Revealing the Ground: The Use of a Technique Trinity to Interpret Urban Landscapes

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INTRODUCTION

Modern building has for the most part forgotten what has always been architecture's most important contribution to collective culture: the fabric and community of urban and rural landscapes which is created by connections between individual buildings and their surround. This work is an attempt to reinvest modern architecture with this consideration of connective patterns and with a concern for the whole at least equal to that for the individual building as part.

The three-part interpretive process of analysis described in this paper was developed in different course contexts to facilitate an approach to architectural design education rooted in an understanding of place. This process is offered as an alternative to an approach to design education wherein the site — or the ground — is often treated as unloaded and neutral; its own structure and specificity suppressed. In traditional models of architectural design teaching, the site is often reduced to a flat, mute, and abstract datum on which the architectural construct is explored.[1]

The design investigation is thus devoid of a search for wisdom found in the field of the site. Architectural strategies derive only from pure geometric, proportional relationships, formal composition, and internal programmatic hierarchy. Only after the parti has achieved a degree of self-sufficiency and completion is it introduced to the site. At this point the relationship between parti and landscape can only be one of accommodation — not of mutual generation. And this accommodation is generally quite one-sided, with the building's geometry and internal logic calling the shots. The result is a view of architecture as primary — as only figure — and a treatment of the ground as secondary, even residual.

In response to this prevailing bias toward the building as figural object, the emphasis upon interpretive site analysis as a precursor to design which is described here aims to encourage a student's awareness of the urban or rural landscape's figural and textural qualities. This work involves exploring analytical techniques to reveal these qualities, and to render landscape, urban, and architectural systems as integral, reciprocal, and equivalent.

A premise of this work is that in order for analytical observations of site to be able to penetrate and meaningfully corrupt the design process, the analysis must become personal, creative, subjective, and spatial. In other words, it must be undertaken as an act of design. The three techniques described here are serial and consecutive. They encourage varying methods of abstraction to render the essence of the observed landscape towards the creation of a spatial template which may be transferred and transformed. The objects of study to which these techniques may be applied are limitless. What will be shown here are works resulting from the analysis of a campus, of cities, of city precincts and blocks, and — retroactively if you will — of well-known buildings viewed within their local and extended site contexts.
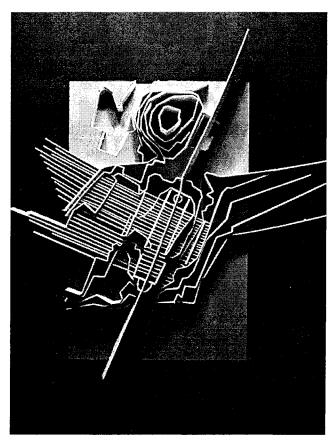

Fig. 1. Bas-relief model of the lawn at the University of Virginia.

START-UP: DIAGRAMS

An established plan-based mapping technique - the figure/ground drawing - is the point of departure. A figure/ground drawing of a city plan highlights the opposition of space (void) and mass (solid) - space is white and mass is black. To achieve this diagrammatic clarity, all evidence of topographic variation — slopes, ridges, valleys, prospects, and the mass and varied textures created by trees and other vegetation — is usually denied.

The Giambatista Nolli Map of Rome (1748) — perhaps the original figure/ground diagram — is by no means as reductive and polarized as what we have come to expect from this technique, and serves to demonstrate by comparison its potential flaws. The Nolli

Map reveals a variety of levels of complexity generally absent in the figure/ground drawing, (see Fig. 2.). Fragment of the 1748 Map of Rome by Giambatista Nolli. The interior space of public buildings is registered as void (not solid) as if it is an extension of the public urban space defined by external streets and squares. By showing the public spaces within the solid mass of buildings, a middle ground begins to emerge.

