Rendering (by Author) on opposite page of Lovell Beach House, 1922-26, was created from a digital model constructed by Washington Alexandria Architecture Consortium students. This model was developed using photocopies of original construction documents, and photographic evidence. The model represents the house as constructed in 1926.

Drawing from the Schindler Archive, Architectural Drawing Collection, University of California, Santa Barbara.

A presentation rendering by Schindler of the Kings Road House, 1922.

Each house needs to be composed as a symphony, with variations on a few themes.
R.M. Schindler, 1926

The most significant influence on this thesis came from studying the works of Rudolph Schindler. Each of his buildings, from his own Kings Road House in West Hollywood, California, to the Wolf House on Catalina Island, in the Santa Monica Bay, relays important lessons relating to architecture and how we live.

Schindler rarely considered the same architectural language twice during his career. However, he did on occasion rely on prior experience to further an architectural idea. For his client, the Lovells, he built an almost exact replica of his Kings Road house in Fallbrook, California, a desert community south of Newport Beach. Other examples of his experimental nature are the use of his 'Slab-Cast' concrete form-work in both the Pueblo Ribera Courts, 1925, Howe House, 1926 and the Manola Courts Apartments, 1926-1940. Later in his career, he would use what he called the Schindler Frame (a method of balloon framing specific to Schindler's construction methods) in almost all of his works. Additionally, Schindler would rely on a modulation of three-dimensional space. This modulation, defined by a three-dimensional construction grid, is based on units of 4' and subsequent subdivisions that Schindler considered natural. This modulation acted as guide and blueprint for the builders of his work. This methodology also gave many of his works a considered similarity. He did, however, break from this deliberate proportioning system at the end of his career. This change is clearly illustrated in the Kallis House, 1946, and in the Tischler House, 1949.

Each of his buildings is a study in space. He understood architecture as "space architecture." His architecture, simply put, is the forming and molding of space for human habitation. To say though that Schindler was dealing purely with abstract, functionalist notions is false. He did not consider himself a functionalist, nor could he attach any kind of "ism" to his definition of architecture. In Schindler's writings, he best explains his belief system:

"The sub-conscious realization that architecture in its old sculptural form has died as an art, leads to an attitude characteristic of our age. Blind to the growth of a new art dealing with a new medium (space) in their midst, the 'Functionalists' ask us to dismiss architecture as an art altogether. They want to build as the engineer does, producing 'types' without other meaning but that of function. They limit themselves entirely to the problems of civilization that is the struggle to adapt our surrounding to our limitations. They forget that architecture as an art may have the much more important meaning of serving as a cultural agent-stimulating and fulfilling the urge for growth and extension of our own selves."[1]

Schindler did not believe in limitations as a means of achieving an architectural solution. Instead he choose to use the limitations, be they budget, client attitude, housing association requirements, or site constraints, as a means to achieve his desired architectural ends. He also maintained a belief system throughout his lifetime that he developed early in his career. While a student at the Academy of Fine Arts, Vienna, he wrote his program (manifesto) of 1912.

I

The cave was the original dwelling
A hollow pile of earth was the first house.
To build meant—to gather and to pile material around empty cells for air-living-rooms.

This conception explains all architectural creation from the beginning of time up to the twentieth century.
The aim of architectural effort was the formal conquest of material-mass.

The only idea was plastically shaped material-mass.

