House(s) on a Slope:
Reciprocity in Architecture

Jean-Yu Chen
Reciprocity in Architecture
by Jean-yu Chen
Abstract

What is reciprocity?
The quality or state of being reciprocal 1: mutual dependence, action, or influence 2: a mutual exchange of privileges; specifically: a recognition by one of two countries or institutions of the validity of licenses or privileges granted by the other
http://www.merriam-webster.com/dictionary/reciprocity

The word reciprocity describes the multi dimensional relationship between architecture and its site. The definition of reciprocity is commonly understood as mutual exchange and dependence. As “site” provides a place for architecture, architecture bears the social responsibility to provide comfort, protection, function and connectivity to the site and its environment.

Harmony in architecture is a result of reciprocity; it is the result of the reciprocity between the nature and artifice. When architectural form adopts and supports each element on the site, the site will be enhanced from the establishment of architecture. In a macro sense, architectural forms become icons, landmarks, or spiritual backgrounds for culture and events. These activities of exchange and dependency assist in holding culture values and integrating society.

It is the architect’s social responsibility to cultivate this experience and to disseminate this idea. Fundamentally, architects must consider the user needs and establish proper connections between the architecture and its site.

Reciprocity confirms the existence of architecture.
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The working process of a creative mind, the ‘creative’ process itself, is an illusive yet fascinating domain of inquiry. Descriptions of the creative process typically rely on the use of metaphor in order to approximate that which remains ephemeral, that which is expressed in action alone. (van Bergeijk, Herman. Notation of Herman Hertzberger. 31)

Architects’ ideas evolve and become objects. The transformation of ideas to drawings show the architect’s thought processes\(^1\). Drawing, as a medium, combines precedence, knowledge, and experience.

To establish a methodology of architecture, one often begins with the study of history seeking precedence. However, I believe intuition is what ultimately drives change. Intuition leads to exploration and experimentation which often results in new ideas and paradigm shifts. New design unfolds through the processes of self evaluation and decision making without the boundary of precedence. This belief can be best illustrated with an example in culinary art, one could always follow the existing recipes and expect a certain result that is controlled and proven; or, one can take risks with different material, change the processes and produce unlimited possibilities.

\(^1\) Processes: engage and appropriates objects transforms it into memory. (Aristotle, Nicomachean Ethics)
So start with this; make a welcome of each door
and a countenance of each window.

A.V. Eyck
The presence of works of art, like those of nature, makes us restless. We wish to express our feelings and judgements in words, but before that, we must recognize, by intuition and understanding, what we are looking at; so we begin to identify, classify, differentiate. But then we find that this, too, if not impossible, is very difficult, so in the end we return to a wordless beholding.

Johann Wolfgang Goethe, Italian Journey April 1788

**Methodology:**

**Finding Ways of Making**

![Sketch of Rokko Housing](image)

**Figure 1** Ando, Sketch of Rokko Housing
Figure 2
Kahn’s three-phase theory of creative process and Tyng’s four-phase cycle of creativity.

Griswold Tyng, Anne. Luis Kahn to Anne Tyng. 212

Figure 3
De Carlo, Diagram of Design method. It describes the interweaving relationship of layers of factors and program.

The architectural methodologies of Ando, Kahn and Gian Carlo De Carlo were my pre-cedence; these diagrams represent their design philosophy in which each phase validates the next. The detailed factors and relationships of the program motivated me to find what inspires them to create architecture.

“Where do we begin in the process of becoming an architect?”
The search begins prior to the conscious decision of becoming an architect. The “pre-cedence” studies, which include: literature, science, history, mathematics…etc, forms a composite experience that fuels intuition. Design starts with the desire to change, to find new solutions and innovations.

Intuition is your most exacting sense, it is your most reliable sense. Intuition stems from the inspiration to live (L. Kahn).

There isn’t a set equation for architecture. The architecture which pleases our senses also demonstrates respect and consideration for nature. They give back more to the site, the user, and the community. A design principle is the derivative of organized senses with respect to nature. Architecture must work at a societal level, in terms of its function, environment, and economics.

The diagrams of L. Kahn and Anne Tyng were found in the book, Louis Kahn to Anne Tyng. Similarities in both of their diagrams are evidence of strong belief in history and precedence. Kahn’s challenge is also in the program and the function. Program in his diagram derived from history and precedence. Intuition is mostly the response and the result of memory and history.

To be intuitive, architects have chosen a world of defining. Intuition is not rational knowledge which is perceived by in a logical way. Intuition bares intricate layers of Erkenntnis, Wissen, Erfahrung (Hans, 1st Year design studio). It is a composite of all knowledge that is rational and empirical. Layers are filter out in a certain order, so they can be perceived and understood as close to what the creator intended.

