

# BETWEEN EARTH AND SKY

by

Steven Janssens Wunder

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**

Heinrich Schnödt, Chairman

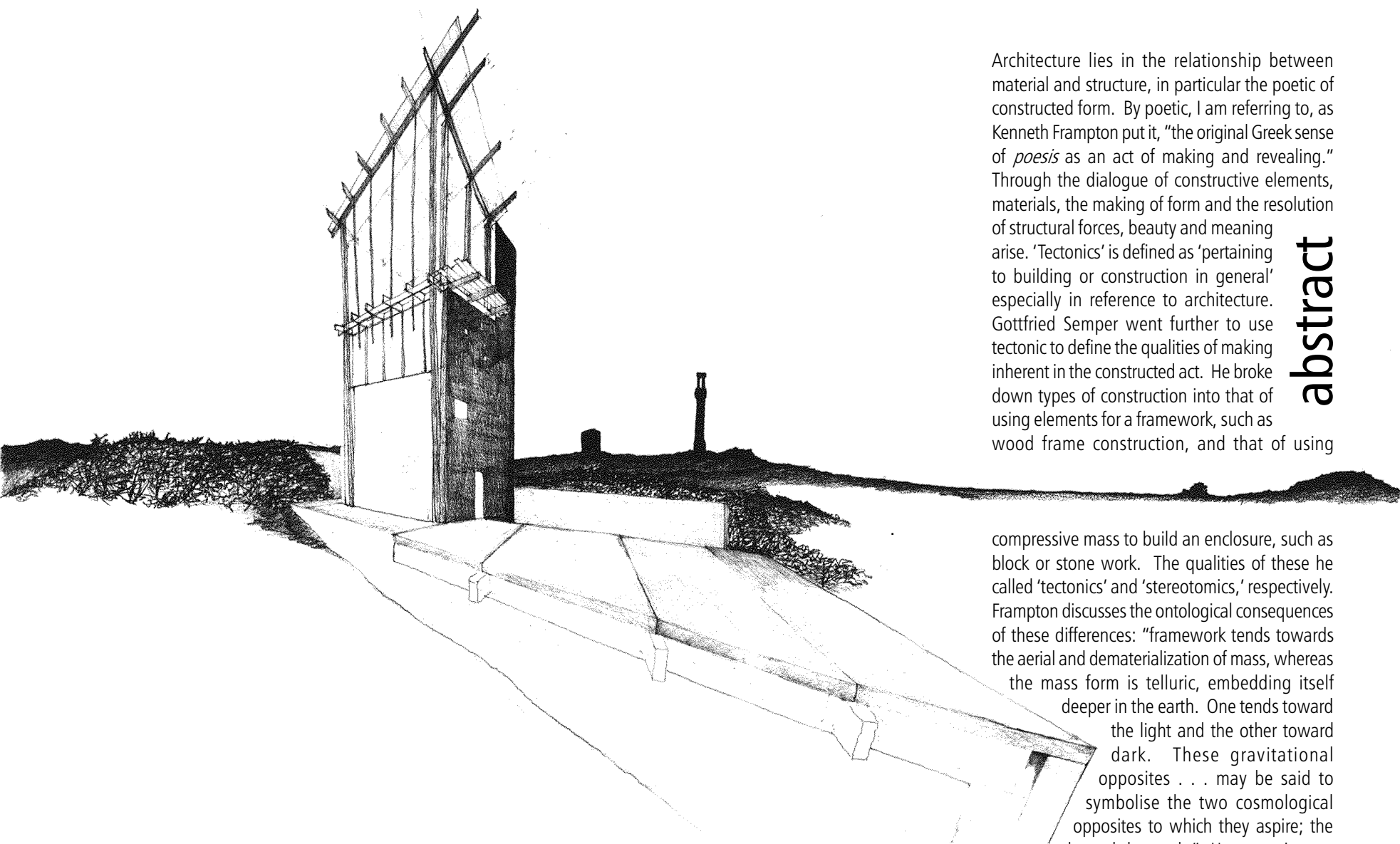
Frank Weiner

Jane Britt Greenwood

28 June 1994  
Blacksburg, Virginia

Keywords: Architecture, Tectonics, House  
copyright 1998, Steven J. Wunder





Architecture lies in the relationship between material and structure, in particular the poetic of constructed form. By poetic, I am referring to, as Kenneth Frampton put it, "the original Greek sense of *poesis* as an act of making and revealing." Through the dialogue of constructive elements, materials, the making of form and the resolution of structural forces, beauty and meaning arise. 'Tectonics' is defined as 'pertaining to building or construction in general' especially in reference to architecture. Gottfried Semper went further to use tectonic to define the qualities of making inherent in the constructed act. He broke down types of construction into that of using elements for a framework, such as wood frame construction, and that of using

**abstract**

compressive mass to build an enclosure, such as block or stone work. The qualities of these he called 'tectonics' and 'stereotomics,' respectively. Frampton discusses the ontological consequences of these differences: "framework tends towards the aerial and dematerialization of mass, whereas the mass form is telluric, embedding itself deeper in the earth. One tends toward the light and the other toward dark. These gravitational opposites . . . may be said to symbolise the two cosmological opposites to which they aspire; the sky and the earth." Human existence finds itself at the juncture between these opposites. Semper regarded the joint as "the primordial tectonic element" around which all building defines itself. Then in a sense architecture embodies the fundamental way man perceives his existence.

# acknowledgements

My deepest thanks to all those who have helped and supported me through the years it took to complete this.

my family: especially my mom, Els, and my father, Charles

my committee members: Heiner, Frank, and Jane

Jyothsna and Horace

Jeanne, Joel

Anshu, Ron

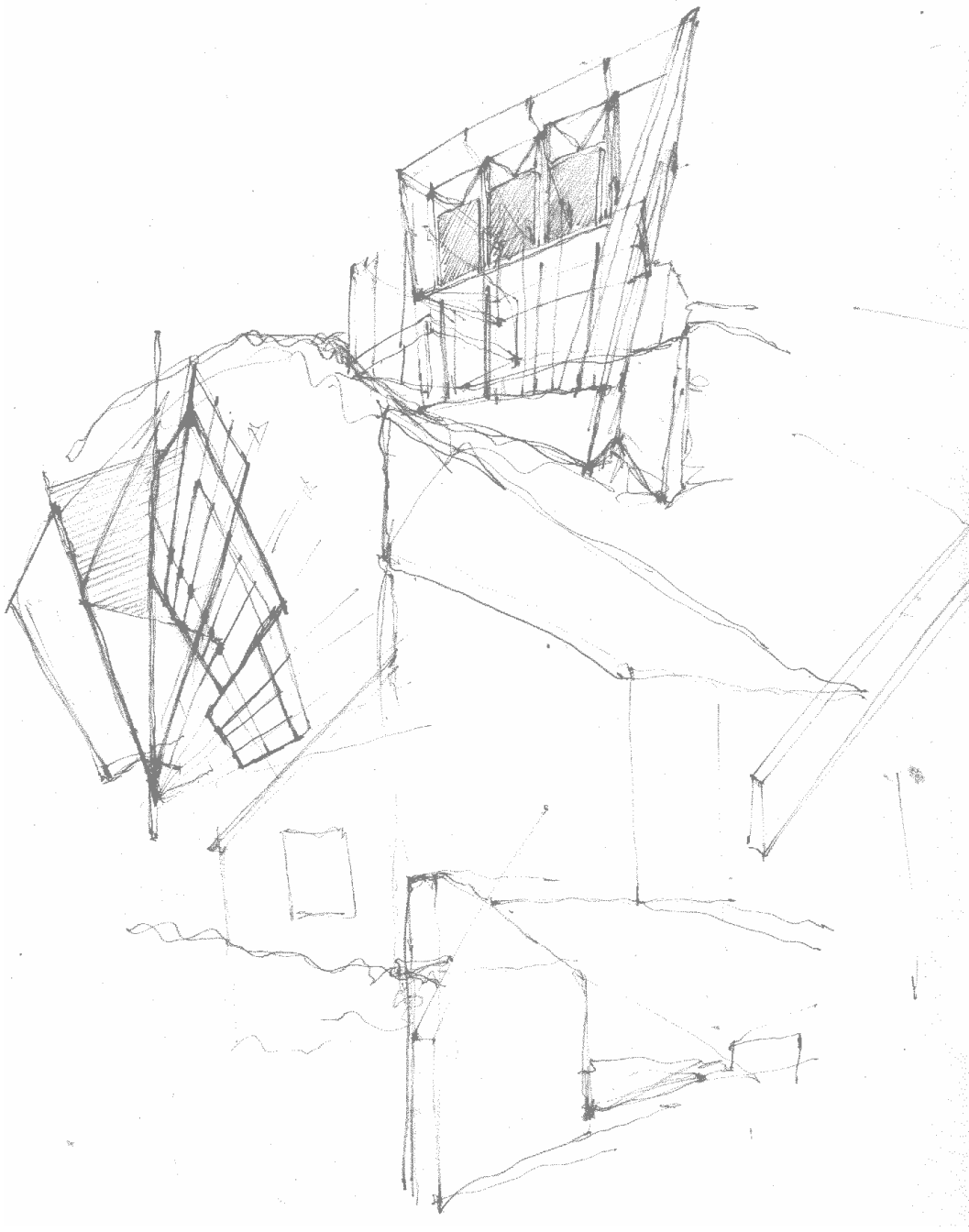
Hugh, Robert

Jeff and Jane

Lucy and Olivio Ferrari

the Mizutani family: Tetsuro, Françoise, Ken and Claire

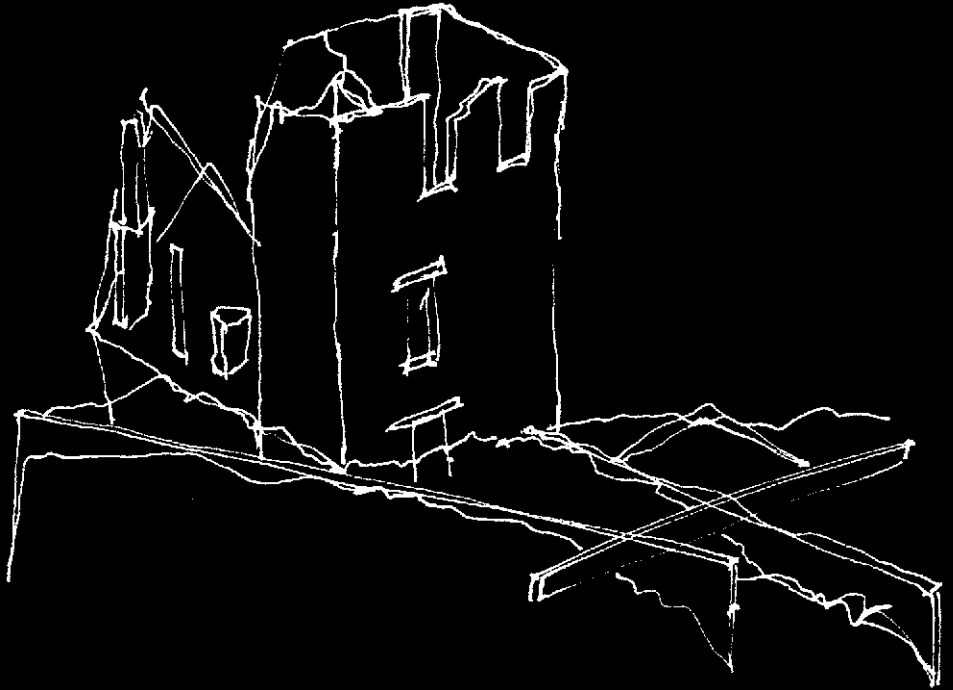
my friends in the SGI, especially President Daisaku Ikeda



abstract	ii
thesis statement	3
the project	7
the plinth	11
the tower	15
drawings	25
bibliography	A
vita	B

# table of contents





Perhaps this alone was what interested me in architecture: I knew that architecture was made possible by the confrontation of a precise form with time and the elements, a confrontation which lasted until the form was destroyed in the process of the combat. Architecture was one of the ways that humanity had sought to survive; it was a way of expressing the fundamental search for happiness.

