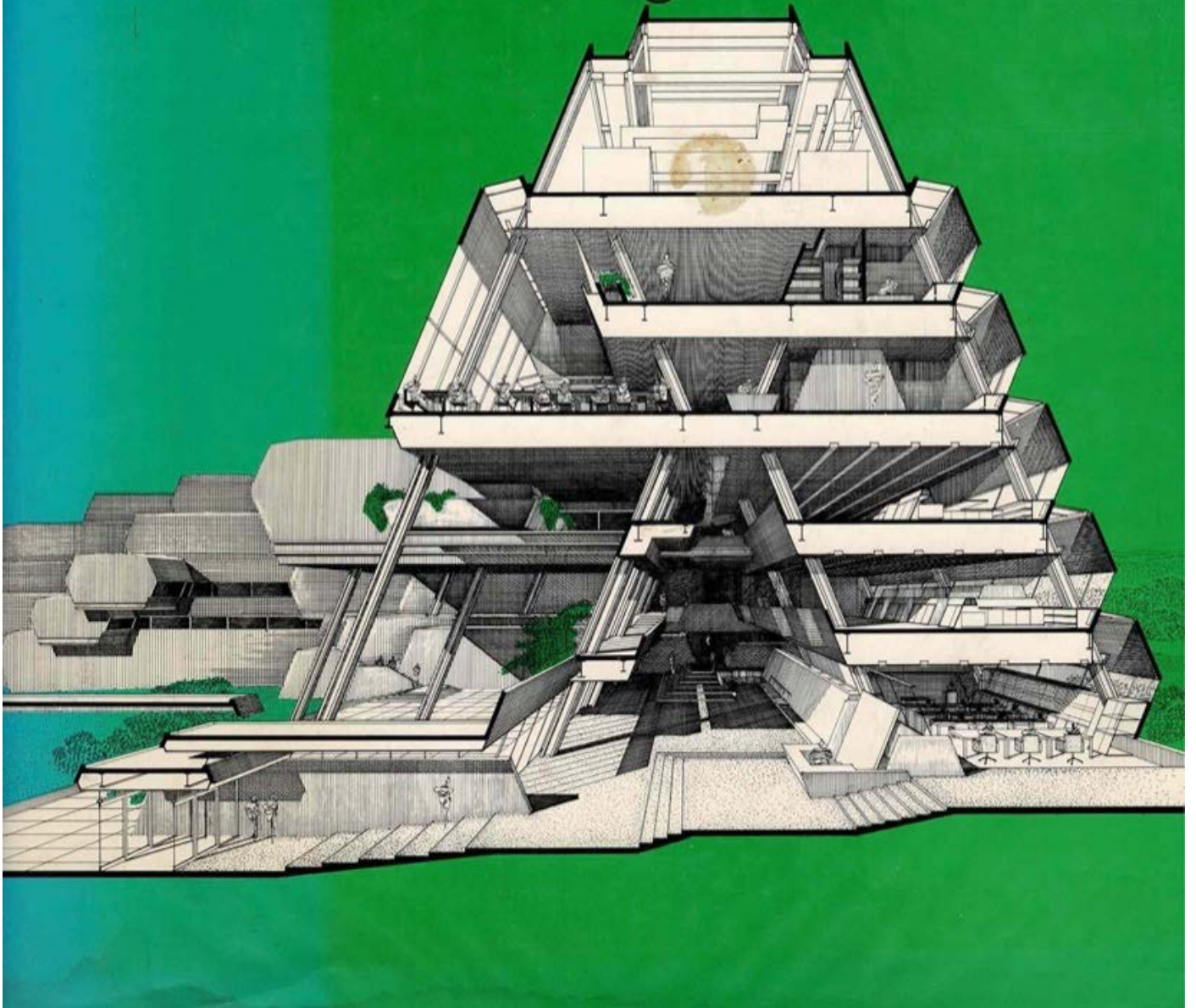


PAUL RUDOLPH

Architectural Drawings



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'From Conception to Sketch to Rendering to Building' by Paul Rudolph

Sketches for an architect are the most direct line between his imagination and the tangible. *Renderings*, which form the great bulk of this book, are prepared (with the assistance of many) when ideas have become crystallized and the owner's insatiable desire to 'see what the building looks like' must be satisfied. These renderings are made primarily to clarify the building concept for the owner, but they also serve as a point of reference. They have a unique life of their own. The working drawing stage is filled with pressures of budget, client demands, municipal authorities' edicts, consulting engineers' advice, draftsmen's ego trips, and diverse other factors which could lead to an evolution of the design which would not be true to itself. During this stage the rendering assumes a special authority as a reminder of the ideal and original intent. Portions of the rendering are often retraced or redrawn, and reproducible prints are made with modifications. Therefore the renderings show the project at only one point in time and are thought of as tools, not as ends in themselves. The end is a building which, in turn, is there only to be changed, since it is to be used. The preludes to the rendering are the, literally, hundreds of sketches which are constantly being prepared when there is a moment in an airplane, a train, a restaurant, or at home. The quality of the private visual sketch (the recording of an idea) varies according to the clarity of the thought. These rough sketches, some of which are shown in this book, are usually the first evidence of my intention and have intense reality for me. (Buildings which have

been designed but never built exist for me, if for no one else.) The sketches are subsequently revised, renewed, traced over, reassembled; montages are created, colors and symbols are added, notes are appended; they are discussed with colleagues, and serve as instruction to collaborators. These sketches are eventually translated into quickly drawn-to-scale plans, sections and elevations, utilizing T-square and triangle. Then they are completely redrawn by assistants to make them presentable to clients and, subsequently, renderings are prepared.