“Design means order in human feeling and thought and the varied activities in which that thought and feelings is expressed”. Deman W. Ross
A Tree is a Leaf is a Tree
Mutual Dependence of Site and Object(s)
Mutual Dependence of Site and Object(s)

A Tree is a Leaf
is a Tree

Figure 5
Le Dernier Cri (1967), Rene Magritte, Foundation De L’Hermitage, pp 125
Nature as the site: the sun, air, and water begin to involve and interact with our intuition. This information becomes the resource for architectural order. The view and the gradual slope, are primary elements that influences this thesis.

In addition to nature, the paintings of Degas were also influential because of their topographical character. The interpretation of earth as a human rising, swimming, or dancing relates to paintings of human movements. The arms of Degas’ dancers relate to the topography of the site. The slope is surrounded by the rising hand that reaches out with certainty and fluidity of movement.
The Site: Located between Washington Street and Lee Street.
Backsburg, Virginia
Not to Scale

The site as a person rising.
The site as a swimmer.
The site as a dancer.
The paintings of Degas can be observed from different perspectives. These paintings express a change in scale and an increasing complexity. The quantitative relationship among the subjects on canvas (one dancer, two dancers, to a group of dancers), eventually extends beyond both the painter and the viewer. This is analogous to the site embracing life and releasing it. Like Degas’ art, architecture has the ability to hold the attention of a viewer and also the ability to liberate him/her.
Topography and Architecture
A set of models experimenting slope and geometry.

Topography and Architecture
The Site

“Topography”: the word combines the Greek word *topos*, place, with the Greek word *graphein*, to write. I speak above as though the word names solely the contours of a given place, but “topography” is in fact a complex word. Etymologically, it means the writing of a place. The English word “topography” has three meanings, one obsolete. The obsolete meaning is the most literal: “the description of a particular place.” Now the word means either “the art or practice of graphic and exact delineation in minute detail, usually on maps or charts, of the physical features of any place or region,” or, by metonymy, “the configuration of a surface, including its relief, the position of its streams, lakes, roads, cities, etc.”...

"Topography" originally meant the creation of a metaphorical equivalent in words of a landscape. Then by another transfer, it came to mean representation of a landscape according to the conventional signs of some system of mapping.


An understanding of the site involves the investigation of nature, which follows the change of seasons and time throughout the day.

Among the best examples of architecture relating to site are the works of Tadao Ando’s Rokko Housing One; and Aurelio Galfetti’s Castelgrande in Bellinzona, Switzerland. The slope and the building are gracefully unified; the site accepts the design and holds it in place without losing its character. The architecture becomes part of nature and nature becomes part of architecture.

Architecture is independent from the site but also harmonious with the site.

The challenges of this thesis were to frame the views and to create moments of pause in the circulation to enjoy them.
These photos were taken before digital cameras. I stood there and watched the sunset.
These photos were taken before digital cameras. I stood there and watched the sunset for several days. This is the views from the site. I want people to indulge in these views.
XS: A Room
Language of Architecture and Idea of Home
Reciprocity in Architecture

Introduction:
Reciprocity
The Beginning
Methodology
A Tree is a Leaf
is a Tree
The Site
Topography

XS: A Room
S: One House
L: COMMUNITY
XS: A Room
S: One House
L: COMMUNITY
Reciprocity in Architecture

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The Potential of Reciprocity in Scale/Geometry

S: A Leaf = One House  House No. 1
S: A Leaf = One House

House No. 1: Bigger than a room
Second Floor Plan

Study/Office
First Floor Plan
S: A Leaf = One House

House No.2
The design of one house is metaphorically protected and surrounded by the site and open to the field. The first floor plan is clarified by the motif of being protected and the second floor is clarified by the motif of an island. The second floor interacts with the site using a bridged connection to the slope. The synthetic is being protected by the natural. Nature is something that can never be conquered, but rather that with which we must communicated. To place a man-made object within nature, it’s placement has to be harmonious.

**Outdoor Space**
1. Connection to the Slope
2. Roof Garden
3. Courtyard
4. Reflection Pool
5. Storage
6. Mechanical Room

**Indoor Space**
7. Garage with Textured Floor
8. Gallery
   - Bridge Connects Garage and Living space
9. Entrance to House
10. Foyer
11. Living/Library
12. Bedroom
13. Kitchen
14. Bathroom
15. Master Suite with Bath
16. Patio
Rear view
Showing connection of roof garden and the slope
The Gallery is a passage and is also a bridge. It connects the garage and living space. It looks out into the reflecting pools in front of the house by the entrance and in the courtyard.
Garage Entrance

Corner of Garage looking out into Courtyard
COMMUNITY

Back to the Origin
Reciprocity of Architecture
Introduction:
Reciprocity
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is a Tree
The Site
Topography
XS A Room
S One House
MODEL VIEWING DOWN THE SLOPE

