Details Matter: Architecture is Understood as a Sum of Its Details

Rajkumar Kadam

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DETAILS MATTER: ARCHITECTURE IS UNDERSTOOD AS A SUM OF ITS DETAILS

RAJKUMAR KADAM

ADVISOR: LARRY DAVIS
CONTENTION
“The whole is to the part as the part is to the whole” - Frank Lloyd Wright

Architecture is understood as a product of its details. It is inseparable from its components and the characteristic ways in which they are assembled. The scalar and material consistency of the components is important as to how architecture is read. In this regard, the best detailing is one where each part has the same language and character as the whole as detailing is about the construction of a part to whole relationship. To construct this argument, this thesis looks at Edward Ford’s “55 Door Handles, or What is a Detail?” and the four schools of thought about the relationship of the door handle to the building: consistent detail, cloning detail, autonomous detail and non-detail. Consistent detailing is the best kind of detail as it expresses formal and conceptual unity.

In order to understand consistent detailing, this thesis looks at various buildings that exemplify the unity of part to whole, particularly focusing on the work of Carlo Scarpa. Scarpa’s details are consistent through all his work. There is both a motival and conceptual consistency influenced by a highly regionalist architectural style since most of his work is situated in Northern Italy. However, while Scarpa is able to achieve coherence at small scale while designing his details, that coherence is lost when one zooms out and tries to understand the spatial narrative of his work. This is something Marco Frascari mentions in his article - “The Tell the Tale Detail” as for Scarpa it is about the construction of a part to part relationship. While he achieves consistency through his details, those details never completely translate into spatial coherence.

This critique of Scarpa’s work is an opportunity to look at another highly regional, but more importantly, cultural style of architecture - the Hindu Temple Architecture - which is both spatial and rich in details. The underlying principle for Hindu temples is that all things are one, everything is connected. The appropriate place for a temple is near a source of water, surrounded by gardens. The plan is derived from vastu purusha mandala - universal essence at the core of Hindu tradition creating a dwelling structure. The basic scheme of a temple complex is derived from the four cardinal directions which determine the temple’s axis.

It is important to understand that Hindu temple architecture is derived from the geometry of squares and circles. As geometry is cross-cultural, the Giardini in Venice provides for an interesting global setting for a regional project. Therefore, this thesis proposes designing a pavilion for India in Venice reinforcing the notion that architecture is a product of its details.
55 DOOR HANDLES, OR WHAT IS A DETAIL?

EDWARD FORD
CONSISTENT DETAIL: MOTIVAL / CONCEPTUAL

FORMAL OR CONCEPTUAL UNITY
One of Scarpa’s favorite motifs - the double intersecting circle occurs at the cemetery in one of the largest elements, the opening gate, and one of the smallest, the holy water front.
Similar to the double intersecting circle, the ziggurat motif occurs at multiple scales in the cemetery - creating an opening in the concrete walls and in a miniature version in the door pivot.
MARIN COUNTY CIVIC CENTER, FRANK LLOYD WRIGHT

The circle as an organizing motif: it has been used for arches, window openings, circular ramp, handrails, cornice ornaments and all the way down to the scale of the door knob.
Conceptual detailing is more responsive to functional demands than motival detailing. The door handle at Villa Savoye composed of prismatic solids conveys Corbusier’s logically industrial approach to the building as a whole.
THE DESSAU BAUHAUS, WALTER GROPIUS

This is a good example of a conceptual unity of part and whole. For Gropius, the industrial was manifested in the geometric, and the Bauhaus - the school as factory - was very much in conceptual alignment with the prisms and cylinders of the handle.
CLONING DETAIL

DETAIL AS A SHRUNKEN BUILDING
CRANBROOK SCIENCE MUSEUM, STEVEN HOLL

The handle here is either the clone of the plan of the museum or may resemble the inverted J-shape of the stone facade.
WEXNER CENTER, PETER EISENMAN

Door knob replicating the pattern of the building. This is an example of the cloning theory of detail: detail as the DNA through which the building generates.
The flat rhomboid shape that forms the steel connector to the roof truss rafters is replicated in the geometry of the window mullions and the shape of the door handle.
The triangles of the handle replicate almost exactly the rhomboid shape of the steel connectors at the intersection of the rafters of the interior wood truss. It also occurs in window mullions and the intersection of the...
Motival detail at its most superficial: roof, door and handle take the shape of a stone Gothic arch though the materials are steel, wood and aluminum. Ariculation of structure, construction and comfort is sacrificed for creating geometric unity.
AUTONOMOUS DETAIL

DETAILS ARE THERE OWN SEPARATE THING
SAYNATSALO TOWN HALL,
ALVAR AALTO

By designing a highly sculptural door handle, Aalto might be trying to argue that a significant detail is one which is autonomous of the otherwise geometrical, abstract context.
VILLA MAIREA, ALVAR AALTO