Aldo Rossi, *Scientific Autobiography*





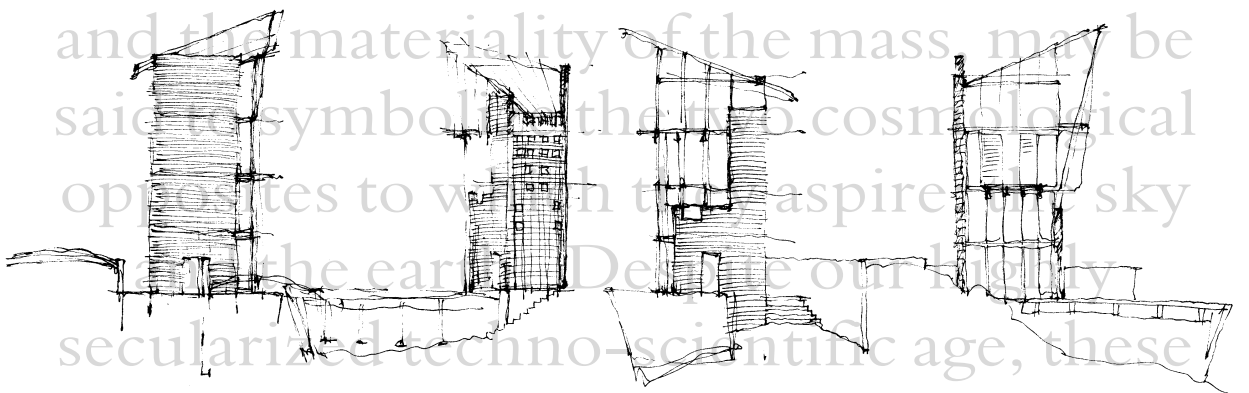


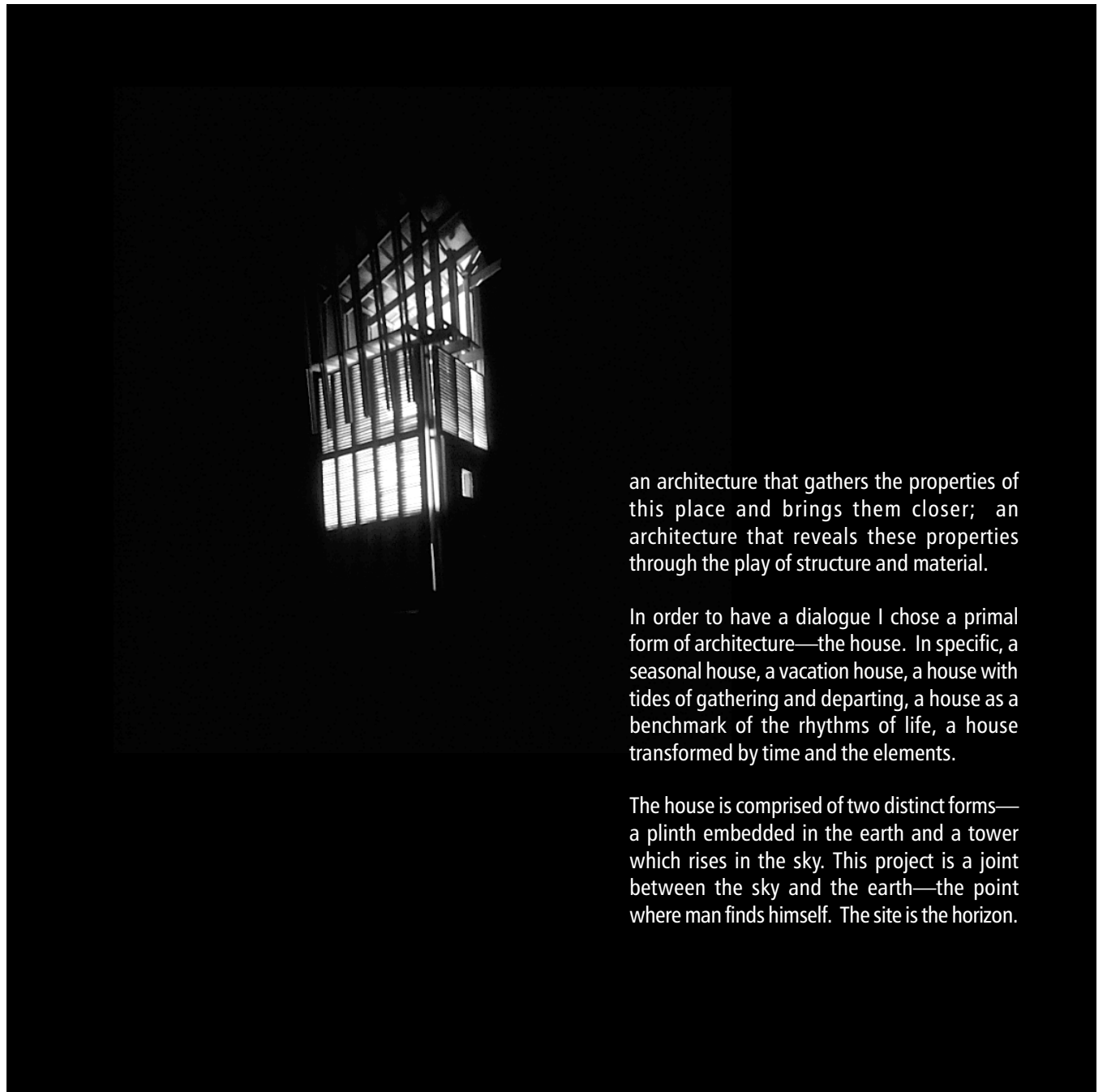
This project began as a confrontation with place — Provincetown, Massachusetts. Located at the end of the curling peninsula of Cape Cod, Provincetown is a distant outpost where land ends and the sea and sky reign. Formed of glacial deposits the land lies low constantly shifting with each tide or nor'easter. The desperate struggle for Man to maintain a foothold in this unstable environment has continued for generations. Native American tribes, Vikings, and the Pilgrims have tried with varying success to survive and make their mark in this environment. There is a primordial quality to life on the Cape. At the end of the peninsula, on land shifting with the winds and tides one becomes aware of the experiential limits of existence. Here Man finds his place at the seam between the earth and the sky.

## statement of thesis

In response to this place I am proposing an architecture. It is an architecture about the confrontation of Man with Change and its forces; an architecture that celebrates and embodies these changes: the ebb and flow of the tides, the cycles of the Day and Night and the Seasons, and the rhythms of Life and Death;

. . . framework tends towards the aerial and the dematerialization of mass, whereas the mass form is telluric, embedding itself ever deeper in the earth. The one tends towards light and the other towards dark. These gravitational opposites, the immateriality of the frame and the materiality of the mass, may be said to symbolize the two cosmological opposites to which we aspire: the sky and the earth. Despite our highly secularized techno-scientific age, these polarities still largely constitute the experiential limits of our lives.

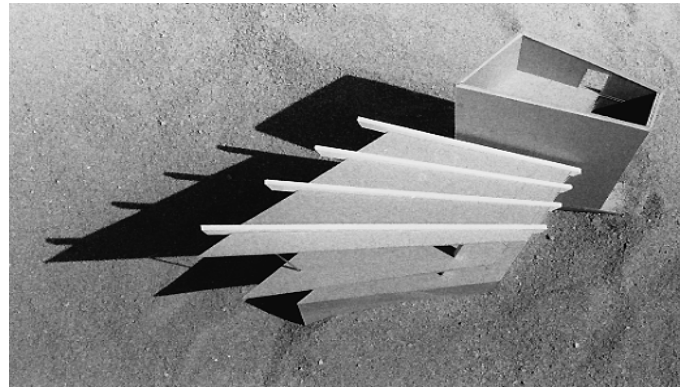
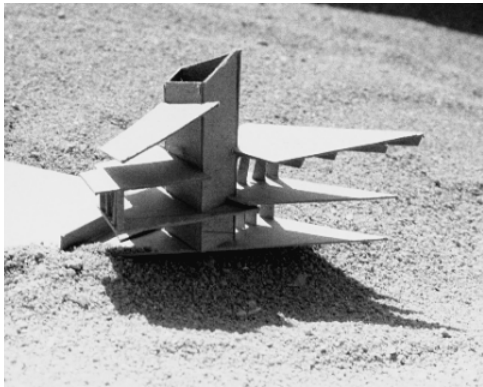




an architecture that gathers the properties of this place and brings them closer; an architecture that reveals these properties through the play of structure and material.

In order to have a dialogue I chose a primal form of architecture—the house. In specific, a seasonal house, a vacation house, a house with tides of gathering and departing, a house as a benchmark of the rhythms of life, a house transformed by time and the elements.

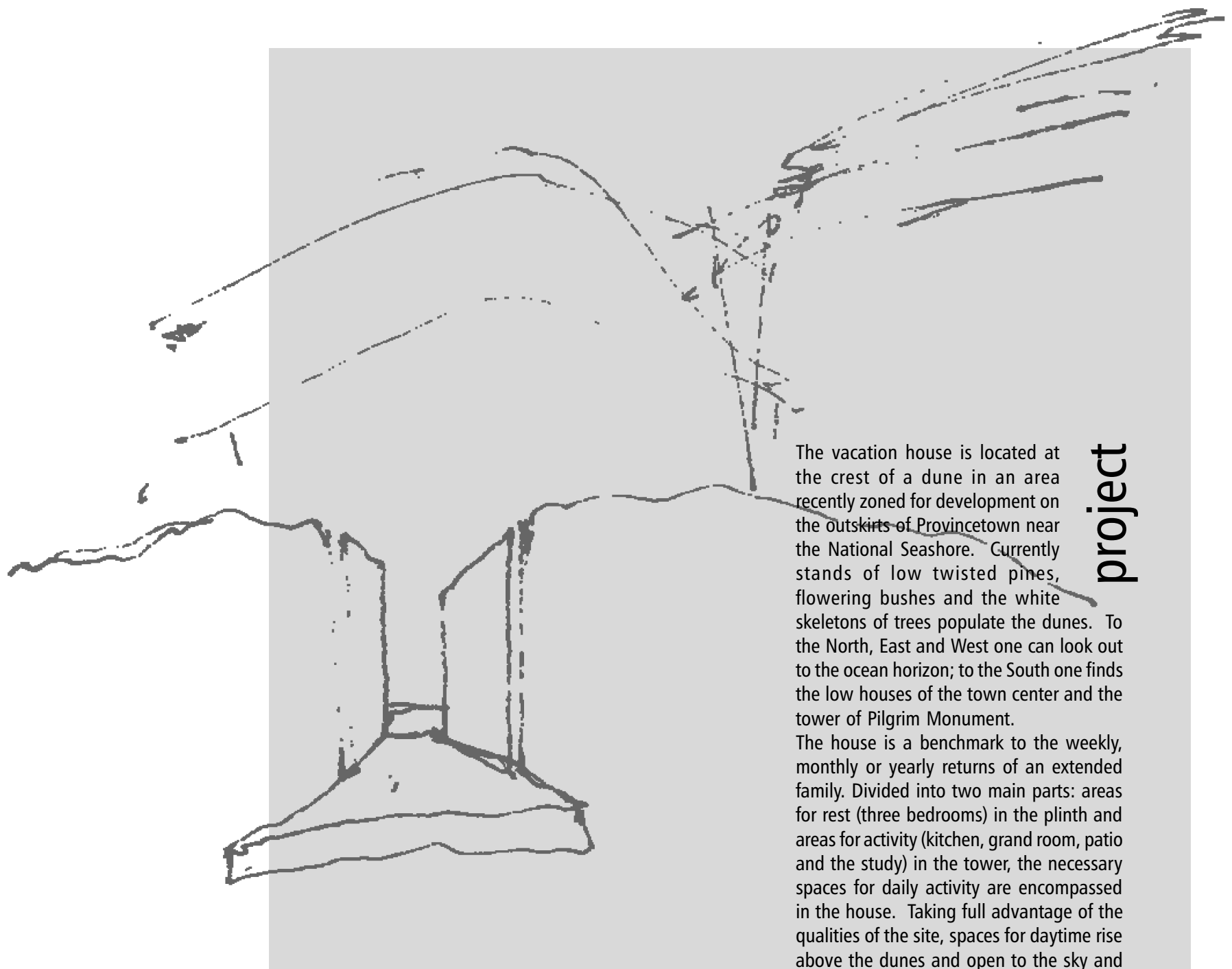
The house is comprised of two distinct forms—a plinth embedded in the earth and a tower which rises in the sky. This project is a joint between the sky and the earth—the point where man finds himself. The site is the horizon.



Sand . . .

Things with form were empty when placed beside sand. The only certain factor was its movement; sand was the antithesis of all form.