MODEL VIEWING UP THE SLOPE
I would like to dedicate this book to the independence of Taiwan in the near future

to the spirits that enchanted my life,

and to my grandfather,
a wise man who believed that the earth is worth far more than gold, who lived through two colonizations and survived.
Acknowledgement

My gratitude to my parents,
for one poetry a day,
faith in unlimited possibility and
strength in self-reliance

To my family,
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Nicholas D. Shieb and
Julius S. Shieb

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William W. Brown,
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William U. Galloway,
Whom I respect as guidance of my architectural thinking

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for Giedion

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Micheal O’Brien,
Hans C. Rott,
For opening the doors of Architecture
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p. 5  [fair use] Figure 1

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Rene Magritte, Le Dernier Cri (The Last Word) [painting], p125.

p. 12  [fair use] Figure 6

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Curriculum Vitae

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EDUCATION

• 12/2009 Rutgers Mini-MBA, Business Essentials
• 5/2010 Virginia Polytechnic Institute and State University, Blacksburg, VA. 
  • Spring 97, Study Abroad in Riva San Vitale, Switzerland, Center for European 
    Studies and Architecture, Virginia Polytechnic Institute.
• 5/1995 Rutgers University, New Brunswick, NJ. Bachelor of Art in German
  • Summer 95, Study Abroad in Tours, France. Landscape Architecture Program, 
    Rutgers University.
  • Summer 93, 91 Study abroad in Konstanz, Germany with German Department, 
    Rutgers University

EXPERIENCE

Brinkman Architecture LLC, Montclair, NJ  Contract PM, Present- Feb 2009
Various residential projects in Northern NJ.

Various residential projects in Madison area, NJ
Ann Taylor Stores, Nationwide

Hoffman Architects, Summit, NJ  Project Manager, June 2008- 2007
Various residential projects in Summit and Short Hills area, NJ.

Denville Health Care and Rehab Center, Denville, NJ
Rockaway Retail Village, Rockaway, NJ (300,000 sq ft)
Various residential projects in Alpine, NJ.
Evaluate and redesign Gensler’s marketing publications templates which enhance and reinforce corporate identity/branding. Member of the Green Building Task Force.
Architectural Projects include Konica Corporate Headquarters (132,000 sq ft), ITT Avionics (1,000,000 sq ft), Panalpina (276,000 sq ft), DPC Cirrus (150,000 sq ft), Tumi, GAP, SwissRe and Mont Blanc. Lucent Next Generation Network showrooms in Brazil, Hong Kong, and France.

Affiliation
American Institute of Architects Present-1998
USGBC Present-2008
Parsippany Parents for the Gifted & Talented Present-2009

Volunteer
North America Taiwanese Woman’s Association Book Project Present-2006
Boy Scouts of America
Intervale School Library Present-2009
the big seed list

Aalto
Architecture
Ando
Benisch, Güter
Brancusi
Bodensee
Botta, Mario
Camus
Chopin
DeBovior, Simone
DeCarlo, Giancarlo
Degas
Door
Dumas, Mont of Count Christos
Earth
Escher, M. C.
Fehn
Frisch
Garage
Gropius, Walter
Hollien, Hans
Holl, Steven
Intuition
Joint
Kafka
Kahn
Katsura
Klimt
Loire
Le Corbusier
Mies
Mondrian

Noguchi
Odenberg, Claus
Rembrandt
Passage
Pietilä, Reima
Place
Precedence Study
Quiet
Rilke, R. M.
Rodin
Scarpa, Carlo
Soufflot, Ste-Geneviè
Site
Sterling, James
Tectonic
Takaezo, Toshiko
Taiwan
Typography
Utzøn
View
Walker, Alice
Wall
Wright
X in the Exeter roof
Y
Zumthor, Peter Chapel Sonn Benedeg
Project with Prof. Shelley Martin and Prof. Chris Risher, where we read Seeing Is Forgetting the Name of the Thing One Sees: A Life of Contemporary Artist Robert Irwin by Lawrence Weschler. We were to make photograph of a wall closely and translate it into color pencil drawings and a sculpture.
Once we enter (the labyrinth), ordinary time and distance are immaterial, we are in the midst of a ritual and a journey where transformation is possible; we do not know how far away or close we are to the center where meaning can be found until we are there; the way back is not obvious and we have no way of knowing as we emerge how or when we will take the experience back into the world until we do. There are no blind ends in a labyrinth, the path often doubles back on itself, the direction toward which we are facing is continually changing, and if we do not turn back or give up we will reach the center to find the rose, the Goddess, the Grail, a symbol representing the sacred feminine. To return to ordinary life, we must again travel the labyrinth to get out, which is also a complex journey for it involves integrating the experience into consciousness, which is what changes us.

-Jean Shinoda Bolen, Crossing to Avalon