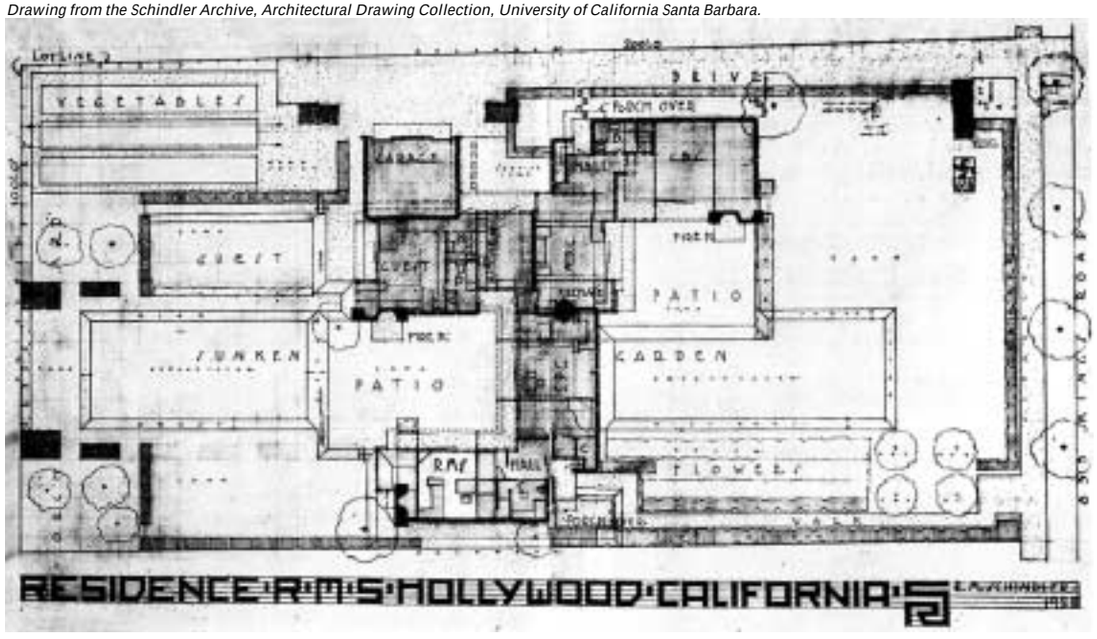
The vault was not a spatial conception but a material formwork supporting the suspended mass.
The decoration was intended to shape the mass, rather than the atmosphere.

The problem has been solved and is dead.

We no longer have plastically shaped material-mass.
The modern architect conceives the room and forms it with wall—and ceiling—slabs.
The only idea is space and its organization.

Lacking material-mass, the negative interior

Drawing from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.



The site and floor plan of R.M. Schindler's Kings Road House, 1922.

Photograph from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

Schindler's Kings Road house shortly after completion in 1922.

Photograph from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

Street level view of the Manola Court Apartments, 1926-40.

space appears positively on the exterior of the house.
Thus the 'box-shaped house' has appeared as the primitive form of this new line of development.

A new problem has been born—
and the idea of function, as always, watches over the birth.

II

The first house was a shelter for man.
The feeling of security was enhanced by every reference to the stability of the house.
Thus the architect's most effective means of expression was the building's construction.
All architectural styles up to the twentieth century *were 'constructional.'*

The effort to symbolize the constructional function of the material-mass suggested ideas for form.
The final step in this development was the artistically conceived steel skeleton;
in a framework the form no longer symbolizes the constructional play of forces;

Drawing from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

Color rendering of the Wolf House, 1927.

the construction itself becomes form.

By introducing concrete construction, the twentieth century
took the first step to disregard construction formally.

The constructional problem has been reduced to a mathematical equation.
The structural equations required by municipal code officials
make a formal guarantee of stability superfluous.
Construction has lost its interest.

Modern man no longer pays attention to construction—
the concrete piers, the beams, the mass of the wall;
for there is neither a column nor architrave,
nor plinth, nor crowning cornice.
He sees the freedom of the cantilever, the openness of the span,
the space-forming surfaces of the large partition walls.

The residential artist's attempt to make form
a symbol of construction or to give construction
an artistically expressive form is dead.

There are no more constructional styles.

The architect's instinct 'to build constructionally'
has become a hollow slogan in an age that wants to give
its artists the strangely necessary exhortation: Build with all
the mental and technical resources that your culture offers you.

III

Monumentality is the mark of power.
The first ruler was the tyrant.
His power over the human masses was expressed
in the physical conquest of static forces.
The power symbols of primitive culture and perception
were confined to overcoming the two simplest forces:
gravity and cohesion.

The monumental effect grew proportionally with
the 'work of material displacement' expressed.
Man cowers before the weight of the earth.
Today a different power of man
demands its monument.
The mind's creative power has
broken the tyrant's power.