The result is the graphic rendering of a spatial integration of public buildings with their surrounding urban landscape and the concomitant idea that neither space, nor mass, is homogenous. According to the degree to which they play a part in the public and communal life of the city, buildings are rendered either as places extending from the urban landscape, or as components of mass which create the formal boundaries of the public realm. Also, an overall impression of topographic variation, and field texture is beautifully and articulately rendered. The varied grain, scale, and orientation of agricultural fields, gardens, — even of the river — are painstakingly captured. Yet, in the aspect of the Nolli which has been most influential to contemporary renderings of figure/ground drawings, ultimately the variations in figure and field fade to black and white. Both figure and field — black and white — remain homogenous, monolithic, and neutral, and in the case of the field, this becomes interpreted as no more than the "nothing" where "something" is not.

The utility of the figure/ground drawing is as self-evident as the technique is pervasive. However, it is perhaps ideally seen as a preliminary and radically reductive abstraction which performs best not in isolation, but as a base diagram capable of reintegrating layers of interpreted information regarding the site's complexities of texture and spatial character.

TECHNIQUE 1: COLLAGE

A specific form of collage is introduced to the figure/ground drawing in order to address both the third dimension - or shape of the ground - and the textural qualities of the field, (see Fig. 3). Collage patterns which suggest urban and landscape textures replace the mute and definitive black and white opposition of the figure ground. Collage is a two-dimensional medium which suggests a three-dimensional reality. In collage abstraction, a literal footprint of building form and outline is traded for an abstract pattern which favors texture and grain. The careful arrangement of collage material can effectively imply variations among background, middle ground, and foreground which evoke three-dimensional relationships between built form and landform. Through this device topographic conditions are given shape and scale equivalent to architectural structure, (see Fig. 4). Applied to a series of urban-scaled studies, this technique of collage allows students to search for the synthesis of building and site giving equal value to each.

TECHNIQUE 2: DRAWING/PHOTO-COMPOSITE

Drawing as a means of construction, first in abstract plan, and then in three-dimensional projection, is introduced as a mechanism of transfer and reconstruction of the individual discoveries obtained by the student through collage abstractions and diagrams, (see Fig. 5). It is the intention of this component of the process to translate the implied three-dimensional relationships explored in collage, into a precise, descriptive, and spatial understanding of the landscape subject.

The drawings are exploratory in nature, built on "hidden lines" based on alignments and guidelines. These "hidden lines" are an integral and necessary component of the drawing, not to be erased. They constitute the scaffolding which anchors the projection, and indicate the connections and relationships between elements, both of architecture and landscape. Students are asked to investigate the specific topographic form of their site and the architectural elements with which it interacts. Through this phase, there is a process of
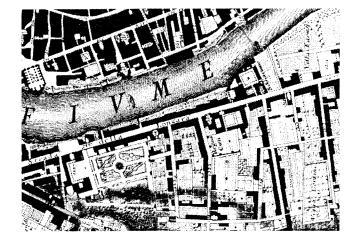

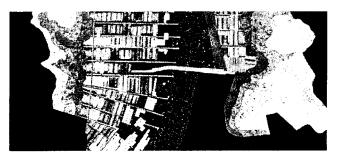Fig. 2. Fragment of the 1748 Map of Rome by Giambatista Nolli.

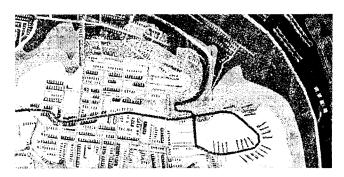Fig. 3. Student collage of precinct of Pittsburgh, PA.

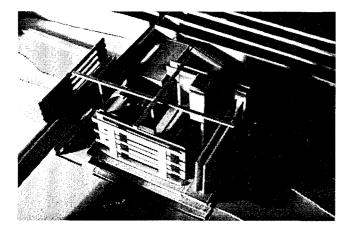Fig. 4. Student collage of precinct of Pittsurgh, PA.

Fig. 5. Student drawing of precinct of Pittsburgh, PA.

repeated returns to the site (where possible) as a means of calibrating specifically needed plan and sectional dimensions, and to correct possible oversimplifications made during the first phases of abstraction.

Fig. 6. Student Photo-Composite of the Lawn at the Unviersity of Virginia.

7. Student bas-relief model of Le Corbusier's La Tourette Monastery.

Fig. 8. Student bas-relief model of Terragni's Casa del Fascio in its site context.