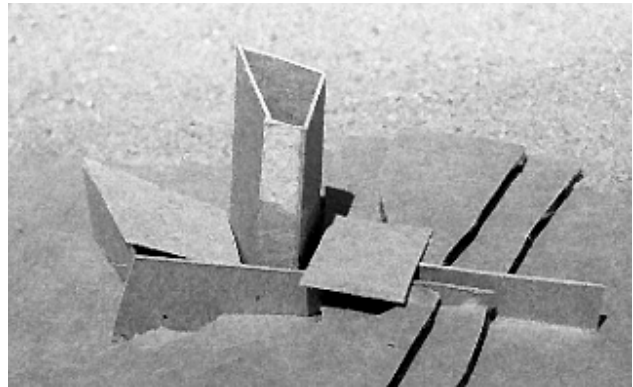
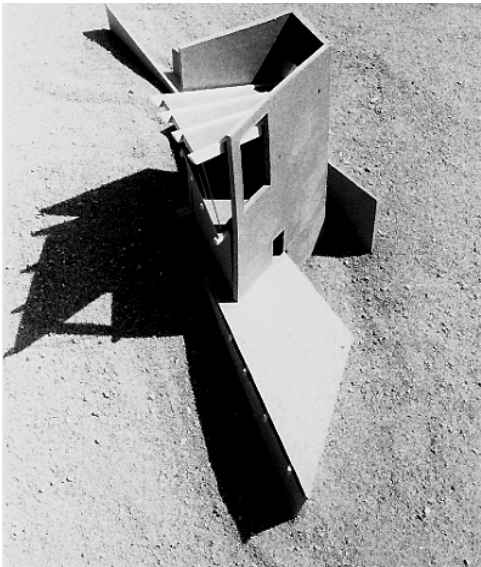
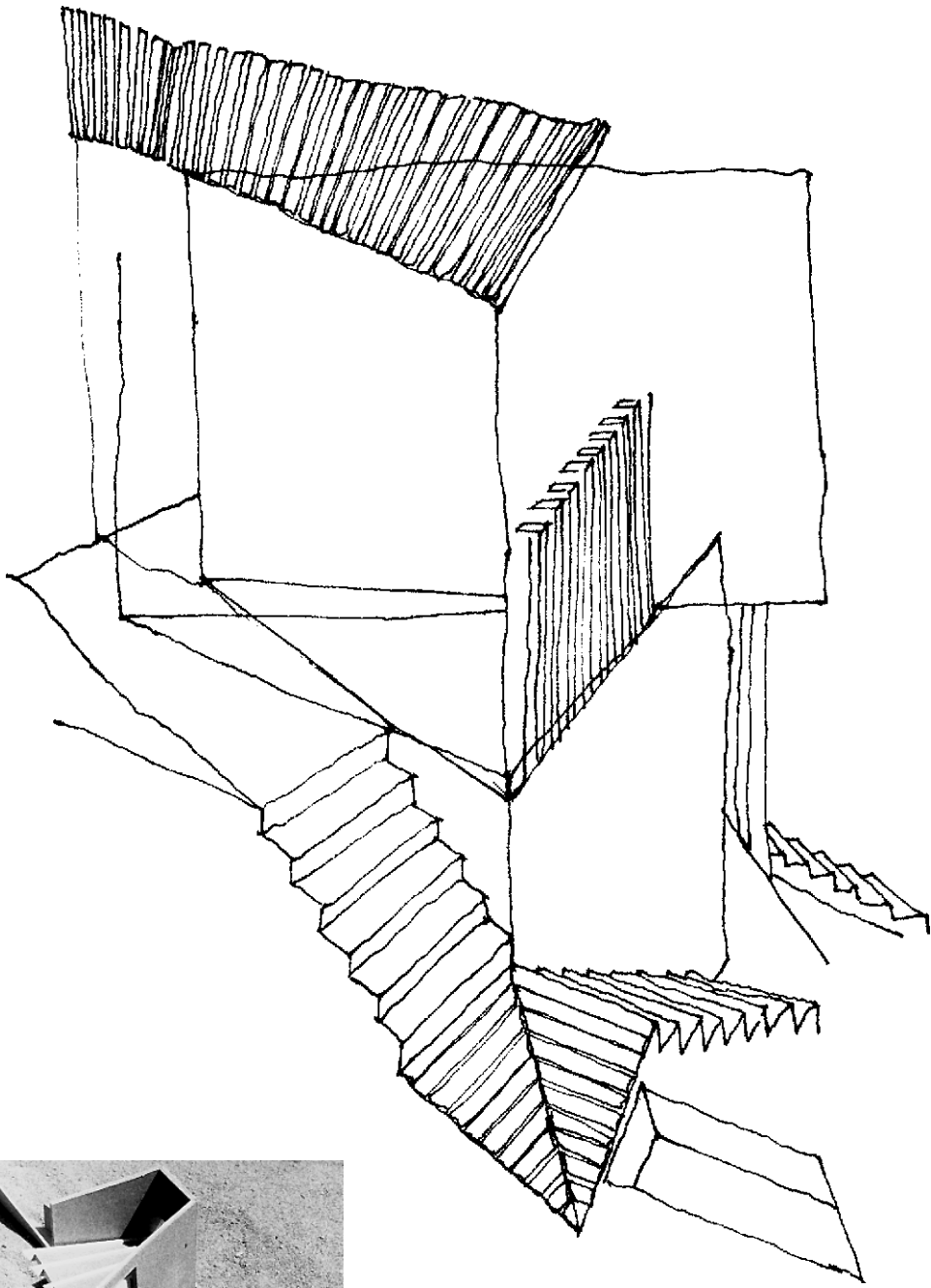
*Kobo Abe, the Woman in the Dunes*



The vacation house is located at the crest of a dune in an area recently zoned for development on the outskirts of Provincetown near the National Seashore. Currently stands of low twisted pines, flowering bushes and the white skeletons of trees populate the dunes. To the North, East and West one can look out to the ocean horizon; to the South one finds the low houses of the town center and the tower of Pilgrim Monument.

The house is a benchmark to the weekly, monthly or yearly returns of an extended family. Divided into two main parts: areas for rest (three bedrooms) in the plinth and areas for activity (kitchen, grand room, patio and the study) in the tower, the necessary spaces for daily activity are encompassed in the house. Taking full advantage of the qualities of the site, spaces for daytime rise above the dunes and open to the sky and the panorama of the Provincelands. Rooms for sleeping, bathing and storage nestle themselves in the dunes.

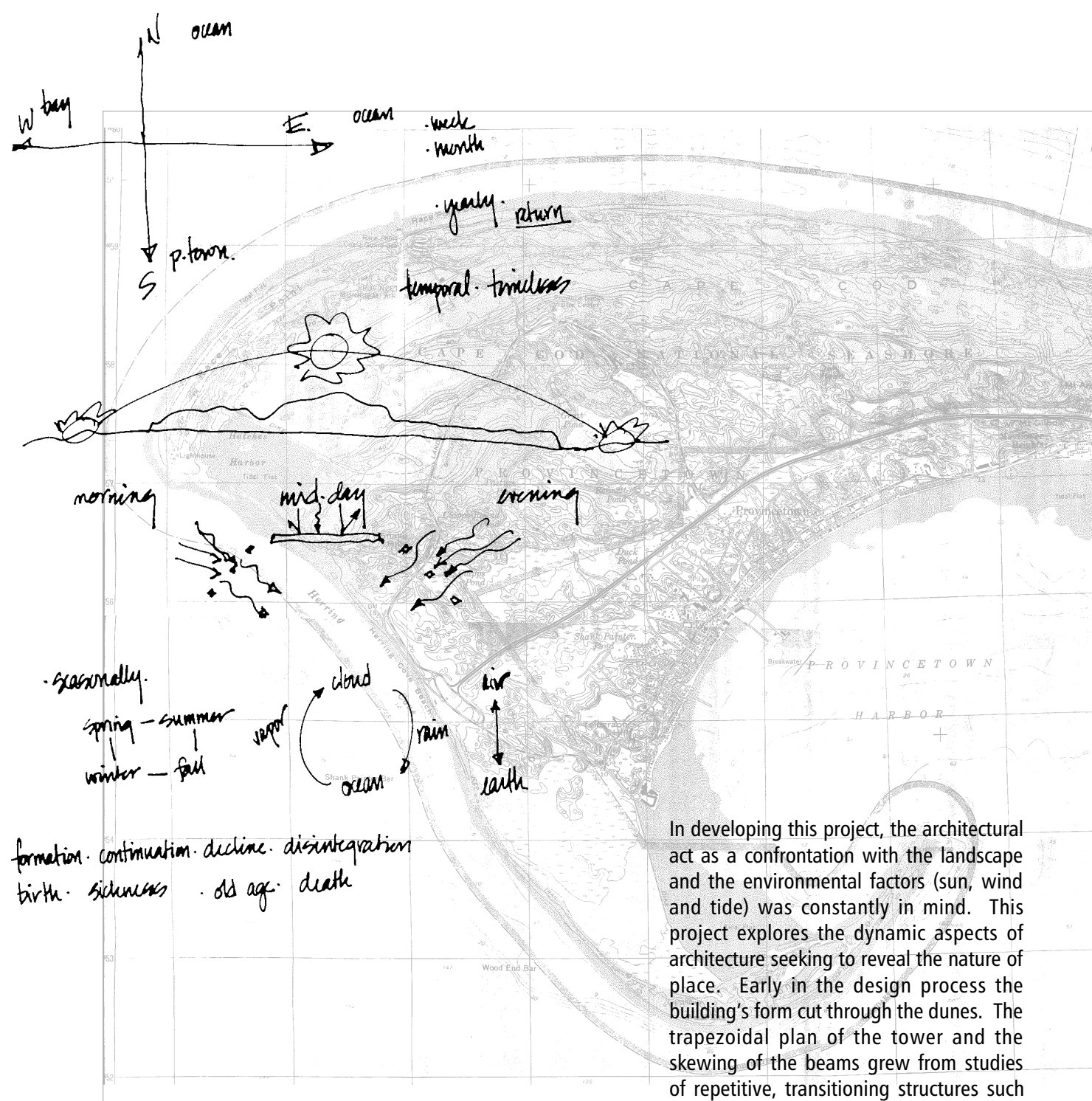
## project



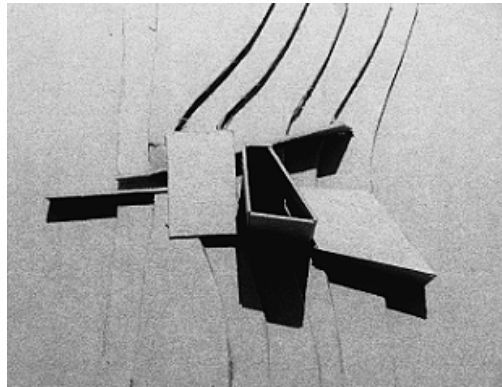
house for extended family  
 reference point.  
 Cycles of life

daily: solar movement:  
 meals. - place to eat/dine

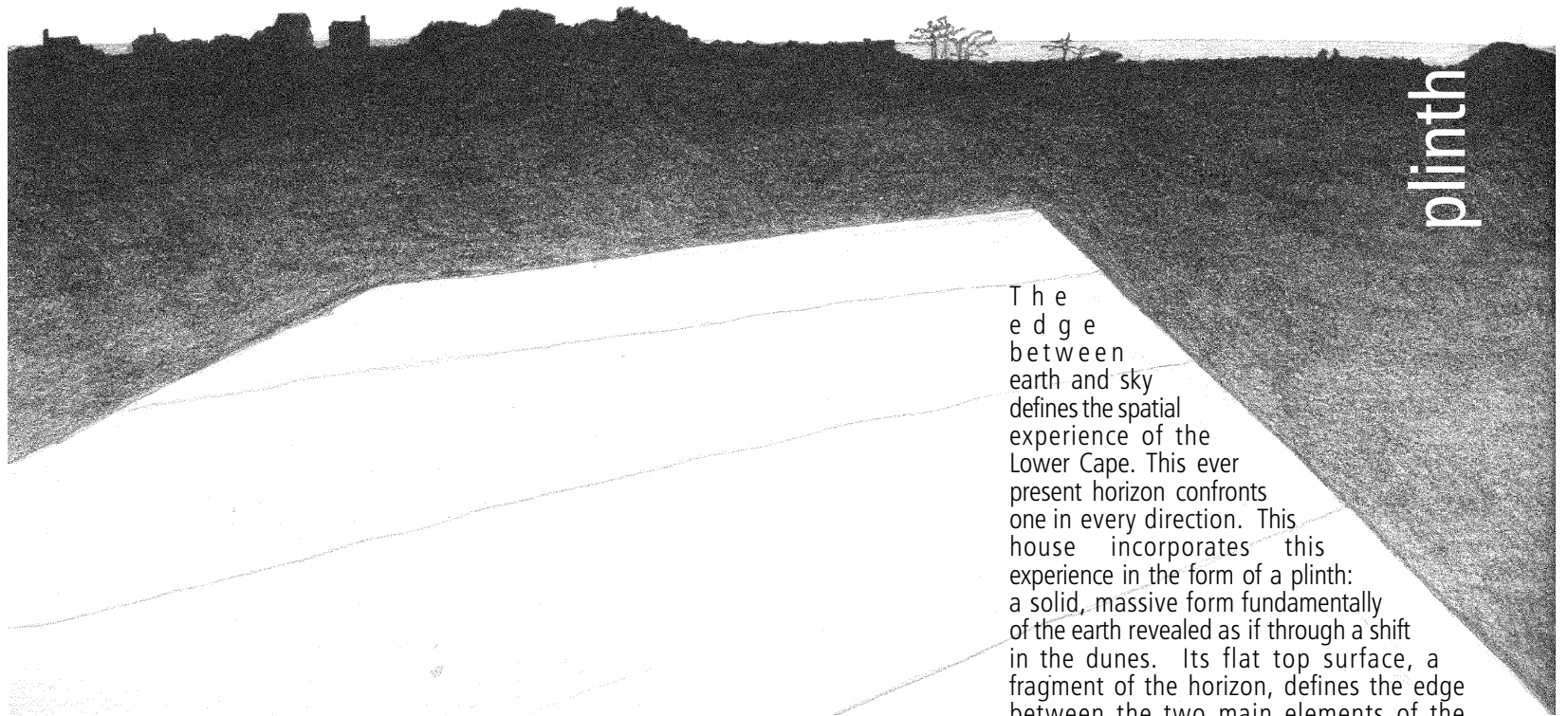
↑ PROMISE LANDS  
 PROMISE TOWNS ↓



In developing this project, the architectural act as a confrontation with the landscape and the environmental factors (sun, wind and tide) was constantly in mind. This project explores the dynamic aspects of architecture seeking to reveal the nature of place. Early in the design process the building's form cut through the dunes. The trapezoidal plan of the tower and the skewing of the beams grew from studies of repetitive, transitioning structures such as in nautilus shells and Fibonacci series, while the forms made from these studies in turn reacted to the prevailing northeastern winds and shifting landscape. Every transition--through the earth at the entrance to the plinth and up the tower to the sky, from dark to lit spaces, from concrete to masonry to wood--reveals the dynamism of this land.