The complex interaction between sketches, renderings, and the design process is outlined below.

1. Some construction *materials* are easier to depict through rendering than are others. This probably accounts for some of my interest in concrete and highly textured surfaces in general. The technique of rendering with line to create light and shadow suggests a certain linearity in the texture of walls which sometimes influences the choice of materials. For instance, the development of textured concrete, as used in many of our buildings, probably started simultaneously with (a) the concept of the rendering and how to make the buildings conform more exactly to the image as depicted, and (b) the idea of increasing the capacity of the concrete surfaces to take stains, weathering, and so forth. For instance, brick has always seemed to me to be an alien material in the 20th century, but perhaps part of this attitude lies in the fact that it is relatively difficult to draw.

2. *Spatial concepts and arrangements of solids and voids* influence the method of sketching and rendering. My particular spatial preferences derived from the concept of space/time are so intimately connected with the method of drawing that I have to remember that the rendering is only a means to that important end, the building. I am tempted to change the design, on occasion, to see more clearly yet another adjacent interior space in the rendering, but this might modify the desired sequence of spaces in the actual buildings. The rendering seldom indicates glass surfaces, in order to let the inside and the outside be shown simultaneously. I have never developed a method of using the rendering technique illustrated in this book to show reflections from glass or other mirror-like surfaces. To indicate glass reflections would prevent clearly indicating the inner penetrations of interior and exterior space.

3. The *breaking down of scale* from the reading of mass and silhouette to the reading of texture and detail can be indicated in drawings, but this is difficult in a model. An architect is concerned with how a building reveals itself in the rain or on a summer day; its profile on a misty day; the different treatment required for that which is close at hand vs. that which is twenty stories removed, with angles of vision, symbolism and content. Thus, one of the drawing's great advantages is that it can suggest how detail is read in actuality from various vantage points. Early in my career I often made the *actual size* of a space seem bigger by

decreasing the size of scale figures, and by deemphasizing easily recognizable elements in the design. Of course no one was fooled after the actual building was completed, and such indulgences are a thing of the past. However, it is easy to manipulate implied scale in a rendering and, in this sense, to fool oneself.

4. The *chosen technique* of study (sketches, renderings or models) influences the actual forms utilized. Non-rectilinear forms are relatively easily drawn in free-hand sketches, but difficult to construct in formal renderings. Conversely, non-rectilinear forms are easy to build in models. The final building clearly indicates the method of study employed.

5. The rendering, with its *fixed viewpoint*, may cause undue concentration on and fascination with a particular view of the building, to the detriment of others. The model eliminates this problem to a degree, but the model cannot readily indicate details or materials and, therefore, tends to become better suited to indicating larger relationships of solids to voids, as well as spatial sequences. In other fields movie cartoons have been developed to catch the sense of motion which is a characteristic of our age, and we must find the architectural equivalent.

6. When we actually visit a building its *psychological impact* has little or no relationship to the feeling we get from a rendering of that same building. The renderings do not indicate varying qualities of sunlight and shadow or atmo-

spheric and climatic conditions. The mood changes, from rendering to rendering, very little indeed. They are rather, finally, an abstraction of an idea, an idealization, a fixed view which has little to do with the reality envisioned. The renderings show a highly idealized version of the truth, but that truth is not the only one, and it may not even be the important one. One is reminded of the psychological impact of the drawings and paintings made by Van Gogh of his hospital and its environs. These drawings give a clear idea of his inner feelings with regard to his environment and its effect on him. Similarly, the architect cannot be entirely objective when he draws his visualization of a building, unbuilt or built. To draw reality as the human mind sees or imagines it is a far different thing from depicting the unknown for a client in as clear a manner as possible, which is the prime function of the rendering. The psychological impact of the architect's design will not be truly known until it is built and, even then, its meaning will vary for individuals and will also vary with the passage of time. Renderings seldom convey the psychological meaning, the building's true essence.

It should be noted that the drawings and renderings shown here were done over a period of almost thirty years, but the technique used for them has changed very little. During my school years and immediately thereafter I searched for a technique of drawing which would allow my personal vision to be suggested and, after a period of searching, arrived at the

systems shown in this book. There are certain buildings which lend themselves better to illustration using these systems than do others and the techniques have been modified only very slightly, partially because they are relatively easy for others to follow.

These renderings are merely a formulation to indicate the general scope of the project but only the imagination, finally, determines the character of any building. One can only imagine unbuilt buildings. They can never truly be drawn and no model or photograph can ever show their ultimate nature.

In Shakespeare's 'A Midsummer Night's Dream' you will find the following:

'And as imagination bodies forth
The forms of things unknown, the poet's
pen
Turns them to shapes, and gives to airy
nothing
A local habitation and a name.'