FINDINGS

Relationships of new and old, past and present

Yamilet E. Martinez - Lopez
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Relationships of New and Old, Past and Present
by: Yamilet E. Martinez - Lopez

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William Brown  Committee Chair
Michael O’ Brien
Heinrich Schnoedt
William Galloway
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To my mom, Rosa E. Lopez, and my husband Jonathan P. Fleming
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THE PROJECT

Frame as Structure
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Frame as Enclosure

FINDINGS

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VITA
language n. Abbr. lang. 1. The aspect of human behavior that involves the use of vocal sounds in meaningful patterns and, they exist, corresponding written symbols to form, express, and communicate thoughts and feelings... 3. Any method of communicating ideas, as by a system of signs, symbols, gesture, or the like... 4. The transmission of meaning, feeling, or ideas by significant act or manner...

structure n. 1. A complex entity. 2. a. The configuration of elements, parts, or constituents in such an entity; organization; arrangement. b. Constitution; make-up. 3. The interrelation of parts or the principle of organization in a complex entity... 5. Something constructed, especially a building or part...
syntax n. 1. Grammar a. The way in which words are put together to form phrases and sentences. b. The branch of grammar dealing with this. 2. Systematic arrangement...
syntactics n. Plural in form, used with a singular or plural verb. The branch of semantics that deals with the formal properties of signs and symbols...

semantics n. Plural in form, used with a singular verb. 1. Linguistics. The study or science of meaning in language and form, particularly with regard to its historical change. 2. Logic. The study of relationships between signs and symbols and what they represent. Also called "semasiology," "semiotics".

practical adj. 1. Of, relating to, governed by, or acquired through practice or action, rather than theory, speculation, or ideals. 2. Manifested or involving practice...
element n. 1. A fundamental, essential, or irreducible constituent of a composite entity. 2. A basic assumption or proposition. 3. Metaphysics. A member of a set. 4. A point, line, or plane. 5. A part of a geometric configuration, as an angle, in a triangle... 6. Chemistry & Physics... 7. Earth, air, fire, or water regarded as a fundamental constituent of the universe in ancient and medieval cosmologies. 6. Plural. The forces that collectively constitute the weather: especially, cold, wind, rain, or other inclement influences...

letter n. 1. A written symbol or character representing a speech sound, a component of an alphabet. 2. A word or a combination of words or a combination of words and symbols in writing or printing that symbolizes and communicates a meaning and may consist of a single morpheme or of a combination of morphemes. 3. Something that is said, an utterance, remark, or comment... 3. plural. A discourse or talk; speech... 4. a. A command or direction; an order...
"Only with the language of the present can we get the past to speak." — Sverre Fehn

"A poet doesn’t produce a different language for each poem. That’s not necessary; he uses the same language, he uses even the same words. In music it is always the same instruments most of the time. I think that is the same in Architecture." — Mies van der Rohe

"...within this structure... the elements 'keep one another in a state of equilibrium in accordance with fixed rules', and ‘a language is a system in which the value of any one element depends on the simultaneous coexistence of all the others.’ — Ferdinand Saussure

The connection of one building to another can be seen through a universal architectural language. Buildings are structured through the use of this language. Architecture communicates thoughts and ideas through the elements of building. The architect may show us things very subtly or dramatically using this language. Light, wind, material, color, water, even a wall are only a few of the elements of architectural discourse. Like letters form words and words form sentences, architectural elements are placed in order from which a possible meaning derived. The relationships between elements tell stories of different kinds. Within the structure of the architectural language the elements remain the same; their configuration, however, changes to reveal new and different meanings. Configuration is various; the use of these elements link past to present.
The term *meaning* is applicable when the observer asks why.
This project uses the elements of Architecture to reveal the relationship of new and old, past and present. It is a rehabilitation project located just outside the old city walls of San Juan, Puerto Rico. The existing building has been used as an orphanage for girls, later as a juvenile prison for girls, and finally as a Drug Rehabilitation Center; currently it is empty. The building is located near “Centro de Bellas Artes,” San Juan’s main Concert Hall. The institutional character of the building lent itself easily to a proposal for a new School of Music. A study of the relationship between container and contained became the design strategy for the new school.
boundary n. boundary, dividing line, frontier, barrier; edge, margin, pale, periphery, extremity.

limit n. 1. end, furthest bound, greatest extent, mid point,...
2. edge, border, boundary, rim, fringe, frontier, margin, confines, periphery, perimeter.
3. limitation, restriction, maximum,... ceiling, top, restraint, check, curb,...
4. restrict, restrain, confine, delimit, curb, check, bound, keep within bounds; narrow, inhibit; define, prescribe, circumscribe, qualify.