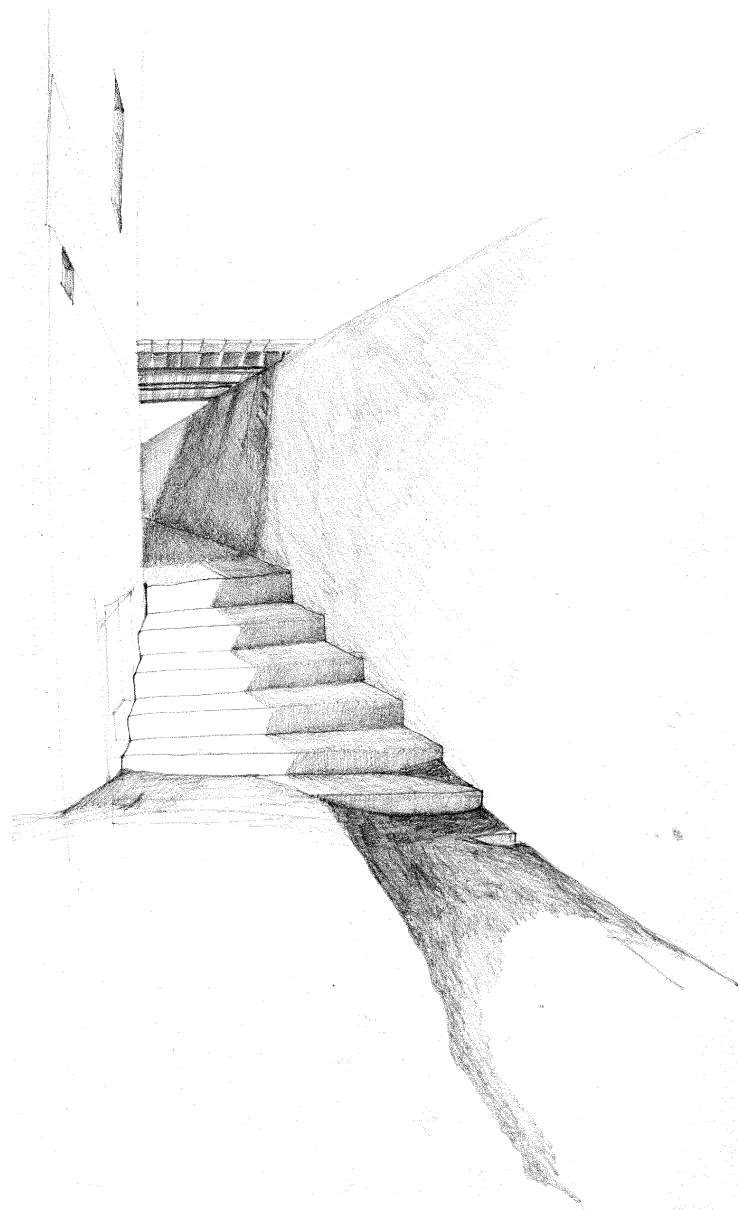




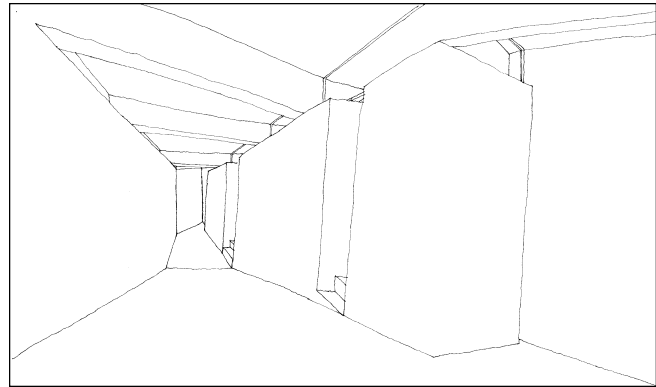
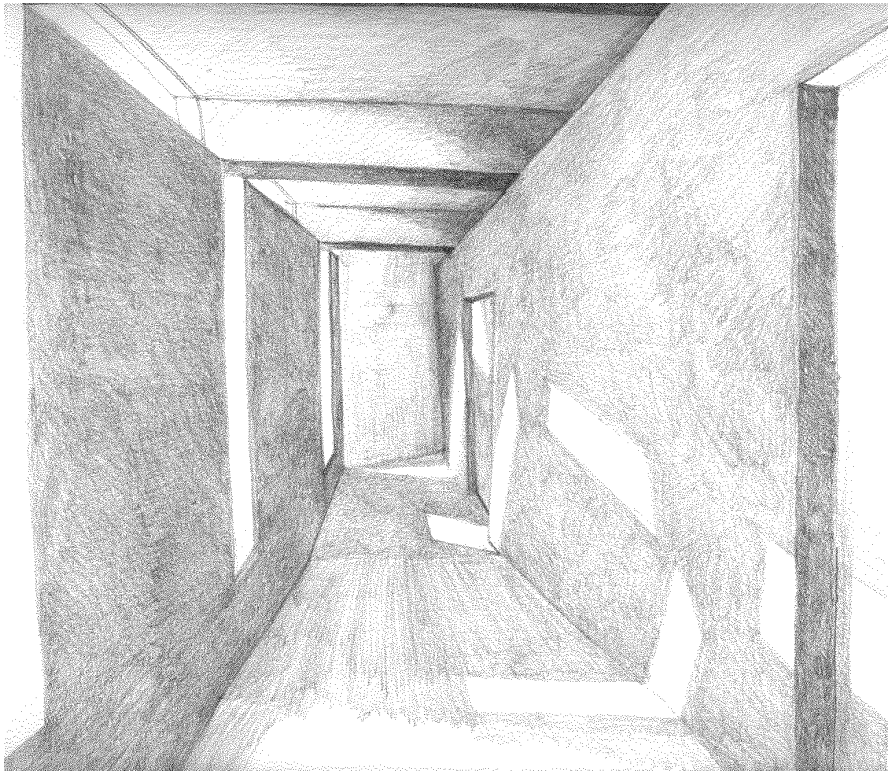
The edge between earth and sky defines the spatial experience of the Lower Cape. This ever present horizon confronts one in every direction. This house incorporates this experience in the form of a plinth: a solid, massive form fundamentally of the earth revealed as if through a shift in the dunes. Its flat top surface, a fragment of the horizon, defines the edge between the two main elements of the house. Formed of poured-in-place concrete the casket-like plinth embodies ideas of Earth, night, death, coolness and enclosure. The internal spaces are dark with slices of daylight filtering through the slots in the walls and openings between the beams. Cut from floor to ceiling these slots along the south wall measure the ever-changing dunes and allow constricted views of the surrounding terrain. Housed within the plinth are the bedrooms and bath-rooms of refuge, of night. A long corridor runs the entire length of the plinth. One begins and ends ones day in the plinth.



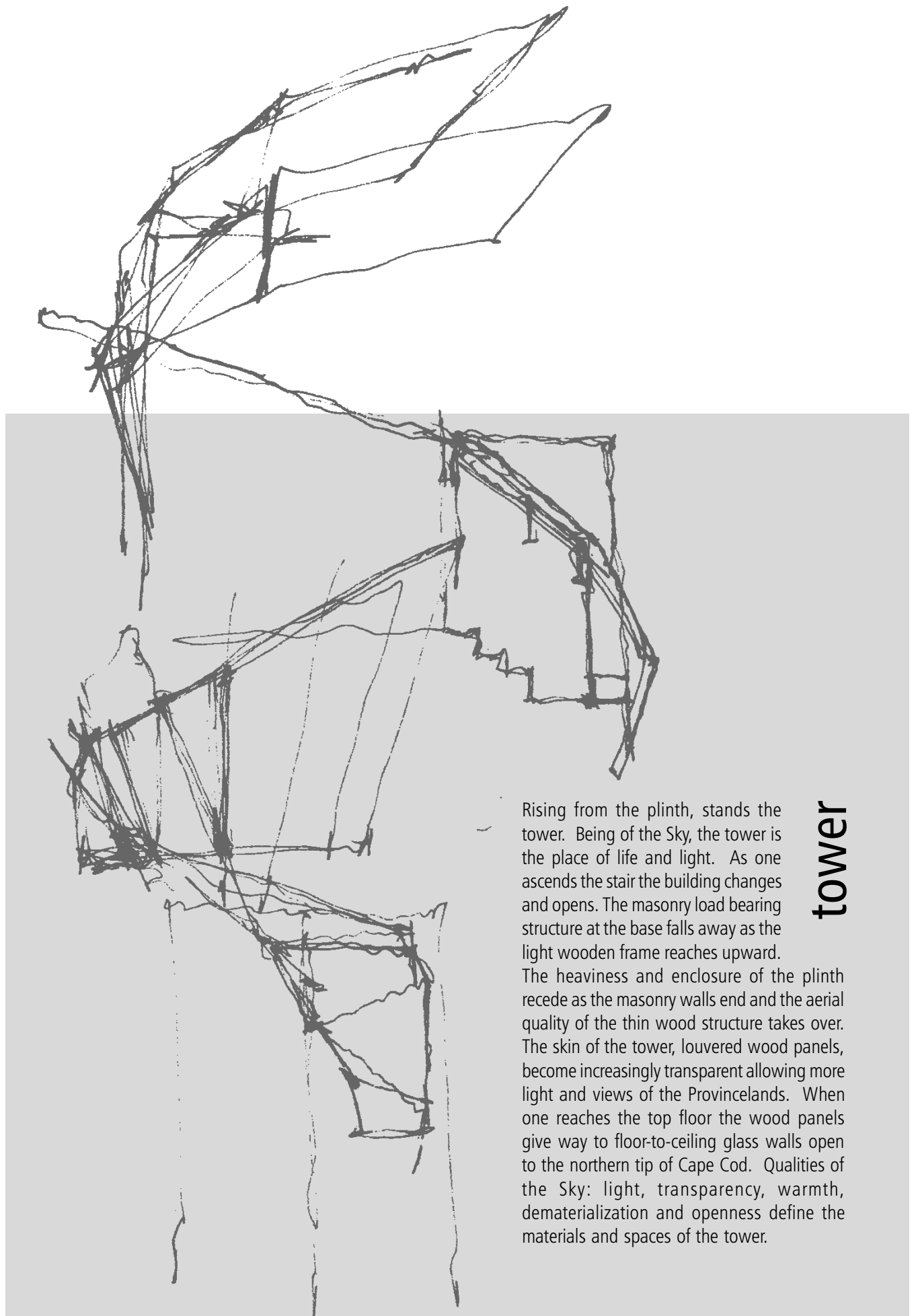
view of model with roof removed



view through passage between plinth and wall

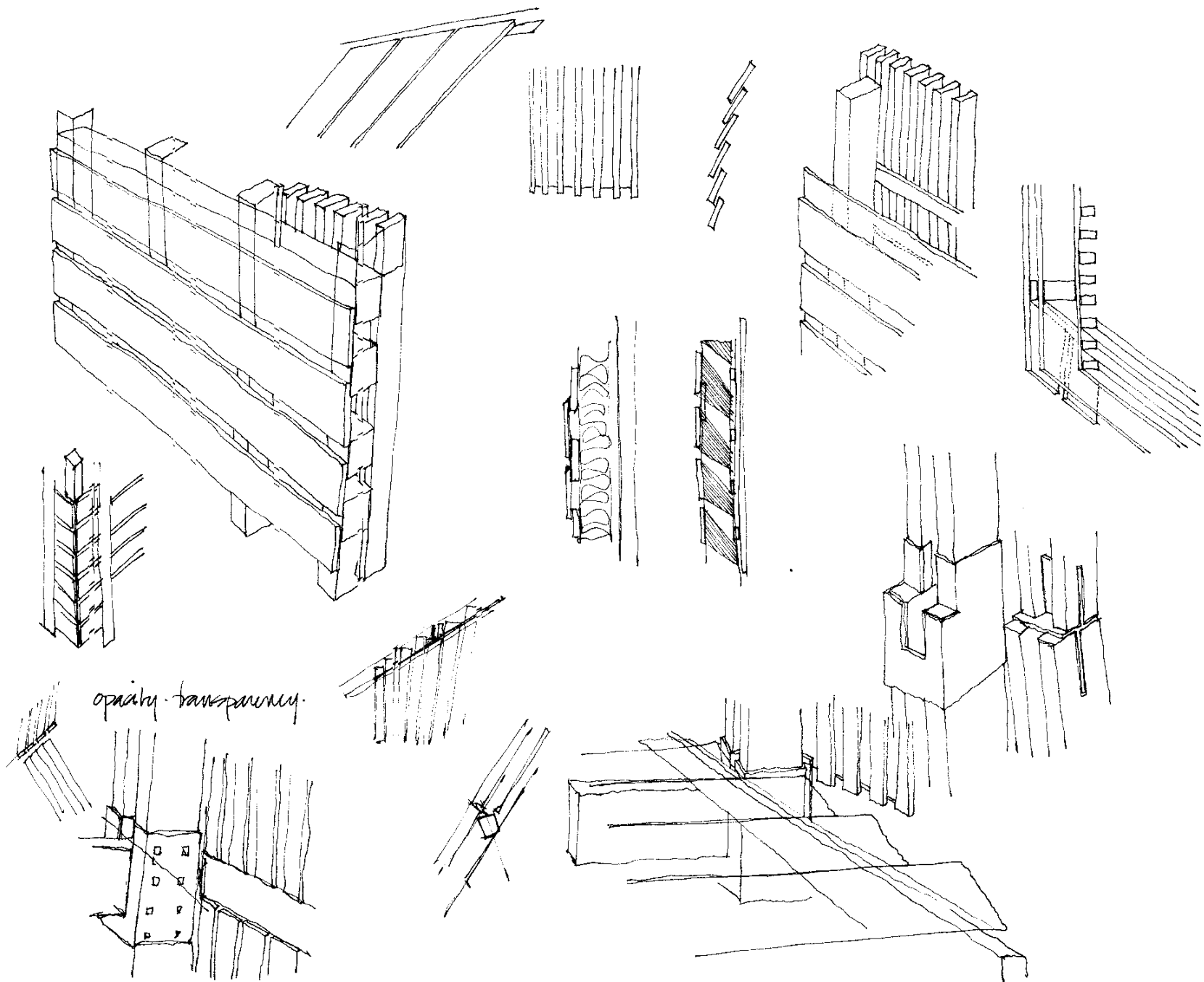


corridor leading to bedrooms:  
thin openings in concrete wall offer a slice of the outside world and measure the level of the changing sands



