A study on the possibilities of place-making by systematically separating the traditional responsibilities of the wall as an architectural element. Walls usually serve several simultaneous structural, enveloping and distributional duties. The project consists in designing a house where four distinct but interacting types of walls are present, each with a well defined duty. Each necessary but deliberately insufficient in itself: one provides the structure; another is a continuous skin for enclosure and partition; still another solely weatherproofs and, finally, one filters the light and grants privacy.

The four walls function as layers with the capacity of interplay, while retaining their identity. The places resulting from these boundaries assert their presence and function in view of the character bestowed by the form of their enclosure. The choice of material, assembly, texture and color in unique correspondence to each boundary's usefulness, complete the experience of the inhabitant and architectural form comes about.
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Master of Architecture

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This book is the result of two years of study-of life-in Cowgill Hall, and of my good fortune for having the tireless support of professors Bill Galloway, Bill Brown, Michael O’Brien and Pia Soppaneva: excellent teachers and wonderful persons. Their guidance and assistance is gratefully acknowledged.
Assembling Places
When space acquires definition by means of boundaries or conditions it becomes a place. A place is definite in situation and character and its recognizable properties make it meaningful... inhabitable.

Architecture defines places. Some elements are inevitably bound to the creation of an architectural place. What these elements are is a general category. But how they are -their arrangement and disposition- is what differentiates cultures, times, and places. Among the elements of architecture, walls are usually responsible for space definition. That is to say, they are the place-makers.

This thesis is a study that focuses on the redefinition of a Wall as the place-maker strategy for the rooms of a house.
Observing a log cabin wall

Being incomplete as a weather enclosure, this log wall is mainly structural. However, it is the boundary in charge of the character of the enclosed space and of the manner in which the site is perceived.

This log wall defines a type of place by the intensity of light it permits and the views that it frames. The character of the place is a direct consequence of the materiality and assembly that configure the boundary.
One wall. Three boundaries.

Structure. Skin. Enclosure.

This project explores the possibility of separating the traditional responsibilities of a wall to generate a method for place-making in the design of a house. Three separate but interacting wall obligations are present as boundaries in the project: load bearing, space bounding and weatherproofing.

Each obligation is fulfilled by a distinct form.

As in the log cabin wall, the first boundary is structural and permeable. It is a fabric of steel columns and trusses arranged as the perimeter of a structural cage. This allows for an uninterrupted volume within.
The second boundary is a complementary opaque wall serving as the necessary skin for enclosure and partition. Free from structural responsibility, this skin wraps around the spanning trusses of the structural cage to define the places for a house.

Finally, tall panes of glass spanning the openings of the opaque skin provide complete weather enclosure for the interior places.

Distinct environments result from modulating the dimension, position and orientation of the opaque skin with respect to the peripheral structure. Correspondingly, distinct types of places emerge, both between the two boundaries and on either side of them.

Places are no longer forced into a constrained volume, nor can they be unequivocally classified as inside or outside.
Inhabiting the Wall

The degree of enclosure constitutes the primary difference between the places. It is determinant of their adequate programmatic function.

Material and color generate the evolving sequence of places.

Exposed places surrounding the steel structural fabric comprise passages.

Deeper in the house, places are wrapped in wood to compose the rooms.
Amid a forest, the faces of the structural cage constitute the first layer and the first degree of enclosure.

This steel fabric acts, not as the limit, but as the threshold where the site ends and the house begins.
A path for entry along the outside surface of the structural fabric is the first indication that material guides the arrangement of places within the house.
section A - water color of the relationship between material and space
An unfilled structural bay mediates between the forest and the interior of the house, providing an entrance courtyard.
The main stairway is fully enclosed by a glass box outside the perimeter of the house. Structural glass fins create a gap between the glazing and the stairs. It is a sheltered place inside the forest.
A gallery passage serves as the transitional place of the house where public spaces are separated from private spaces. Its continuous interior steel surface and transparent glazing, in conjunction with the outer steel structure, define this place that intercedes between the forest and the protected room.
The public living room supports different uses according to the configurations of the wood wrapping. An intimate scale for the kitchen, an interior open space for the living room and an exterior terrace.