Location

Urban condition outside the old city wall expansion, existing building (Girl's Asylum) on site. Miramar, Santurce, P.R.
Boundaries become a common element, the juxtaposition between old and new architecture. Without boundaries there is no transition.
The “Asilo de Niñas” (Girl’s Asylum) is one of the few Spanish Colonial buildings that still remain in the Santurce area. This building is also representative of the government sponsored urban expansion of San Juan, beyond the Old City Wall, during the XIX Century. Its proportions and elegant simplicity make it worthy of recognition, as well as its massive character, symmetrical configuration, and fine exterior elements. The building shows a plan characteristic and typical of construction during this era. The original or oldest portion of the building consists of thickly constructed walls measuring one meter at the foundation and gradually decreasing in dimension. The building is constructed in a method called “cal y canto” consisting of a mixture of rubblework and stones.

History of the Existing Building
The building was erected around a rectangular central patio. The rooms are usually open, uninterrupted spaces, and the ceiling beams span in the shortest dimension. The northern or rear facade is the one which has undergone the greatest changes, these consist in the western and eastern wings constructed in concrete which is currently the primary building material used in Puerto Rico. Its elements: voluminous walls, room height, and tall apertures are contributing factors to the structure’s monumentality, making the building unique within Santurce’s urban scenario.
Second and first floor of old structure, existing condition. The main frame is the walls, a secondary frame is articulated by wood beams, called “alfajías”, which support the floors and the ceiling. The original structure evokes new possibilities.
The proximity of the past embodies the spirit of continuity and renewal.

First sketch made for the project; an idea of a new structure which folds and continues from the floor to the walls. Horizontal and vertical elements meet. It explores concepts of repetition and rhythm introduced by light through the space, bringing ideas from the old building to the new insertion.

Looking through the main hall at the old portion of the building. Elements create separation and connection, interruption and continuity, differentiation and transition. Between the opposites: darkness and light, enclosure and openness. These elements unite the whole.
Analysis of the Existing Building

Study of symmetry, main axis, and enclosure of circulation area, and main spaces.
First floor existing plan


Elements selected for demolition

Main structure is left, the secondary stairs (a) and the remaining structure (b) at the rear side of the building are proposed for demolition.
South facade of Girl's Asylum.

South facade of Girl's Asylum, existing building on site.
Skin may change. Structure persists and dominates.
repetition
- repeat, retelling, restatement, reiteration...
- repeat v. 1. restate, say again, say over, reiterate, echo, mimic, imitate.
- repeat v. 2. tell, relate, recite, retell, recount, quote, pass on.
- repeat v. 3. duplicate, redo, perform again, reproduce.

rhythm n. 1. movement or procedure with uniform or patterned occurrence of a beat, accent, or the like.
- rhythm n. 2.a. the pattern of regular or irregular pulses caused in music by the occurrence of strong and weak melodic and harmonic beats...
- rhythm n. 2.b. a patterned repetition of a motif, formal element, etc., at regular or irregular intervals in the same or a modified form...
Study of repetitive elements in facade: massive walls, fenestration and columns.

Repetition and Rhythm appear when elements are placed in harmony.
transitional changes, change, transformation, transition, passing, passage, shifting, jump, leap, conversion, variation, transmutation, progression, gradation, graduation, change, turn, convert, transfigure, transmute, alter, metamorphose, remodel, reconstructor, remainder, remain, resist, reform.

change - n.
alter, modify, make different, shift, vary, convert, renovate, renovate, renovate, reform, reform, transfer, transmute, mutate, transform, turn.

change - v.
alter, modify, make different, shift, vary, convert, renovate, renovate, renovate, reform, reform, transfer, transmute, mutate, transform, turn.