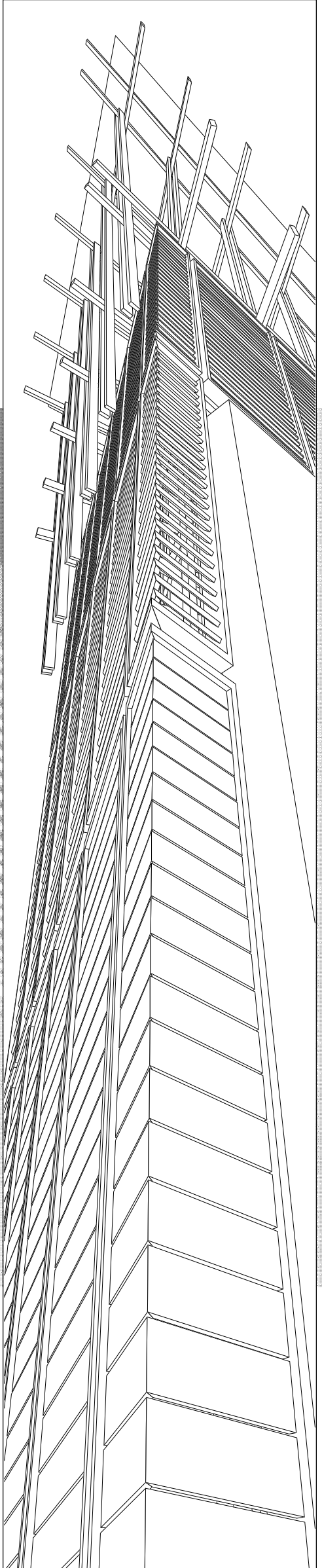
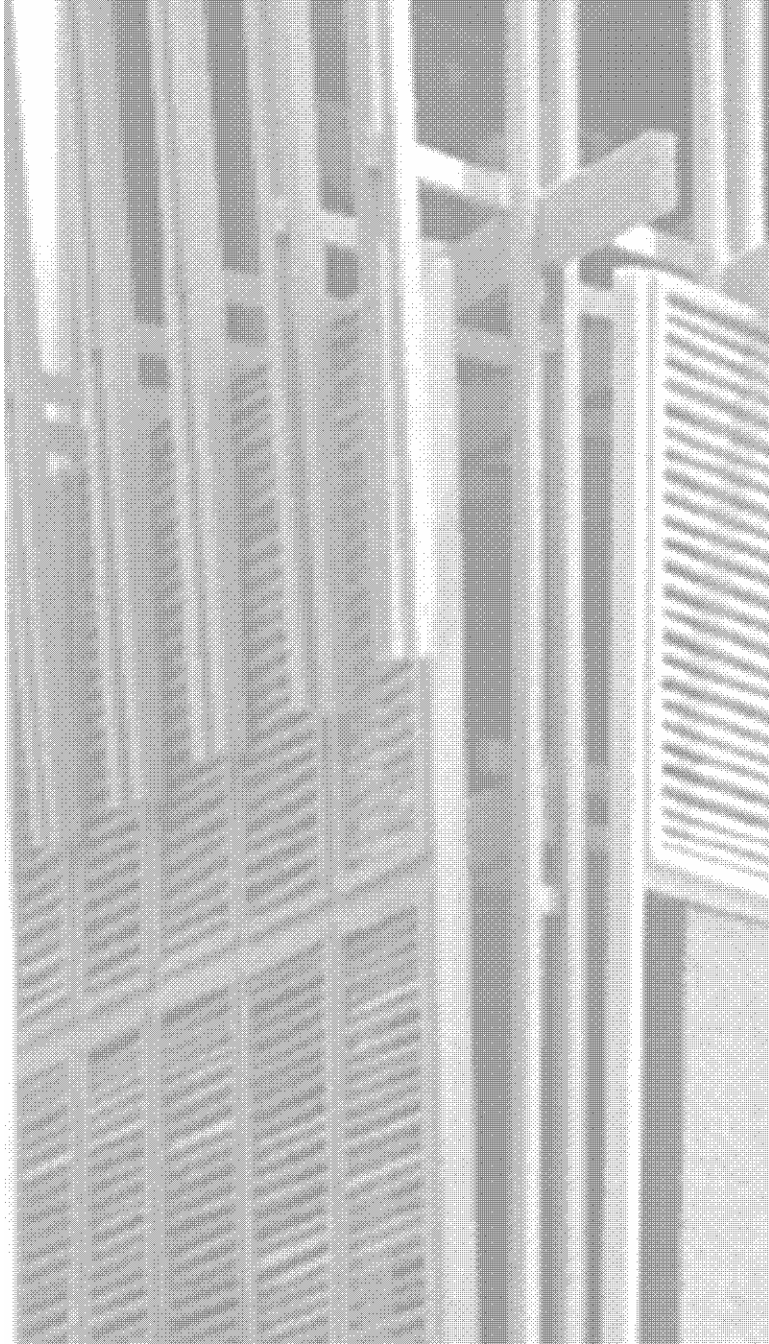
Rising from the plinth, stands the tower. Being of the Sky, the tower is the place of life and light. As one ascends the stair the building changes and opens. The masonry load bearing structure at the base falls away as the light wooden frame reaches upward. The heaviness and enclosure of the plinth recede as the masonry walls end and the aerial quality of the thin wood structure takes over. The skin of the tower, louvered wood panels, become increasingly transparent allowing more light and views of the Provincelands. When one reaches the top floor the wood panels give way to floor-to-ceiling glass walls open to the northern tip of Cape Cod. Qualities of the Sky: light, transparency, warmth, dematerialization and openness define the materials and spaces of the tower.

