

Language of architecture: Diagrams

Ar. Pallavi Tiwari

B.Arch, M.Plan with specialization in Urban planning

Abstract - Diagrams are a well-established tool in the field of architecture. The functionality of these diagrams is versatile from being used as instruments to communicate the design, to a structured method of the design process itself. This paper reflects upon the importance of diagrams and the role they play in architecture along with various stages of the same. Several examples have been highlighted in the paper to emphasize the use of diagrams and the function they have in the field.

Key Words: Diagrams, spatial arrangement, sketches, communication, details, visual representation, graphics.

1. INTRODUCTION

A poet expresses his feelings by carving words of his choice in a rhyme. A musician conveys his thoughts by making them flow with the melody which he creates. Designers, however, choose a different form of art to reveal the concepts and ideas blooming in their minds. Poetry and music are although very definite and strong mediums, sketches and diagrams represent and reflect what the designer wants them to reflect. Unlike other forms of representation of creativity where the actual concept can be under looked or modified by the way a person perceives it, diagrams made, either as a final spatial arrangement of elements of a design, or just a way to refine those raw forms during the design process, are apprehended the exact way the designer wants them to be understood. For what might appear to be a very complex procedure which is followed before coming to an appropriate, reasonable and possibly the best solution to a design problem, one can have various examples of how diagrams have been used by architects since a very long time as a vehicle of communication with others and also as way to see and understand the forms that they work with.

As believed and experienced by architects like Louis I. Kahn, Le Corbusier or Peter Eisenman etc, Diagrams are not just a way of visual representation but are also a way to solve problems. Through graphical symbols like dots, arrows etc, and with analytical notes, diagramming plays a very important role in the whole design process. From simple bubble diagrams which are made during the most initial phases, to various aesthetic aspects of design like what kind of views are visible from a room; it is all done through a number of diagrams which an architect makes before finalizing one.

Although diagrams play a vital role in reaching a conclusion, it is very important to not get carried away with

them. It is likely for an architect to consider a diagram he has made as more than it actually is. The rougher a diagram is, the more conscious of the fact that it is in need to be worked out, the designer is. As more details are added to a diagram the closer we get to the final outcome, however it is very important to know what amount of detail is to be added at which stage of decision making. Lots of such diagrams are found in the notebooks of various architects suggesting an inevitable relation of diagrams and design process.

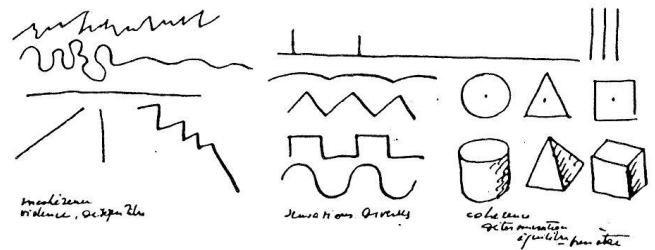


Figure 1 Le Corbusier, "Diagram of lines and forms as they affect the physiology of sensations," in *Alrzanach d'aichitecture modern (Paris, 1925)*. 35

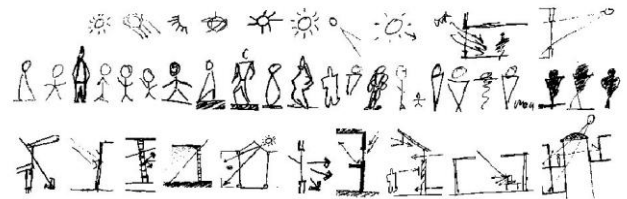


Figure 2 Designers used conventional symbols and configurations for architectural concepts in diagrams.

2. Types of diagrams

In the overall process of design, diagrams are used as tools at various stages wherein different types of diagrams are used to develop and process design elements.

2.1 Conceptual Diagrams

These diagrams are drawn during the ideation phase of any design project. Through few basic shapes and their arrangement, the main idea is put forward. These diagrams are more for the designers own understanding of the whole concept, and not for the communication to other. These conceptual diagrams can be seen as the starting step which is later manipulated, adjusted and modified till the actual design emerges out of it.

2.2 Bubble Diagrams

By definition, the bubble diagram is a freehand diagrammatic drawing made by architects and interior designers to be used for space planning and organization at the preliminary phase of the design process. The bubble diagram is important because later phases of the design process are based on them. The various elements of the design are listed and then arranged as per required proximity. It is an arrangement of what comes where in a design. Just like conceptual diagrams these bubble diagrams are also modified later on to develop best suited arrangement of spaces. For example, in a residential design project, a bubble diagram would look like this.