The continuity between inside and outside is reinforced by the glass enclosure on the north and east sides of the space. Moreover, the presence of the steel frame adjacent to the stair provides ambiguity and retains the indistinctness between the interior and exterior elements of the house.
section C - water color of the relationship between material and space
The most secluded place is the **bedroom**. The continuous wood plane crosses the steel frame structure creating a private balcony that grasps a fragment of the forest and brings it into the room.

Here the steel frame is transformed to provide an uninterrupted space from the inside to the outside. Spanning trusses replace the columns in the instances where the frame meets the wrapping skin. They consent to a columnless space that stretches out into the forest.
Wood planking scales and proportions the bedroom as a private place.
All the places are generated by the presence of boundaries that offer different degrees of enclosure: the light structural fabric, the opaque skin and the transparent glass.

Their interplay within a forest conveys the different experiences of a house: from the openness of an entrance to the privacy of a bedroom.
The development of the project clarified the usefulness of each boundary. Consequently the choice for their appropriate material and assembly system was possible.

The search for lightness in the form for the perimeter of the structural cage transformed the ‘log wall’ assembly that was initially in charge of the structure and apertures. The desired slenderness of the horizontal wood elements made them dependent on a secondary frame to be able to perform as a structural wall. No longer being the major means of support of the project these elements became dispensable.

The responsibility of filtering light and views is also not inherent to the new nature of the structural boundary. A permeable fabric of steel columns and spanning trusses now constitute the load-bearing cage. Although it is extremely open in character, the memory of a wall is still present in the manner in which the columns are woven together for stability.
The openness of the rooms, the transparency of the glass, and the lightness of the structural fabric provide habitable places held within the texture of a forest. The forest provides the desired light filtering and the privacy required for the house in its totality.

The forest is a necessary condition for the house, as it constitutes the project’s ultimate boundary.

It is not, however, a sufficient condition; as no boundary is complete without the presence of the other.
Permeable structural frames, glass panes and hung wood partitions are all walls. As spatial enclosures they define the presence and function of the places according to their form.

The primary structure is a 32’x32’ cage of columns and trusses made of 2”x 2” x 1/4” galvanized steel angles. The opposite faces of the cage are tied together by spanning horizontal space-trusses.

See-through columns are constituted by four separate steel angles fastened together by welding connections every 24 inches.

The skin is attached to the nodes of the spanning trusses of the cage. It is assembled as a layered construction with substructure and insulation between. Tongue and groove 2”x 3” wood planks compose the skin’s inside surface while steel covers the outside. This materiality and assembly permits the skin to fold as roofs and floors creating an explicit continuity among its surfaces.
The glazing has its own structure, which consists of 14 inch deep structural glass fins spanning the height of the openings. The glass structural fins are anchored to the substructure of the skin by steel angles. These anchors, as well as anchors for doorframes throughout the house, are always located beneath the floor's surface and above ceiling height to avoid obstructing the framed view from the interior and the continuity of the skin.

The position of the glazing in respect to the fins' depth allows a subtle variation in the boundary of the different places. It can be positioned either at the interior or exterior edge of the fin, corresponding to different experiences for each place. The fins are part of the interior space of the main stairway and they are outside the gallery passage.
Although different in form, each of the boundaries is in dialogue with each other. Their relationship is revealed in the arrangement and configuration of their elements.

The configuration of the enclosure skin transforms the structural arrangement of the cage to achieve the spatial continuity between inside and outside. The structural system can locally become a non-regular cage by the omission of columns and the location of spanning trusses, in response to the needs of the place served.
On the other hand, the spanning limits and bearing points of the structure invariably determine the proportions for the configurations of the rooms.

The sliding doors, the glass mullions, and the panel joints are always positioned either along the grid of the structural cage or according to the edges of the enclosure skin.
The house makes itself present through an intelligible relationship between its form and purpose. Separate boundaries of different degree of enclosure are used to modulate the experience of the site as a gradual transition from the exterior to the interior. The transition is achieved through the orderly perception of the insideness of passage-places and room-places.

Shape, material, assembly, textures and color support each boundary’s usefulness. The boundaries, in turn, bestow a particular character to the places they enclose. This character unequivocally signifies the manner in which they could be inhabited.
The project reveals architecture's usefulness in fulfilling the experience of the inhabitant by means of the disposition of form.
Vita

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