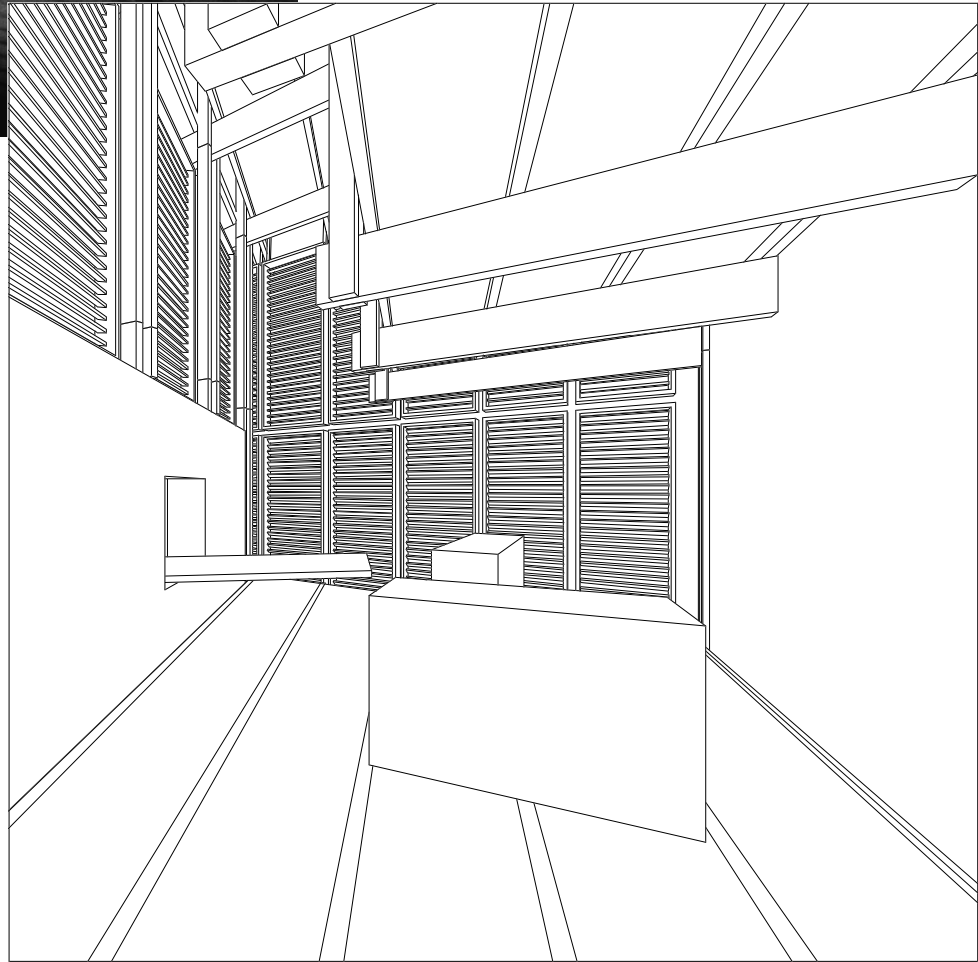
## tower



opacity - transparency

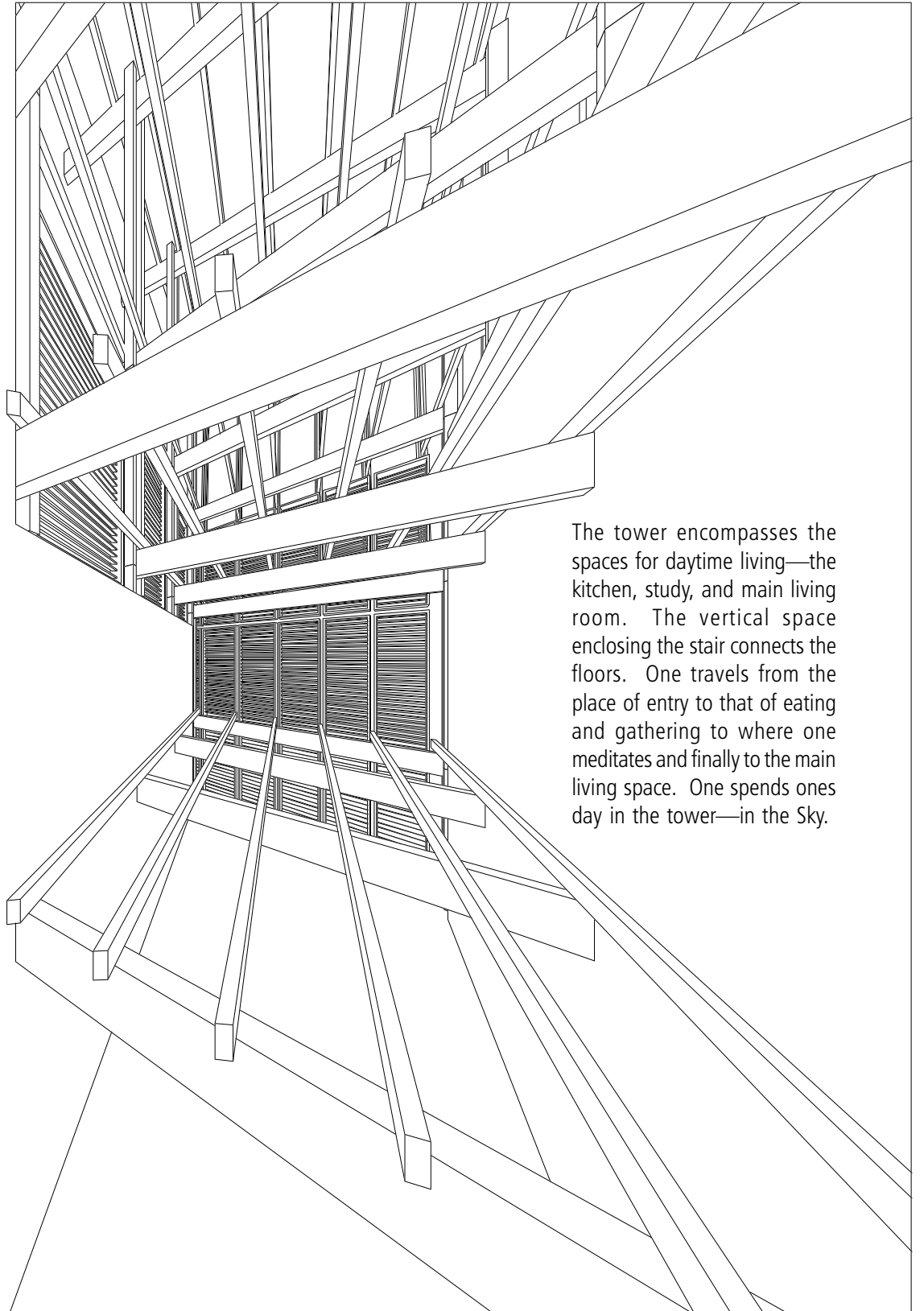
details of exterior wall at the tower





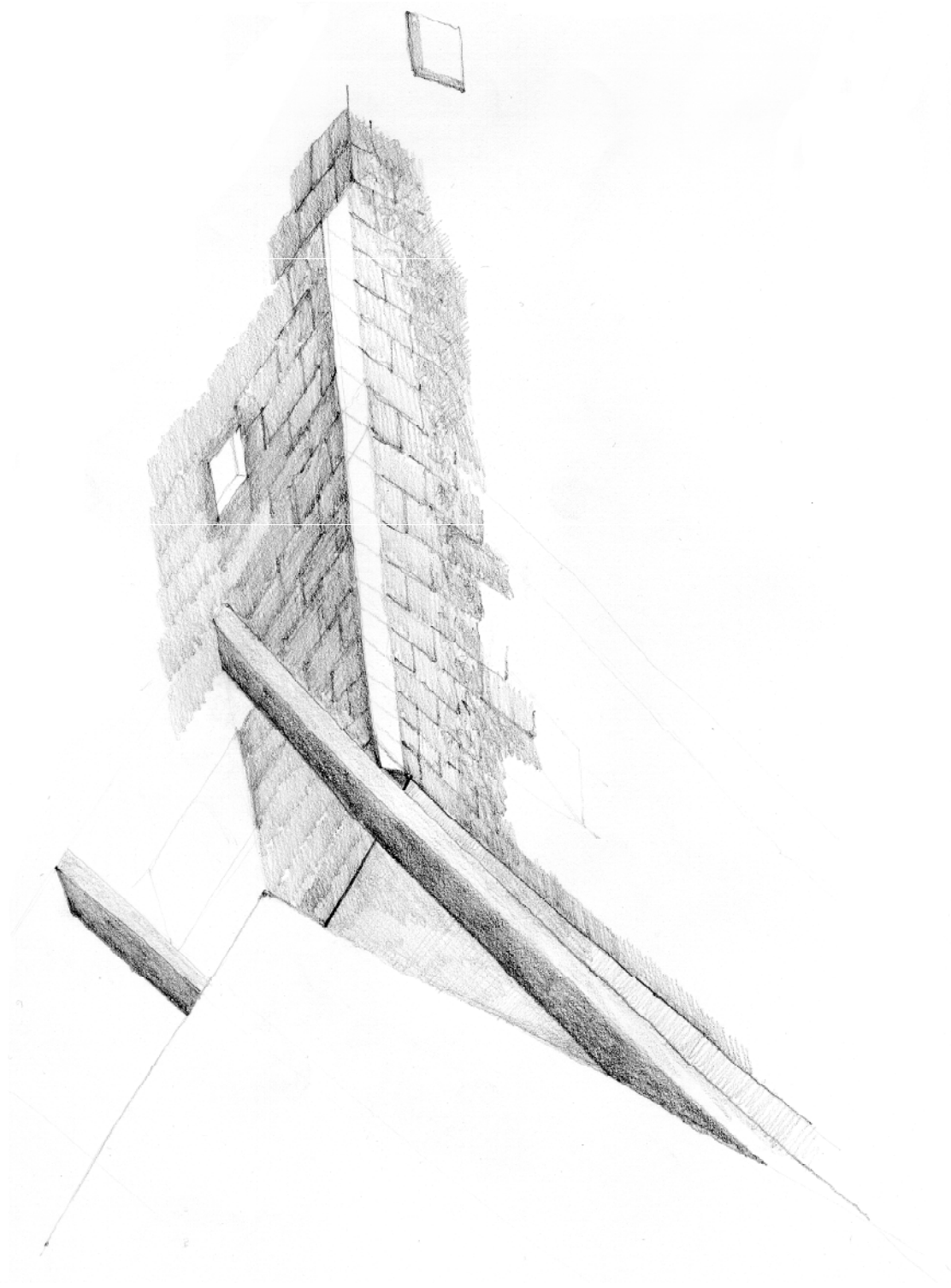
interior views of tower  
above: third floor study; right: second floor kitchen



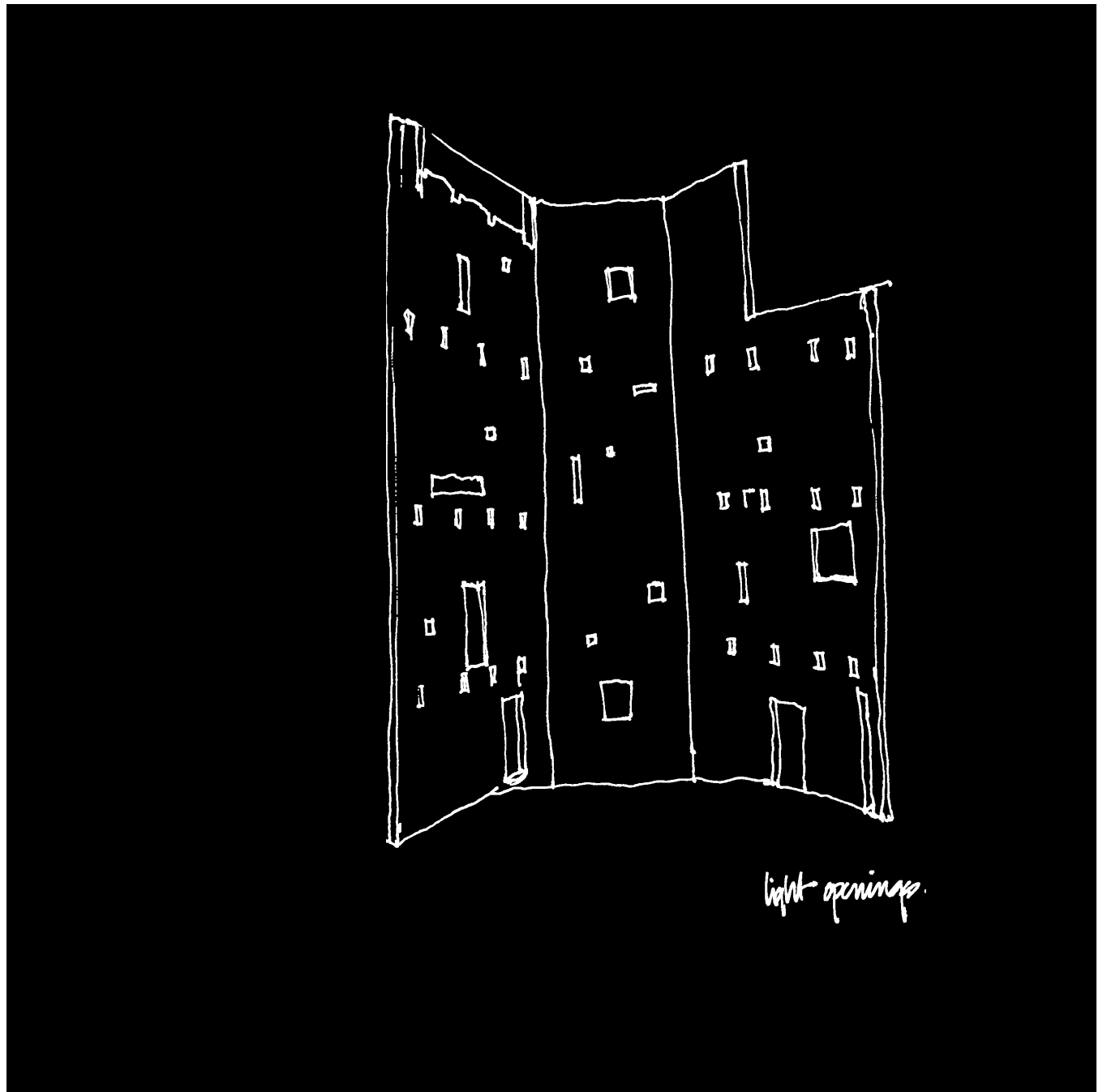


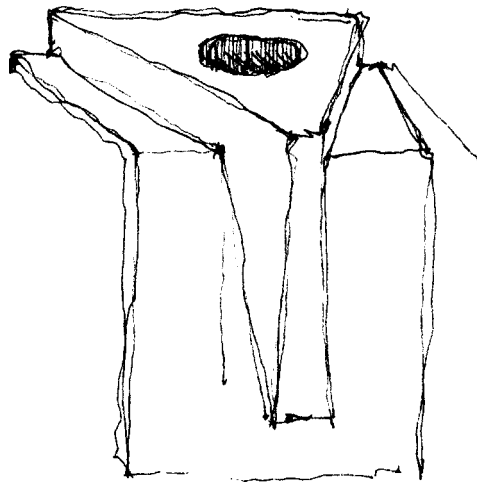
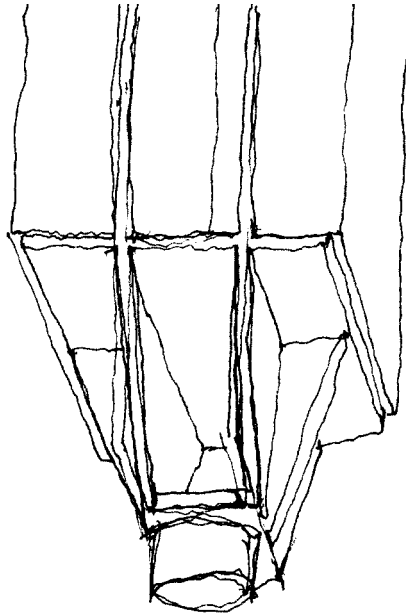
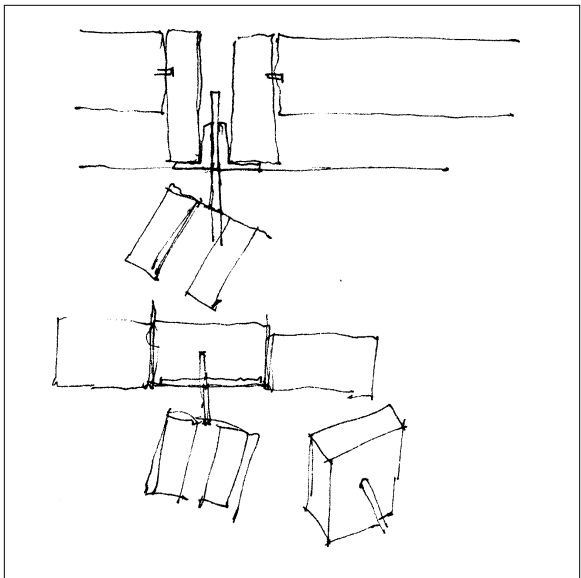
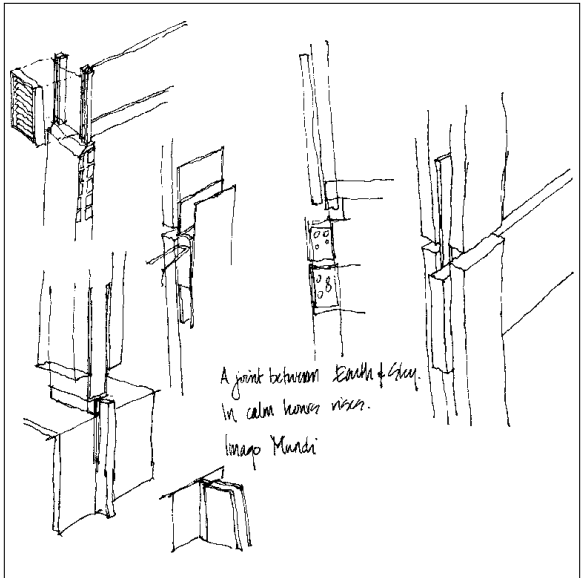
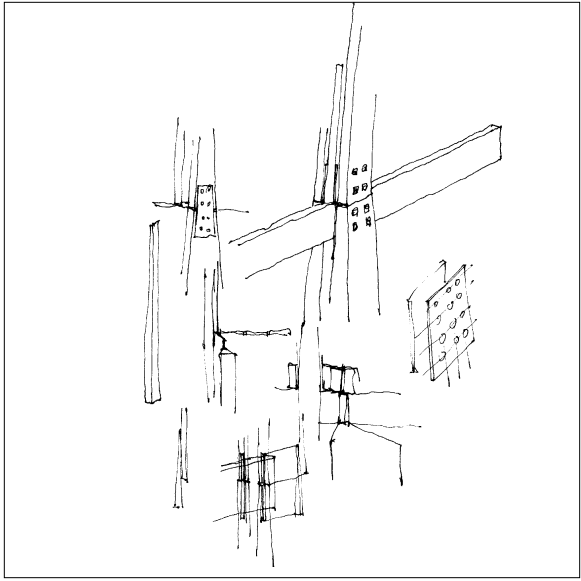
The tower encompasses the spaces for daytime living—the kitchen, study, and main living room. The vertical space enclosing the stair connects the floors. One travels from the place of entry to that of eating and gathering to where one meditates and finally to the main living space. One spends ones day in the tower—in the Sky.