- n.
difference, modification, switch, shift, variation, deviation, variety, fluctuation, alteration, substitution, reform.
Elements make architecture universal; yet unique through their transformation.
Study model of the site. Proposing an independent court structure (library and plaza), which extends and enters into the old building (classrooms, offices, and practice rooms). The plaza as a continuous horizontal element. Intention: continuity of exterior to the interior.

Study of the court structure as a new addition, outside the wall becomes line. Both facades, new and old, work together like magnets attracting one another; extension of elements appears in the horizontal plane (plaza) and on the opposing wall. Finally, a third structure is added at the rear: the new concert hall, completing a third square.
Study model: Plaza as a place for interaction. It unifies the old wall with the new, becoming a space of transition. A dialogue opens between the two walls forming the plaza, a third space.

Sketch: Space framed by the new concert hall at the left, and the new addition to the right. Water becomes an important element of the plaza, the connector between the lagoon and the framed space.
“Each space must be defined by its structure and the character of its natural light.”

Louis Kahn
Outer coating. Two skins, the container and the contained.
a. Study in plan of old portion of the building. Study of container and contained space. Another layer is added: the contained affects the perception of the space. Study of symmetry and axis. Idea of closing the second portion of the building completing the second courtyard.

b. Studies of the courtyard, halls, and interior spaces of the old portion of the building. The first study is of its geometry and proportions; the second, third, and fourth studies include the arcade space. Excluding the arcade from the plan reveals two squares interlocking.

c. Study of the square. The grid as structure and ordering system. Studies of the square divided in different zones; in half with a central court and two wings, entraining some spaces. Study of the central court as a room, of importance are the enclosures, negative and positive spaces, and the definition of edges.
Sketch 1: The contained object is different from the container in height, material, and form.

Sketch 2: A new floor is added and extended. Dialogue between old and new.

Sketch 3: The new addition creates a tension point between the old wall and the new.
Study model of the existing structure (Girl’s Asylum), its interrelation with the new structure, and the relation of the new structure with its own parts.

Power Plant, Virginia Tech University, Blacksburg, Virginia. Example of a steel structure addition to an old building. One structure is contained by the other.
Container = enclosure. The contained object behaves differently in form (circle), height (does not touch the ceiling), and in material, changing from wood ( enclosure ) to concrete ( contained ).

Two skins: container and the contained, the contained is differentiated from the container because of its lineality ( frame ), and change in material. The materials used for the container are concrete and marble.
a. Site plan proposal: study of plaza enclosed by the old building and new structure.

b. Sketch: Configuration of the space. Fragmentation of the upper floor allows the light to enter.

c. Sketch: Concert hall seen from the plaza. Skeleton frame becomes a container.

d. Sketch: The new frame wraps the inner space of the Concert Hall. Light becomes a repetitive element.

e. Sketch: Study of light and shadow as important elements in the reading of a space.

f. Sketch: Existing building; courtyard area with the addition of an open Music Hall.

g. Sketch: Light is a continuous element while the objects work independently of the old structure.

h. Sketch: New addition next to the plaza extends to the old structure. Light defines the space.
“... a language is a system in which all the elements fit together, and in which the value of anyone element depends on the simultaneous coexistence of all the others.” — Ferdinand Saussure

Model of new structure (Main Frame), and its parts as a whole, classrooms, practice rooms, and offices.

Crown Hall under construction, Mies van der Rohe. The main frame is autonomous but each part depends on it. It is an independent and codependant relationship.
"Materials record sun, wind, rain, heat, and cold in a language of discoloration, and rust... As a testament to histories of use and misuse, time is legible in the state of this transformation."

It is possible for a material to have more than one dialect.