The door knob here is formally unrelated, and even contradictory to the form and concept of the building. By doing so, Aalto might be trying to juxtapose the different levels of technology and craft as a way of humanizing industrialization.
ERDMAN HALL, LOUIS KAHN

The circular openings that characterized Kahn's later work appear here in strange location, as small openings around the door handle.
The building is composed of two languages: the rigid geometry of the rooms and structure and the organic shapes that weave through the design. The door handle belongs to the latter.
The building is composed of two languages: the rigid geometry of the rooms and structure and the organic shapes that weave through the design. The door handle belongs to the latter.
NON-DETAIL

SUPPRESSION OF DETAIL INFORMATION
While Scarpa was very much a motival detailer, he skipped the door handle in this building to allow the space to retain its original character, that of an open portico and a monolithic stone wall.
Koolhaas has eliminated the door handle in this building. Instead, it’s an automatic door with a superimposed image of Mies gazing at his own buildings across Michigan Ave. He opens his mouth to allow one to enter.
Embracing the climate of South California, Schindler designed sliding doors opening to the garden. There is almost no door so there is no handle.
The door is made from a window section and the handle is an almost unnoticeable angle welded into the frame face.
Most of these doors at the Kimbell Museum cover storage cabinets for the bookstore, but the first two are the entry to the library and lead to a stair to the floor above.
PRECEDENTS OF CONSISTENT DETAILING
GAVINA SHOWROOM, CARLO SCARPA

The corner condition treated two different ways at the Gavina Showroom. Note the multiplicity of materials in both instances.
The double intersecting circle motif used at a larger scale on the facade of the showroom and at a much smaller scale as a hinge.
BRION CEMETERY, CARLO SCARPA

The ziggurat pattern used to elaborate the detailing of the entry gate and the tomb at Brion Cemetery.
The double intersecting circle motif used for the entry gate and as a part of the door opening hinge at the cemetery.
CASTELVECCHIO, CARLO SCARPA

The concept of hinge used at two different scales at the Castelvecchio in Verona - the Cangrande statue connecting the old castle to the new renovation by Scarpa and as a detail for the bridge. This is an example of conceptually consistent detailing.
CASTELVECCHIO, CARLO SCARPA

Scarpa’s overarching concept of making the museum space ‘float’ is repeated at various scales in the Castelvecchio.
Similar to the Castelvecchio, Scarpa proposed a floating museum space at the Stampalia Foundation. The concept was repeated at a smaller scale for a fountain in the garden.

**QUERINI STAMPALIA FOUNDATION, CARLO SCARPA**
GISPOTECA DI CANOVA, CARLO SCARPA

The corner condition is used here to bring subtle light into the museum space.
VILLA MAIREA, ALVAR AALTO

Aalto uses the double columns at multiple scales in the villa. There is a consistency of material palette here. The railing for the stairs are designed connecting the columns together giving a consistent character to the villa.
VILLA MAIREA, ALVAR AALTO

Most columns in the villa share a common language as they are clad with wooden strips or bound with rattan. Aalto was inspired by the surrounding birch trees in designing these columns as an instance of regionalist architecture.
The Greenes have used multiplicity of joints as a consistent way of detailing at various scales in the Gamble House.
MARTIN HOUSE, FRANK LLOYD WRIGHT

Repetition of brick columns creating a field condition at the Martin House.
COPPER HOUSE, BIJOY JAIN

Designed almost exclusively using local materials, Studio Mumbai’s design of the Copper House is an important example of how a regional material palette can produce consistent detailing.
Baker uses brick work at the Center for Development Studies to design patterns that run through the entire building and provide a consistent character to it.
SCHINDLER CHASE HOUSE, RUDOLF SCHINDLER

Openings through the structural system used to create clerestory windows for the living space and skylights for the bathroom.
PALACE OF ASSEMBLY, LE CORBUSIER

Repetition of the structural system on the facade creates pockets of light in the interior at the Palace of Assembly in Chandigarh.
THE DESSAU BAUHAUS, WALTER GROPIUS

The school as factory - Gropius’ admiration for the industrial is manifested in the Bauhaus through geometric systems creating a conceptual unity of part and whole.
KIMBELL ART MUSEUM, LOUIS KAHN

Repetition of vaults parallel to each other creates a field condition at the Kimbell Art Museum.
SCHRODER HOUSE,
GERRIT RIETVELD

The building is composed of a series of planes in dialogue with each other producing spatial relationships that conceptually consistent.
In this building at M.I.T., Correa achieves consistency through subtraction using a geometry of squares.
CARLO SCARPA DETAILS CATALOGUE
CORNER CONDITION
Using a third element to create a connection between two elements.
CONDITIONS OF FLOATING
ZIGGURAT MOTIF
HINDU TEMPLE ARCHITECTURE DETAILS
SHIKHARA (TEMPLE TOWER) AND TEMPLE DETAILS
SPATIAL NARRATIVES IN INDIAN TEMPLE ARCHITECTURE
DISPARATE VISUAL AND PHYSICAL AXIS