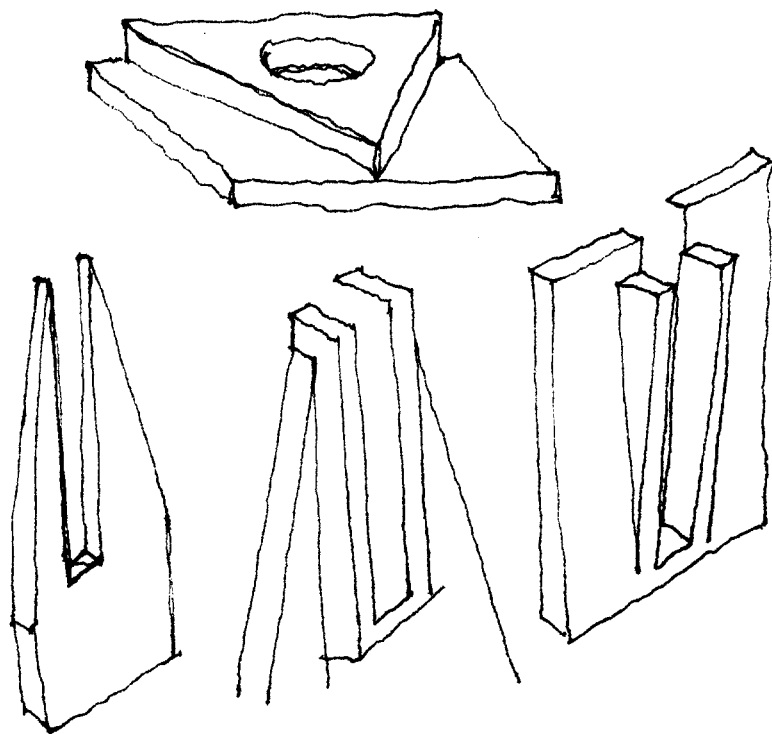
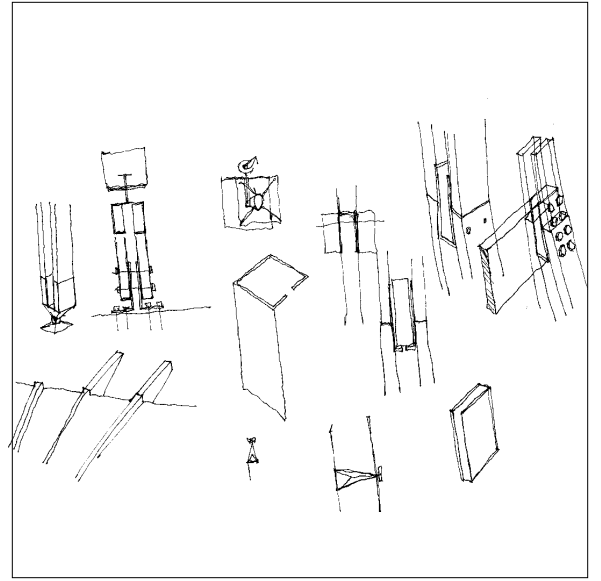
interior perspective of wood structure



early study of openings in tower wall

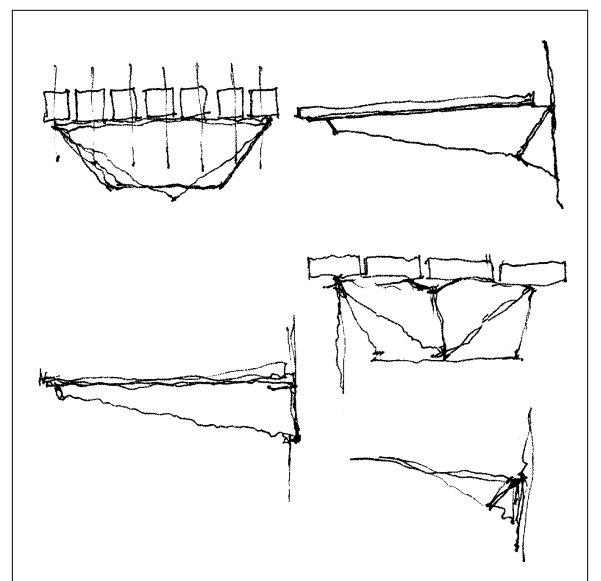


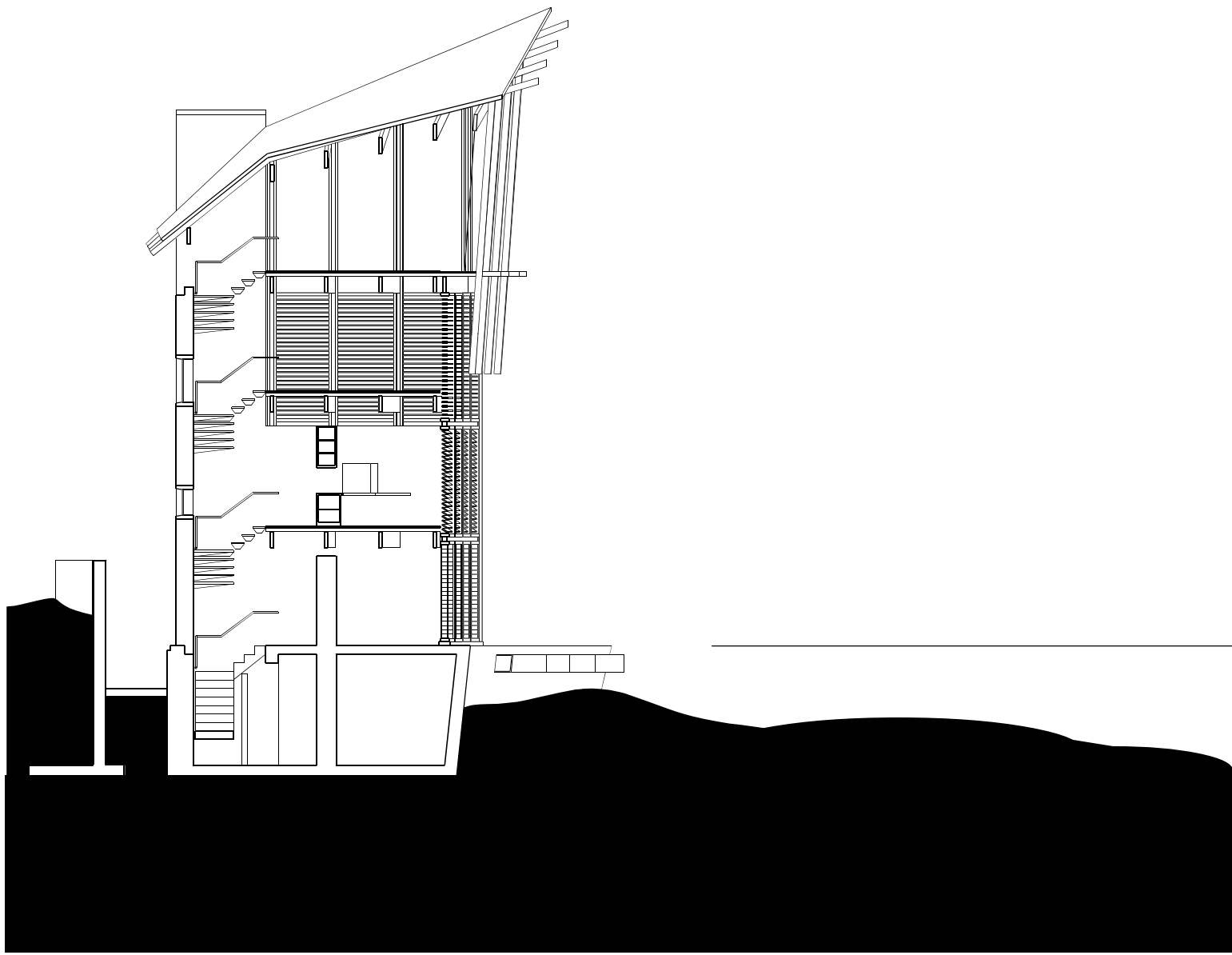




To the Greeks *techne* means neither art nor handicraft but rather: to make something appear, with what is present, as this or that, in this way or that way. The Greeks conceive of *techne*, producing, in terms of letting appear.