Alan Holgate
Crawford House, Morphosis
a. Both columns (modern, and classical) have the same elements: base, and capital
b. Connections between columns and walls. The walls are within the columns and outside of them.

c. Column and base detail in steel, Banco Populare, Carlo Scarpa.
d. Axonometric and plan sketches of different bases for steel columns.
e. Second study of welded angles between the columns and the beam.
f. Connection of the concrete beam and the old wall. Partial filling of the joint with concrete.
g. Greek temple. Example of a vocabulary, that later is used with new materials.
h. Connection of a steel beam with a concrete column at Classroom / office area.
i. Banco Populare, Carlo Scarpa. The same elements used with new technology.
j. Possible connection between beam and columns; steel structure.
k. Connection between the steel column and the base; angles as connecting elements.
l. Study of welded connections between the columns and the beam.
m. Steel Frame, Mies van der Rohe. The independent parts depend on the main frame.
n. Connection between steel column and the beam.
o. Study of a third material used in the connection of a concrete beam with the old wall.
p. A fourth piece as the connector of the steel beam and the old wall.

“The significance of each element is affected by the presence of the other and by the arrangement of the assembly.” — Alan Holgate
Schools began with a man under a tree, a man who did not know he was a teacher, discussing his realizations with a few others who did not know they were students. The students reflected on the exchanges between them and on how good it was to be in the presence of this man. They wished their sons, also, listen to such a man. Soon, the needed spaces were erected and the first schools came into existence. The establishment of schools was inevitable because they are part of the desires of man.²

Louis Kahn
New addition separated from existing structure. The old wall as skin, and new frame as structure. The new floor is added on top of the old floor to maintain the original tiles.

First floor proposed plan
Practice rooms create a second layer of massive wall. The insertion forms layers between spaces and thicker enclosure.

Second floor proposed plan
Classrooms are free from the old wall but depend on the new frame. Floor apertures allow light to lower floors.
Section of the old structure, proposing the demolition of two floors in existing section, and one floor and the ceiling in proposed section. The massive walls and the first floor are maintained.
Proposal: an addition of three floors; a new structure is placed systematically. The concrete frame delimits a space where functions are placed independently from the old structure.

Prevailing structure gives the rules for objects to move around.

"Interiors changed radically while exteriors maintained continuity." — Stewart Brand
Existing Section

Primary enclosure by massive walls and secondary structure of beams, floors, and ceiling. Courtyard opens to the light.
Proposed Section

Two new frames are introduced, one containing the other in the courtyard area. The new concrete frame is wider when it is adjacent to the exterior wall and is narrow along the interior courtyard wall.
Courtyard plan: new insertion of two frames creating new layers of container / contained.
Harmonious changes

"Harmony is achieved by the use of one or more of the orders as dominant components..." - Alan Holgate
Section B-B through courtyard; screen inside steel frame.

Axonometric View, Steel Frame

Longitudinal section C-C through courtyard; screen inside steel frame.
"Freedom is still our hope and the means is still clear structure."

Christian Norberg - Schulz
Primary frame in concrete, secondary frame in steel, and tertiary frame in wood.
The elements used in the facade employ the same language as old structures. Each element have its historical association, as materials do. The new structure keep the essence of elements used in the past.
Axonometric view of classrooms / office area. Study of enclosure: steel columns placed in a specific order, walls are situated between and outside the columns.

Axonometric view of the secondary steel frame in classrooms / office area. Study of interaction between concrete columns (main frame), and the steel frame.

Axonometric view of classrooms / office area. Study of the whole: Interrelation of parts, edges, connections, materials; three frames working together.
Relationships of New and Old, Past and Present:

- In Material
  Steel and concrete / Wood and Masonry

- In Form
  Frame / Wall

- In Light
  Layers Unchanged

- In Proportion
  Function and Intuition / Classical

- In Scale
  Broad and narrow implications of a building project:
    Urban impact
      extension, city for the car / contained, pedestrian
    Human interaction in space
      functional / symbolic
    Detail
      joint; steel and concrete / wood and masonry

Time is the connector.
End Notes

7. Article: Asilo de Ninas, Miramar, Santurce; Oficina de Preservacion Historica de Puerto Rico; San Juan, PR: History and Study of the physical condition of the building.

Photographic Credits

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1997 Master of Architecture
Virginia Polytechnic Institute and State University

1995 Bachelor of Environmental Design, University of Puerto Rico

Travel Study Program:
Summer 1996, Peru (Lima, Cuzco, Arequipa).
Fall 1995, Chicago, IL; Indiana; Kentucky.
Summer 1994, Italy, France, Switzerland.
Fall 1993, Phoenix, Arizona, AIAS Forum.