Interwoven with the drawing exercise is the introduction of a complementary technique of representation: the photo-composite, (see Fig. 6). The photo-composite, developed originally by David Hockney, conveys a three-dimensional, spatial experience through the arrangement of multiple photographic frames taken from a fixed station point. Unlike single frame photographs, which tend to emphasize a singular view or object, the composite is able to capture relationships between elements, and in doing so begins to render the space of the subject tangible.

The student revisits the site and selects a view and matching station point based on the information that view is intended to convey. Next, multiple overlapping frames are shot (each with their own perspectival vanishing point) encompassing the intended view. Upon retrieving the developed prints, the all-important act of arranging and assembling the composite of frames takes place. The
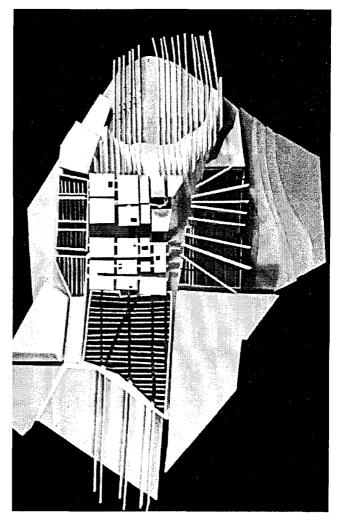
arranged view is to be biased by the student's intended communication. Because of the multiple vanishing points in the various photographic frames, some degree of distortion and fragmentation of the representation is inevitable. The student is asked to consider thoughtfully and deliberately what is to be distorted in the view, and what is to retain its clarity and continuity in the preferred arrangement. The photo-composite is that component of creative analysis which is based on precise observation, contemplation, and representation of the artifact in its full, material, and phenomenal expression.

TECHNIQUE 3: BAS-RELIEF MODEL

The three-dimensional projection produced in Part 2 is a working drawing for the culminating phase of this analytical process: the bas-relief model, (see Fig. 7). Based on the drawing produced, the student is asked to construct an architectural relief model which synthesizes his/her ideas about the site subject. The model may be seen as a series of two-dimensional maps interwoven into an integrated three-dimensional matrix, which portrays both the integrity of individual systems, as well as their participation in the whole. The model is meant to clarify ideas of spatial hierarchy, topography, path, and structure, using a limited palette of materials. The models exploit a sculptural manipulation of planes, columns, and walls, to identify relationships and to distinguish figures from their surrounding field. The nature of the exercise emphasizes that the most important "material" to be manipulated, is the play of light and

shadow made by the various depths of the construction. Figures and systems, then, are identified through their sharpness of outline in relief.

CONCLUSION

The method of analysis described here is meant to highlight the exploratory and inconclusive nature of the designer's creative search. The challenge is to combine objective analysis — the reduction of complex ideas to abstract terms which are aspecific and thereby transferable — with the subjective search for a personal interpretation of the object of study. Through this process, students learn valuable skills of observation, documentation, abstraction, and synthesis which parallel a design methodology built on the use of transfer and transformation, (see Fig. 8.).

This pedagogy rests on the belief that design originates from shared, inherited ideas and places which have been absorbed and integrated by the individual; the designer does not begin from a tabula rasa. Only through the process of individual reflection on existing ideas and artifacts are new ones of value produced. The type of analysis here described is not a search for a single and conclusive truth, but rather for the potential of a single artifact/site/landscape to contain multiple truths which may be interpreted and filtered through the eyes of the individual designer. Perhaps Corb said it best: "In a complete and successful work, there are hidden masses of implications, a veritable world which reveals itself to those whom it may concern — which means: to those who deserve it." (*From A New World Space*).

NOTES

[1] I refer here to architectural teaching methods deriving both from the Beaux-Arts and Bauhaus traditions. Though clearly these traditions stand in many respects as opposing poles in the spectrum of modern (post-Enlightenment) design methods, they share a predilection for the ideal and the universal. This shared bias seems to involve in both cases the exclusion or diminution of consideration of the specificity of site.