Martin Heidegger, *Building Dwelling Thinking*





north - south section

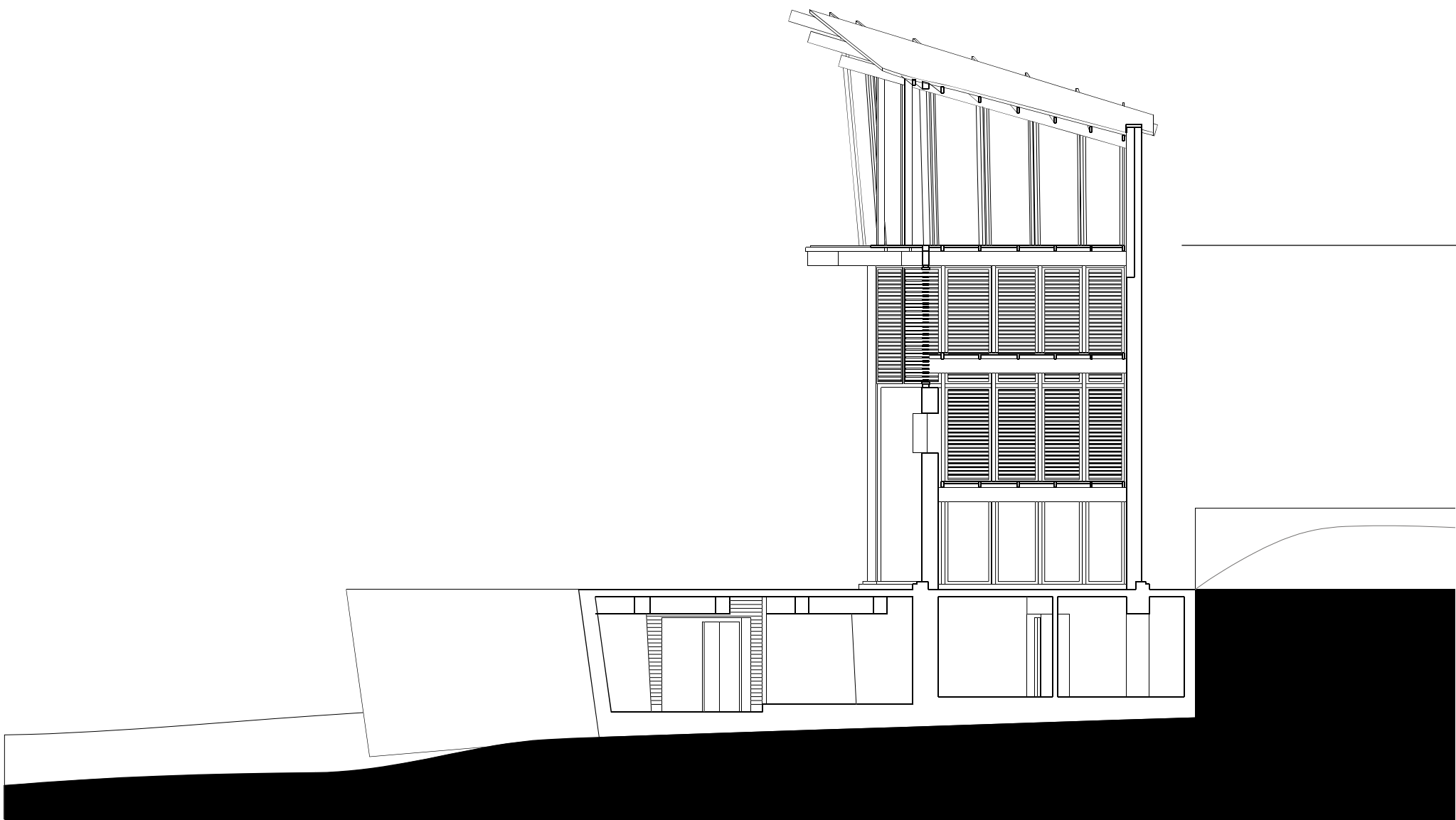
second level - kitchen

entrance level

ground level - bedrooms

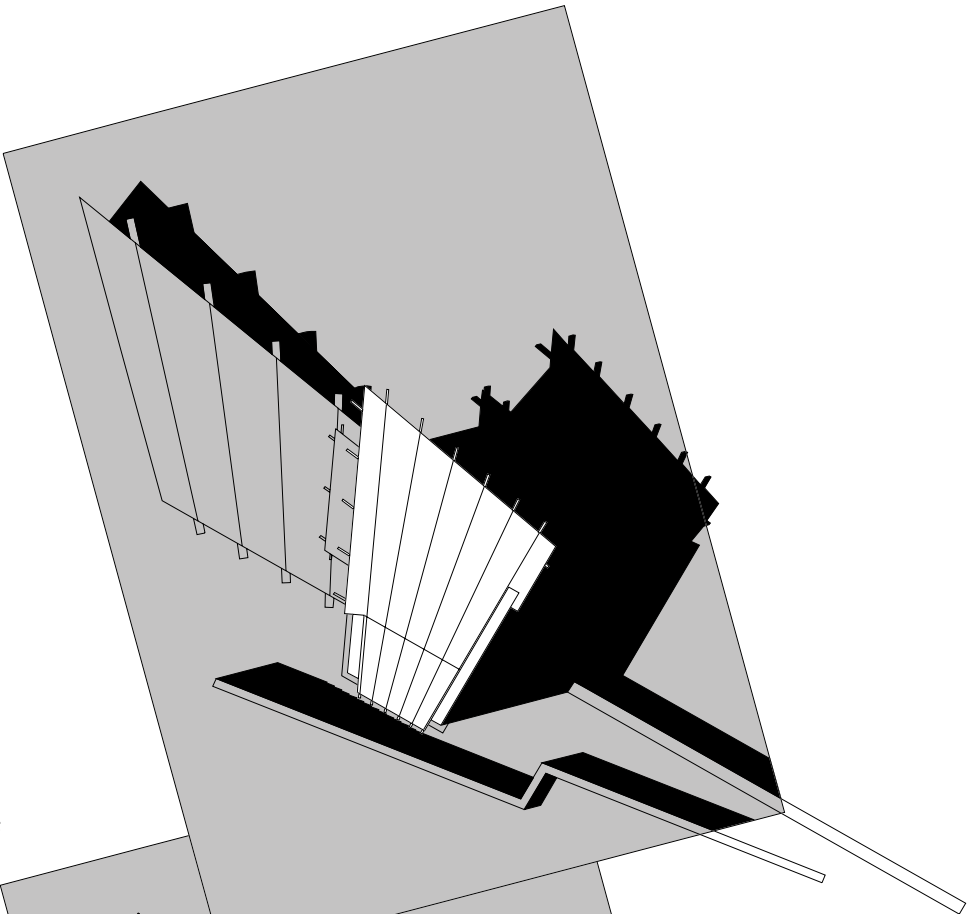


drawings

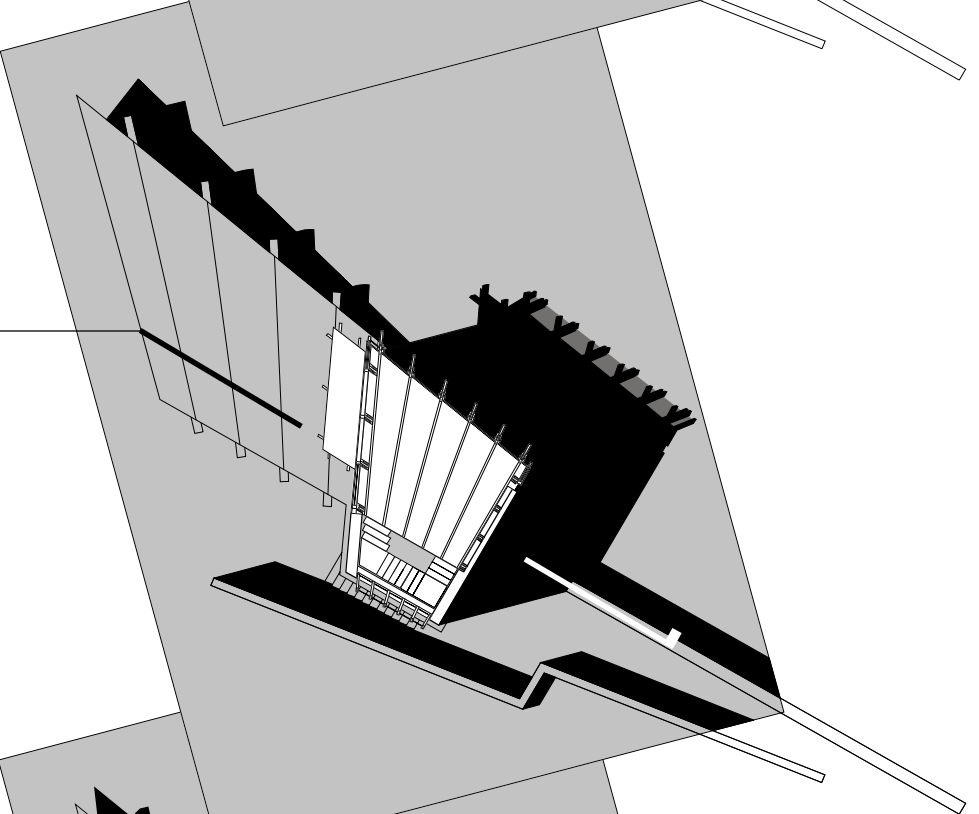


east - west section

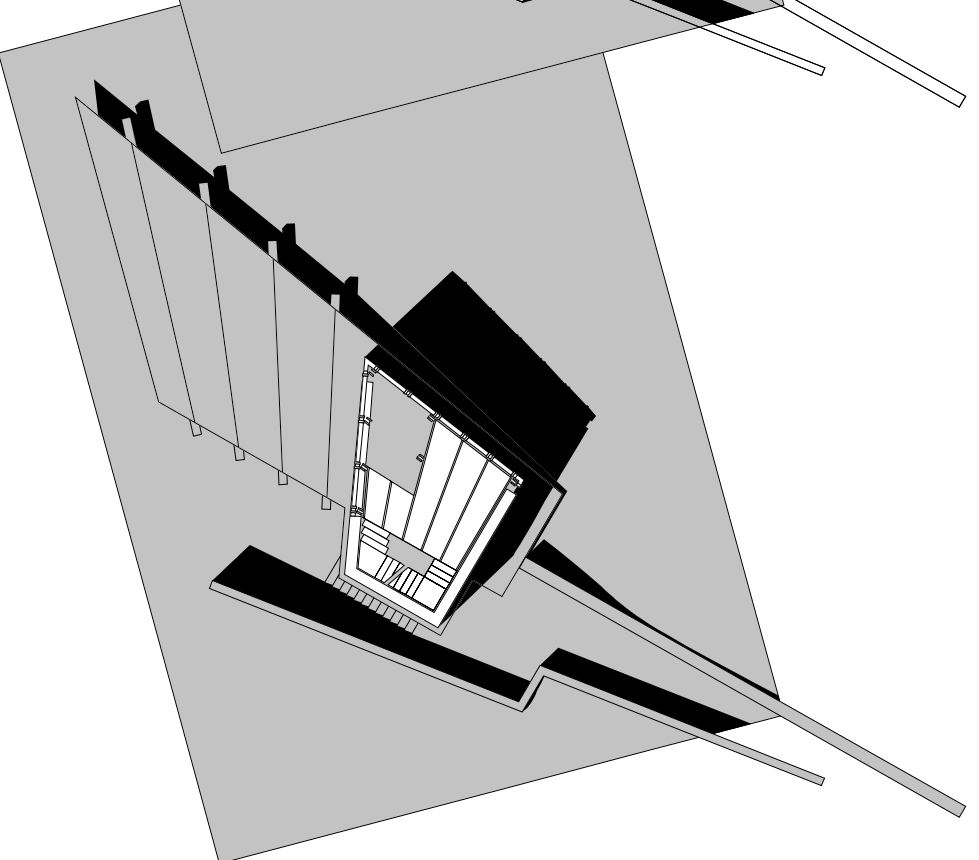




roof



fourth level - living



third level - study





“Man does not dwell in that he merely establishes  
his stay on earth beneath the sky . . . Man is  
capable of such building only if he already builds in  
the sense of the poetic taking measure. Authentic  
building occurs so far as there are poets, such poets  
as take the measure for architecture,  
the structure of dwelling.”

*Martin Heidegger “. . . Poetically Man Dwells . . .”*

Ernst Cassirer, An Essay on Man. Yale University Press: New Haven, 1944.

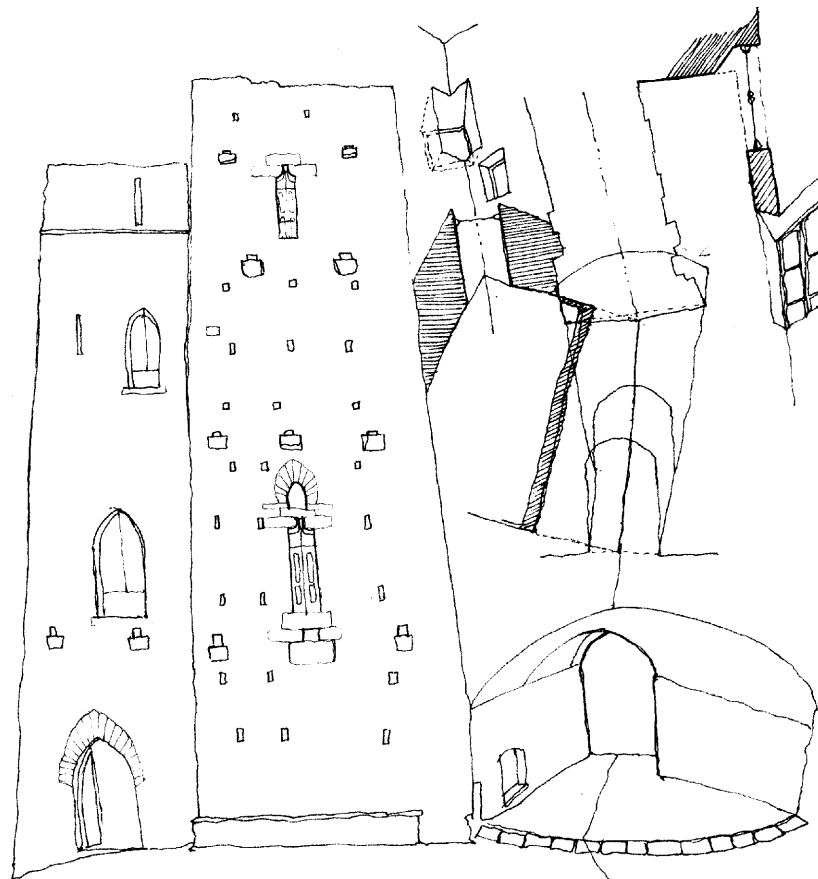
Martin Heidegger, Poetry, Language, Thought. Harper and Row: New York, 1971.

Herman Hertzberger, Lessons for Students in Architecture. Uitgeverij 010: Rotterdam, 1991.

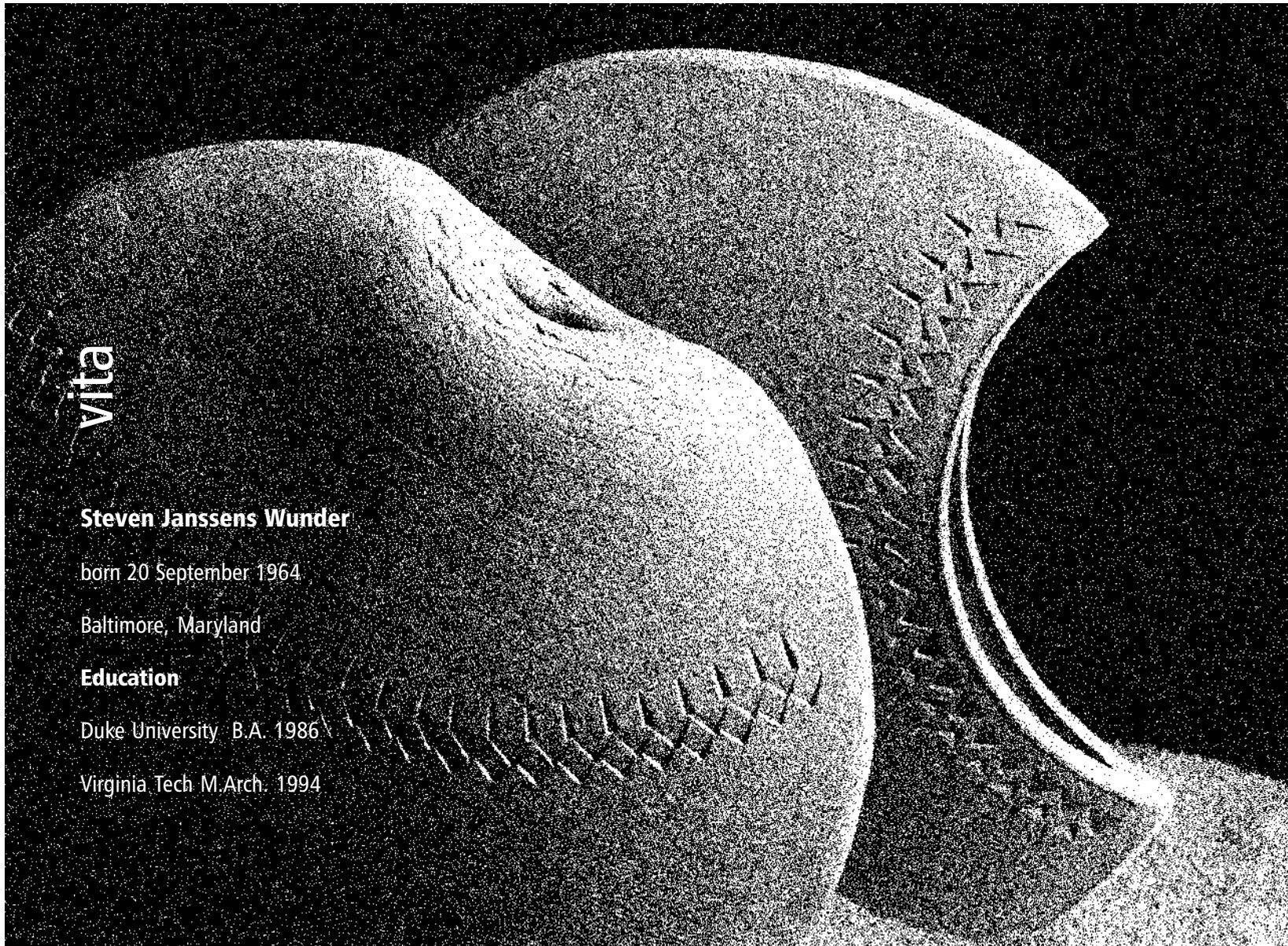
Claude Levi-Strauss, The Savage Mind. The University of Chicago Press: Chicago, 1962.

Christian Norberg-Schultz, Genius Loci: Towards a Phenomenology of Architecture. Rizzoli: New York, 1980.

Aldo Rossi, A Scientific Autobiography. MIT Press: Cambridge, MA; 1981.



bibliography



vita

**Steven Janssens Wunder**

born 20 September 1964

Baltimore, Maryland

**Education**

Duke University B.A. 1986

Virginia Tech M.Arch. 1994