and is always extrinsic to the textual meaning itself, insofar as we direct our attention to design issues, which lie outside that meaning. The coherence that is of much concern into the formal strategies that connect concept and form reveals the designer’s intention. The coherent relationship between concept and form can demonstrate the translation from the intelligible to the visible. The legitimacy of the translation from concept into form based on merging complex design issues in an artistic way is another focus of the design evaluation. It shows that the designer’s accomplishment can be convincing. Through this analytic model of case studies (See Figure 1), the complexity of the relations between the verbal and visual, conceptual and representational, intelligible and visible, rational and artistic, through which a distinguished architectural conception can be revealed.
Le Fresnoy

Le Fresnoy National Studio for Contemporary Arts, designed by Bernard Tschumi, considered as deconstructivist, was influenced by the writings of Jacques Derrida to question the objective standards upon which an architectural design can be based, is a good case study example. An interview concerning Le Fresnoy given to the GA Document serves as the discourse to be analyzed as follows (Tschumi, 1997, 74-79).

“... The site that had been selected in the north of France had some existing buildings on it, but the competition allowed for complete demolition of all of the structures. But I found that some of the spaces were quite extraordinary inside. There were large industrial spaces, some with concrete roofs, some made of wood. The strange collection of elements really did make for unbelievable spatial effects. I thought to myself: ‘Why should we demolish all of this?’ ... Normally I don’t like doing renovations or additions. And I’m not a restoration architect. But this time I thought we could do it successfully by putting a big ‘umbrella’ over the old buildings, so as to keep them. There would be a lot of new building, but this way we could combine them effectively under this huge roof.” (See Figure 2 & 6)
The in-between was conceived as a series of platforms hanging in the air, where one could have an extraordinary place of invention for artists doing installations, for students doing films, and so on. All kinds of things could occur along the platforms. (See Figure 4, 5, 8)

And since there was no way of supporting these platforms on the existing buildings, we decided to hang it all from the new roof. The ducts for electricity and air conditioning are also in the roof. The new roof also meant that we didn’t have to worry about weatherproofing the old building. (See Figure 9)

But a city is not a style: a city is about collisions, contrasts, conflicts. The most interesting part of a city or this project is the different parts, and what happens in between. The juxtaposition of these different parts doesn’t mean that one is better than the other. (See Figure 3 & 7)

The project is not contextual; contextual implies that there is a normative condition.

I think that it is very important not to confuse the word ‘event’ with the word program. The ‘program’ is the repetitive nature of a thing. An event is a one-time occurrence. It will never happen again.

As a concept, umbrella conjectures a roof-like form in a tangible way and an in-between space in an intangible way. Metaphorically, umbrella implies not only a protective function just as the roof protects a building from the weather but also a specific relationship between the protector and the object; a protected in-between space. Unlike a raincoat, which we wear to get protection, the umbrella protects us from the weather and keeps us at a distance. The holder of an umbrella presents an implication of structure that makes it easier to respond to technical problems. The words, juxtaposition, not contextual, and event, lead formal expressions to become dynamic, contingent, and a contrast rather than harmony between the old and the new. Concept, as the generator of the design conjecture, implies not simply the possibilities of form but a form that is able to embody the complexity of the design issues to solve functional, technical, spatial and aesthetic problems.

A lot of people are very concerned with whether the discourse on a design process is a priori or a posteriori? It is believed that only the discourse an a priori discourse is real and can faithfully demonstrate the design process. While the discourses that provide all kinds of media are almost an a posteriori and considered to be a fake discourse on the design process, this kind of discourse tries to legitimizze the design as a fait accompli rather than a process. In fact, a discourse on design works is like the preface of a book. What is essential for the preface is not to be written first, but a reflective introduction. The act of creating a discourse on the design process is a reflective abstraction from the material reality to search the possibilities of form. In such a way, the concrete can be grasped through the intermediary of the abstract.

Learning from case studies

The goal of this design studio is to study the possibility of architectural form as the embodiment of ideas. We are convinced of the necessity for this kind of training, because the creation of architectural form has been thought to be idiosyncratic and arbitrary. Students used to draw concept diagrams to explain the form development process when making their projects. However, from their presentations, concept and form are seldom found related. A coherent relationship between concept and form seems impossible.

To ensure that form can be derived coherently from concept, students must choose an architect as the starting point for constructing a model to demonstrate the congruency between concept and form. Through analyzing the key words found in the architect’s discourse and their corresponding expressions of the chosen architect’s works, students can first realize that the introduction and use of a specific word during the design process has great importance for the project and how it helps architects focus on the conceptual level and helps him translate his idea on the visual level. Students are then asked to formulate some useful concepts that not only appear often in discourse but that also can be developed into various forms for different projects. What students are expected to learn from their studies is not the architect’s formal expressions but the consistent relationship between concept and form. The most important thing that students must learn is that concept and form do not correspond with one another “one by one”. In other words, a concept can bring out various forms according to different programs or needs. Finally,
students will be asked to use the concepts that they formulated to develop a project. Case studies therefore provide students with a starting point for a new project.

The essential qualification for case studies requires an interesting actuality and an analyzable design process. Although it is not the form per se but the creative activity that is considered the key to case studies, the first, as an example of possibilities, serves as the proof for the latter having the capacity for creation.

There are three aspects involved in what we can learn from case studies. First, from the discourse analysis, we learn that concept is formulated not by intuition or pure imagination but the act of creation, a complex mental process of reflective abstractions, that construct the concept from a comprehensive understanding of specific design issues. Second, from the form analysis, we learn that non-discursive conjectures for a physical and spatial form, generated by the concept, provide a field of possibilities from which the formal expressions corresponding to discursive predictions can be chosen. Third, from the design evaluation, we learn that a good design depends not on a conjectural form but the complexity of the formal conjectures.

The goal of case studies is therefore not to demonstrate the abstract perfection of ideal form itself but an inspiring design process through which an artifact with the creative intention can embody the complex relation between concept and form.

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6-9 Reprint from L’Architecture d’Aujourd’hui 314, Decembre 1997.