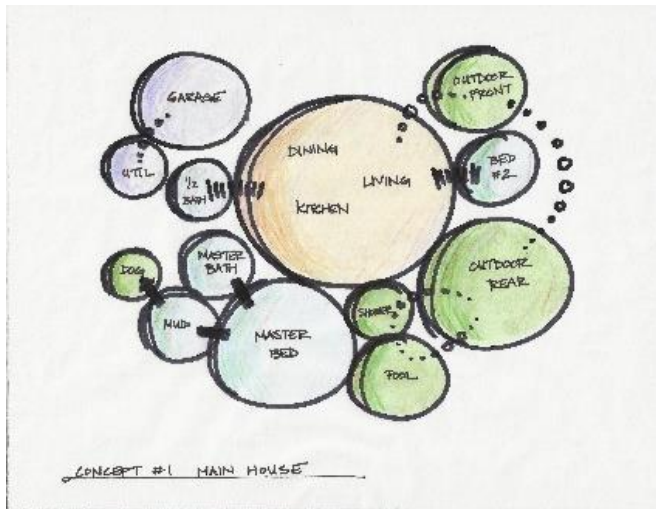


Figure 3 Typical Bubble Diagram for a residential project

2.3 Circulation Diagrams

These diagrams are a representation of use or activity for which the design is being done. The sequence of movement is illustrated with the help of lines and arrows. This helps designers in understanding the different types of space requirement their interrelationship and their hierarchy. These diagrams also help in establishing the nature of the spaces and who would be using them, public spaces and private spaces for examples are marked with different arrows to show the access to different spaces, this division is an important part of ever design.

2.4 Analytical Diagrams

These are diagrams to analyze the context of design. Site for instance is an important part which needs to be studied and critically analyzed in order to utilize the full potential of the features on site. Thus, site analyses diagrams are created, these diagrams become crucial in design process as they help in shaping the design, its placement and spatial arrangement.

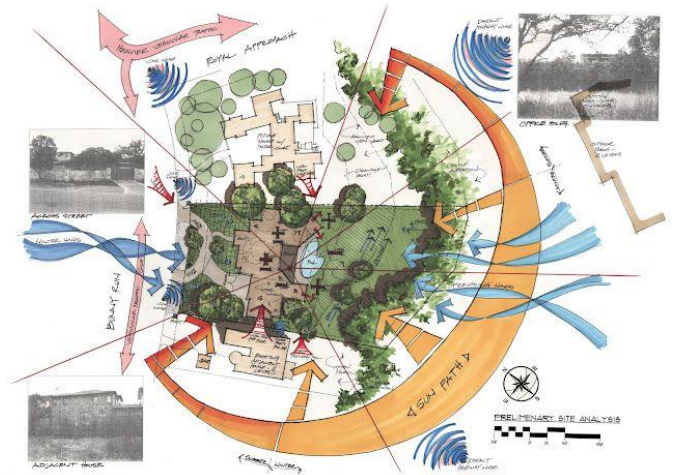


Figure 4 Typical Site analysis diagram

2.4 Structural Diagrams

These are the structural elements of a building illustrated in relation to the overall form of the building. They relate to the structural aspect of the design. Major structural elements are included in this phase. These diagrams are generally made towards the end of the design process or the final stages.

2.5 Presentation drawings

These drawings as the name suggests are for presentation purpose. Once the design is finalized, these are graphical illustrations which represents the design in 2 dimensions exactly the way it will be in 3 dimensions. They help people visualize the design without the technical aspect.

3. Role of diagrams in design

The diagrams of different stages of design help in shaping the design itself. It clears the ideas that the designers have and help in conceptualizing the thought process systematically in order to refine the raw ideas. The responsibility of the communication of the ideas lies on these graphic illustrations. These are the instruments that the architects use to converse the design. Producing detailed architectural drawings can allow us to identify and modify certain aspects of the design. Designers use graphic symbols and that the drawing marks they make are linked to verbal protocols and design thinking (Gross, 2001).

As an instrument of thought, sketches, diagrams and drawings have an eminent influence on not only on the early phases of the architect's working process, but also on the next phases concerning construction, and thus on the buildings that are the final goal of architectural design. a form of dialogue as well as a visual guideline, the diagram serves as both the subject of conversation and the object of architect's endeavor. (Vrachliotis, 2005)

Diagrams facilitate conceptual exploration, which results in an alignment of conceptual and spatial configurations (Fehmi Dogan). As diagrams are used in various stages of design process to arrive at best possible solutions, it is important to understand the evolution of these series of diagrams that an architect makes. With each subsequent modification or alteration done in a diagram, enough of the original features retains in each step, which ultimately leads to the final outcome from the initial conceptual diagram.

4. CONCLUSIONS

It is evident that diagrams play a crucial role in not only communicating the design to the clients, but also in the overall design process. With increasing technological this important stage of developing a design through series of diagrams and drawings is getting highly dependent on the computer aided designs. The well-established art form of arriving at the design by such sketches, drawings and diagrams is somewhere getting lost with stages being skipped due to mere ease of drafting that the cad and alike software's provide. Diagrams have a role as discussed above thus it is important to have the process remain the same in the field, with new adaptations as required.

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