MOVEMENT PATH AS DERIVATIVE OF PERSONAL AND INTUITIVE EXPERIENCE
BRIHADEESWARA TEMPLE, THANJAVUR
KANDARIYA MAHADEV TEMPLE, KHAJURAHO
KESHAVAL TEMPLE, SOMNATHPUR
MEENAKshi SUDRESHwARA TEMPLE, MADURAI
VIRUPAKSHA TEMPLE, PATTADAKAL
EXPLODED AXON SHOWING THE DIFFERENT COMPONENTS COMPRISING A TYPICAL TEMPLE COMPLEX

GARBHAGRIHA
WOMB CHAMBER

MANDAPA
PORCH / PAVILION

GOPURAM
GATEWAY
DEVELOPMENT OF THE PLAN OF HINDU TEMPLE
DEVELOPMENT OF THE PLAN OF HINDU TEMPLE

DEVELOPMENT OF THE SHIKHARA OF HINDU TEMPLE IN PLAN

ADINATH TEMPLE, KHAJURAHO
9TH C.

PARASWANATHA TEMPLE, KHAJURAHO
9TH C.

KANDARYA MAHADEV TEMPLE, KHAJURAHO
11TH C.
DEVELOPMENT OF THE SHIKHARA OF HINDU TEMPLE IN PLAN

EVOLUTION OF THE PLAN AND SHIKHARA OF KANDARIYA MAHADEV TEMPLE FROM THE VASTU PURUSHA MANDALA
PART TO WHOLE RELATIONSHIP: DEVELOPMENT OF SHIKHARA THROUGH SCALAR REPETITION
PEAKS OF ALL SELF SIMILAR TOWERS FOLLOW THE GOLDEN RATIO
PART TO WHOLE RELATIONSHIP: REPETITION OF TOWERS AND THEIR ELEMENTS IN THE SHIKHARA CREATING CONTINUOUS UPWARD EYE MOVEMENT
EXPLODED AXON SHOWING THE DIFFERENT COMPONENTS COMPRISING A TYPICAL TEMPLE COMPLEX
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EXPLODED AXON SHOWING THE DIFFERENT COMPONENTS COMPRISING A TYPICAL TEMPLE COMPLEX
DEVELOPMENT OF THE SHIKHARA OF HINDU TEMPLE IN PLAN

A TYPICAL TEMPLE SCHEME
AXIS DETERMINED BY CARDINAL DIRECTIONS
ASCENDING PLINTHS
RISING SHIKHARAS
INCREASING DEGREE OF ENCLOSURE, DECREASING INTENSITY IF LIGHT AND INTIMACY OF SCALE AND SPACE
INCREASING DEGREE OF ENCLOSURE, DECREASING INTENSITY IF LIGHT AND INTIMACY OF SCALE AND SPACE
SITE: VENICE GIARDINI BIENNALE
IDENTIFYING PAVILIONS
55 Door Handles, or what is a Detail? / Edward R. Ford.


Carlo Scarpa, Architect: Intervening with History / Carlo Scarpa, R. Nicholas Olsberg, George Ranalli, Jean-François Bédard, Sergio Polano, Alba Di Lieto, Mildred S. Friedman, Guido Guidi.

Carlo Scarpa: Architecture in Details / Bianca Albertini, Alessandro Bagnoli

Carlo Scarpa a Castelvecchio / Licisco Magagnato.

Carlo Scarpa's Tomba Brion / Guido Guidi, Antonello Frongia.


Concepts of Space in Traditional Indian Architecture / Yatin Pandya; Drawings and Architectural Graphics Yatin Pandya and Vastu-Shilpa Foundation for Studies and Research in Environmental Design.

Elements of Indian Architecture / José Pereira.

Frank Lloyd Wright: Between Principle and Form / Paul Laseau, James Tice.

Frank Lloyd Wright's Usonian Houses: The Case for Organic Architecture / by John Sergeant.

Formal Structure in Indian Architecture.

Indian Temple Architecture: Form and Transformation: The Karnāta Drāvida Tradition, 7th to 13th Centuries / Adam Hardy; foreword by Kapila Vatsyayan.

Paradigms of Indian Architecture: space and time in representation and design / edited by G.H.R. Tillotson.

Strange Details / Michael Cadwell.

The Details of Modern Architecture / Edward R. Ford.

The Tell the Tale Detail / Marco Frascari.

Querini Stampalia Foundation: Carlo Scarpa / Richard Murphy, Giorgio Busetto.