Hide and Seek: An Architecture of Layers

Christopher A. Houck

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture in Architecture

Hans C. Roth
Howard T. Gartner
Steven R. Thompson

July 25, 2013
Blacksburg, Virginia

Keywords: architecture, elementary school, layers, playground
ABSTRACT

This project is an elementary school located in a suburban area outside of Williamsburg, Virginia. The building is sited on an eight acre plot of wooded land and is designed for 150 students. A playground is designed as a counterpart to the school.

A design approach which resembles the layering of space is developed through the drawings. The experience of these spaces establishes a dialogue between building and student likened to a game of hide and seek.

Hide and Seek: An Architecture of Layers
Christopher A. Houck
To my family

Thank you for your continuous love and support.

To my talented classmates

I have learned so much from you and through your work. Thank you.

To the architecture faculty at Virginia Tech

Thank you for a true education. You have shown me new ways to see the world and the architecture in it.
LIST OF IMAGES

1a ceiling plan - emerging cylinder variation
1b site model detail - irregular column variation
1c study model detail - irregular column variation
2 skylight section study
3a first floor plan
3b second floor plan
4a site section
4b site plan
5a longitudinal section
5b plan
5c plan - irregular column variation
5d exploded scenario
5e northwest elevation
5f southwest elevation
5g entry
5h hallway
5i classroom to playground
5j assembly
5k library to courtyard
5l roof garden
6a transverse section
6b entry - irregular column variation
6c material study
6d transverse section
6e study model - irregular column variation
6f site model - irregular column variation
7a roof - emerging cylinder variation
7b roof - irregular column variation
7c roof garden
7d roof - irregular column variation
7e roof garden
7f roof garden
7g roof garden
8 transverse section
9 study model - irregular column variation
10 material study
11a early sketch
11b playground sketch 1
11c playground sketch 1
11d playground sketch 2
11e playground sketch 2
11f playground sketch 3
11g playground sketch 3
11h elevation study
11i door sketch
11j folded plane study 1
11k folded plane study 1
11l folded plane study 2
11m folded plane study 2
11n folded plane study 3
11o folded plane study 3
11p folded plane study 4
11q folded plane study 4
11r transverse section - courtyard variation
11s transverse section - courtyard variation
11t transverse section - irregular column variation
11u study model - irregular column variation
11v plan - irregular column variation
11w plan - irregular column variation
11x plan - courtyard variation
11y plan - courtyard variation
11z plan - irregular column variation
12a study model - emerging cylinder variation
12b plan - emerging cylinder variation
12c plan - emerging cylinder variation
12d plan - emerging cylinder variation
12e plan - emerging cylinder variation
12f plan - emerging cylinder variation
12g plan - emerging cylinder variation
12h plan - emerging cylinder variation
12i plan - emerging cylinder variation
13a transverse section - irregular column variation
13b transverse section - irregular column variation
13c transverse section - irregular column variation
13d plan - irregular column variation
13e plan - irregular column variation
13f plan - irregular column variation
13g site model - irregular column variation
13h site model - irregular column variation
13i site model - irregular column variation
13j site model - irregular column variation
13k site model - irregular column variation
13l site model - irregular column variation
13m site model - irregular column variation
13n site model - irregular column variation
13o site model - irregular column variation
13p site model - irregular column variation
13q site model - irregular column variation
13r site model - irregular column variation
13s site model - irregular column variation
13t site model - irregular column variation
13u site model - irregular column variation
13v site model - irregular column variation
13w site model - irregular column variation
13x site model - irregular column variation
13y site model - irregular column variation
13z site model - irregular column variation
14a library - emerging cylinder variation
14b hallway - emerging cylinder variation
14c hallway - emerging cylinder variation
14d hallway - emerging cylinder variation
14e hallway - emerging cylinder variation
14f hallway - emerging cylinder variation
This project, by means of layers, attempts to compose spaces of purpose directed by these associations.

The project, to design a school, was a vessel that enabled an exploration into the nature of the relationship between play and architecture. Developing the two programmatic elements of playground and school concurrently led to interpretation of this relationship in three ways:

1. **Building presents plain elements which are physically enjoyable to navigate and whose use is embedded in forms, i.e., a ladder is for climbing.**
2. **Building presents ambiguous elements arranged in ways which encourage the imagination to discover ways of using.**
3. **Building presents itself as a participant in a game.**

Design began to resemble playful architecture as the intention shifted from designing building elements to be played on, to designing a building which plays with, as an active participant in a game. Play no longer was bound to the program of playground, but could be associated more broadly with architecture.

The game "hide and seek" elicits feelings of surprise, discovery, anticipation, and delight; could a building also play this game?
The project is a small elementary school on an eight acre wooded site near Williamsburg, Virginia. Suburban neighborhoods surround the site on two sides, with the other two bordered by roads. A bicycle path runs along the northwest edge.

A section of trees buffers the entry road from parking and another row of planted trees buffers the parking from the school. An entry canopy receives students dropped off, protects those waiting to be picked up, and provides a space to store bicycles. A long ramp to a roof garden set parallel to the hallway. The rise of the ramp dims light passing through the hallway, and the light from above is punctuated by light from above. The hallway ends in a courtyard, with library and assembly space arranged around. Central to the courtyard is a fireplace and adjacent is a path which leads through the woods. A service and structural core, with plantings above and ductwork below provides a deep threshold to the classrooms. Classrooms open to a porch and look out to the vegetable garden and playground; a view shared with the offices. A large ornamental garden space on the roof for children is complemented by a smaller, secluded garden space for staff.

Construction is primarily concrete. The outer frame and walls are rough board formed, and the inner frame is smooth panel formed and painted. Wood casework and stud walls form interior partitions, and glass framed by steel in its openings to the outside. The building is arranged in rows, or layers, parallel to the entry road. Rooms are made between them, and passage through, around, and over defines the experience of the building.
entry  
hallway  
classroom to playground  
assembly  
library to courtyard  
roof garden
CONCLUSIONS

Layers contract and release, permit light and cast shadow, obscure and reveal. Darkness gives way to light, horizontal gives way to vertical, small gives way to large. Each space is a preparation for the next. The nature of each room is shown through contrast. The act of obscuring before revealing heightens awareness, impact, and presence of what is shown. Light hints at what is beyond.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Publisher</th>
<th>Year</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baeza, Alberto, and Antonio Pizza, Alberto Campo, Basoń</td>
<td>works and projects.</td>
<td>Barcelona: Gili, 1999</td>
<td>Print</td>
<td></td>
</tr>
</tbody>
</table>
The thesis, the exploration of layers as an element in architecture, and play as it relates to architecture, is a study that continues beyond the project presented here. Often the nature of these explorations, the project is the strongest, but often ideas seem more apparent in their inception. A series of images follow which relate to earlier versions of the project and may serve to clarify or contribute to understanding the work.