Man has found a more mature symbol
for the conquest of physical forces—the machine.

The mathematical conquest of statics makes the structure's formal and artistic expression meaningless.

The new monumentality of space will presage
the limitless power of the human mind.

Man trembles at the expanse
of the universe.

Photograph from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

The Pueblo Ribera Courts, LaJolla, 1925.

IV

For man the value of his cave lay in its
seclusion and confinement, in the feeling
of security it gave the occupant.

The medieval city presented as its building principle
the same feeling of security; it crowded the largest number
of defenders into the smallest possible circumference.

The peasant only feels comfortable in a hut that
cares for his need of protection from the elements
by the strongest contrast with the world outside,
in rooms whose formal elements are able to evoke
recollections of this feeling of security.

The modern dwelling should not express style or personality;
it should provide a quiet environment for the occupant.
It should no longer bellow like an eternal gramophone
for every short hour of the architect and occupant.
The majority think it should be silent, 'comfortable' and 'homey'.

The civilized man has progressed from a
fear of the elements to their domination.
His home is no longer a timid retreat;
his power has enabled him to return to nature.
The words 'comfortable' and 'homey' have changed their meaning.

The comfort of the dwelling no longer resides in its
formal development, but in the possibility of controlling
within its confines light, air and temperature.[2]

Translated by Harry Francis Mallgrave

Drawing from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

Color rendering of the Pueblo Ribera Courts, 1925, by R.M. Schindler.

Photograph from the Schindler Archive, Architectural Drawing Collection, University of California, Santa Barbara.

Interior view of SPC's room in the Kings Road House, 1922.

In his own house, the Kings Road House, 1922, this attitude can be seen. Given a limited budget, (apparently all funds to build the house were borrowed from his in-laws) he was unable to design the dwelling and hire a contractor to build it for him. Realizing this he not only developed an admirable scheme, but envisioned it with the idea that two people could build the entire building. Controversy remains as to whether Schindler and Clyde Chase (his partner in the project) actually did construct the building. However, Schindler did leave us with a series of photographs demonstrating his ideals.

Schindler is also revered for his ability to manipulate a slope, making the unbuildable buildable. Prior to many of his innovative strategies, slopes were simply turned into flat platforms for the building to be placed upon. This resulted in unsatisfactory solutions that typically caused greater environmental harm than good. Several of his projects can be sighted as examples of his ability to transform the slope. The Manola Court Apartment, 1926-1940 take a collection of apartment dwellings then gracefully and forcefully step them up a 30 degree slope. The outcome of this achievement over an 14 year period is one of consistent community. This sense can still be felt today. However, more importantly, Schindler was able, in this scheme, to implement an individualism in each dwelling atypical of other similar developments.

The Laurelwood Apartments, 1948, also demonstrate Schindler's competent and artistic handling of complex programmatic issues juxtaposed in relation to a difficult site condition. Schindler's own words describe the complex best:

"Each apartment contains a living room, dining room combination, which is separated by glass partitions from the kitchen and breakfast nook, in order to obtain the utmost feeling of spaciousness...The architectural design uses to the utmost the opportunity of the hill and the view, and tries to give each tenant a feeling of living in his own house. Although large areas of glass are used the feeling of coldness is averted by using interior stucco walls only up to door height with the rest of the walls and the ceiling executed in wood. This treatment also helps to reduce the cost of redecoration and eliminates plaster cracks for all time."[3]

Schindler did not limit himself to only apartment houses in his effort to define an architectural response to the difficult hillside conditions present in Los Angeles. He designed many single family residences that demonstrate his craft. Among them is the Wolf House, 1928-29, that best describes his ability to harmoniously blend an architectural response to a site. This house was considered a temporary dwelling by its owners. Their intention was to use the house only on weekends and during the summer months. Additionally, the house, being more of a retreat than a daily dwelling, was to also provide accommodations for guests. The house is thus more playful in nature. Schindler left in his archive the following brief description of the house:

"The character of the house as a play house is emphasized by its form. It appears light and airy and all vertical supporting members are architecturally suppressed. No excavating was done to speak of; instead of digging into the hill, the house stands on tiptoe above it. The design consciously abandons the conventional conception of the house being a carved mass of honeycombed material protruding from the mountain, for the sake of creating a composition of space units in and of the atmosphere above the hill. Only the foliage from an abundance of flowerboxes all over the building laces it back unto the ground."[4]

Although this project is not in direct response to hillside building conditions, the site planning and relationships of the buildings to nature in El Pueblo Ribera Courts, 1923, are worth noting. Here Schindler used his experiences of his own home for the *parti*, and the Lowes House, 1922, for constructional methods to develop a response to this oceanside retreat. There are twelve individual dwelling units at El Pueblo Ribera, sited on a gently sloping site which until the 1960s had direct ocean views. The units are constructed using Schindler's 'Slip-Cast' concrete construction method (first used in the Lowes House, 1922, in Eagle Rock, California) topped with a lightweight wood frame. The concrete forms the heavy building base as well as the walls necessary for partial garden enclosure and room definition. The wood framing is used to enclose rooms and form the lightweight ceiling trellises of the verhandas.

In the Kings Road House, Schindler used an 'L' shaped parti for a building complex made up of two adjacent 'L' shaped units with a common kitchen and small third dwelling unit between the two. Each of the 'L' shaped units forms an exterior room in the garden that has on one side of it the back of one of the other units. At El Pueblo Ribera, Schindler used the enclosure of the 'U' to form the garden room. The extension of this room was made using the back side of the adjacent unit, and an 'L' shaped row of hedges. Here again the effect is to create an extension of the indoor space into the garden where the garden becomes a room.

El Pueblo Ribera is not without precedent. It is assumed that Schindler was familiar with the work of Irving Gill who had by the time El Pueblo Ribera was conceived built Lewis Court, 1910 and Horatio West Court, 1919. These two examples of a 'modern' approach to bungalow court housing could very well have been a clear connection to the work that Schindler produced. Of even more significance is the fact that at El Pueblo Ribera there is a density approximately 50% greater than seen in contemporary suburban developments. This can only emphasis the fact that a sensitivity to dwelling placement and site

Computer rendering by author, digital model created by Students from Washington-Alexandria Architecture Consortium-Computer Design course taught by author.

The four elevations of the Lovell Beach House as it would have appeared in 1926. These perspective elevations are computer generated using information gathered from copies of the original construction documents and archival photographs of the house taken during and shortly after construction. From left, North, West, South and East Elevations.

design is paramount to a sustainable housing development.

To implement his architectural ideas Schindler developed a design and construction proportioning system. It is important to understand this system, as it will guide one to a better understanding of the building design:

"'Scale' denotes a consistent dimensional relationship of parts of a structure to each other and a basic unit. This unit in a dwelling is quite naturally the human figure.

The unit lines are indicated on all plans in form of a four-foot grid. One system of lines in the plan is marked by letters, the other is numbered, and the vertical marked with grades...The architectural product must be a part of human life, and unless related to us in scale and rhythm is monstrous. In order to be useful the unit must have a simple relation to human stature and must be large enough to keep the necessary number of units required to size the average room small enough for easy grasp. It must be small enough to fill all needs for detail sizes by subdividing into simple fractions which can be easily pictured, 1/2, 1/3, or 1/4 at the most. For practical reasons the unit should adapt itself to certain standard dimensions already established in our industry-lumber lengths, door and ceiling heights, 16" [on center dimensioning] in woodframing, etc.

...the four foot unit...

Human height = 1 1/2 units = 6'-0"
Standard door height = 1 2/3 units = 6'-8"
Standard room height = 2 units = 8'-0"
Fractions: 1/2 unit = 24"
1/3 unit = 16"
1/4 unit = 12"

These three fractions plus small multiples of the four-foot unit will give all the dimensions necessary for the architect. He can dispense with measuring tapes, rulers, figured dimensions, endless additions, subtractions, checking and rechecking of figures, confusing dimension lines and arrows." [5]

However, in addition to developing an understanding of the technical aspects of this particular architect's building systems, it is important to understand and verbalize that which is more undefinable.

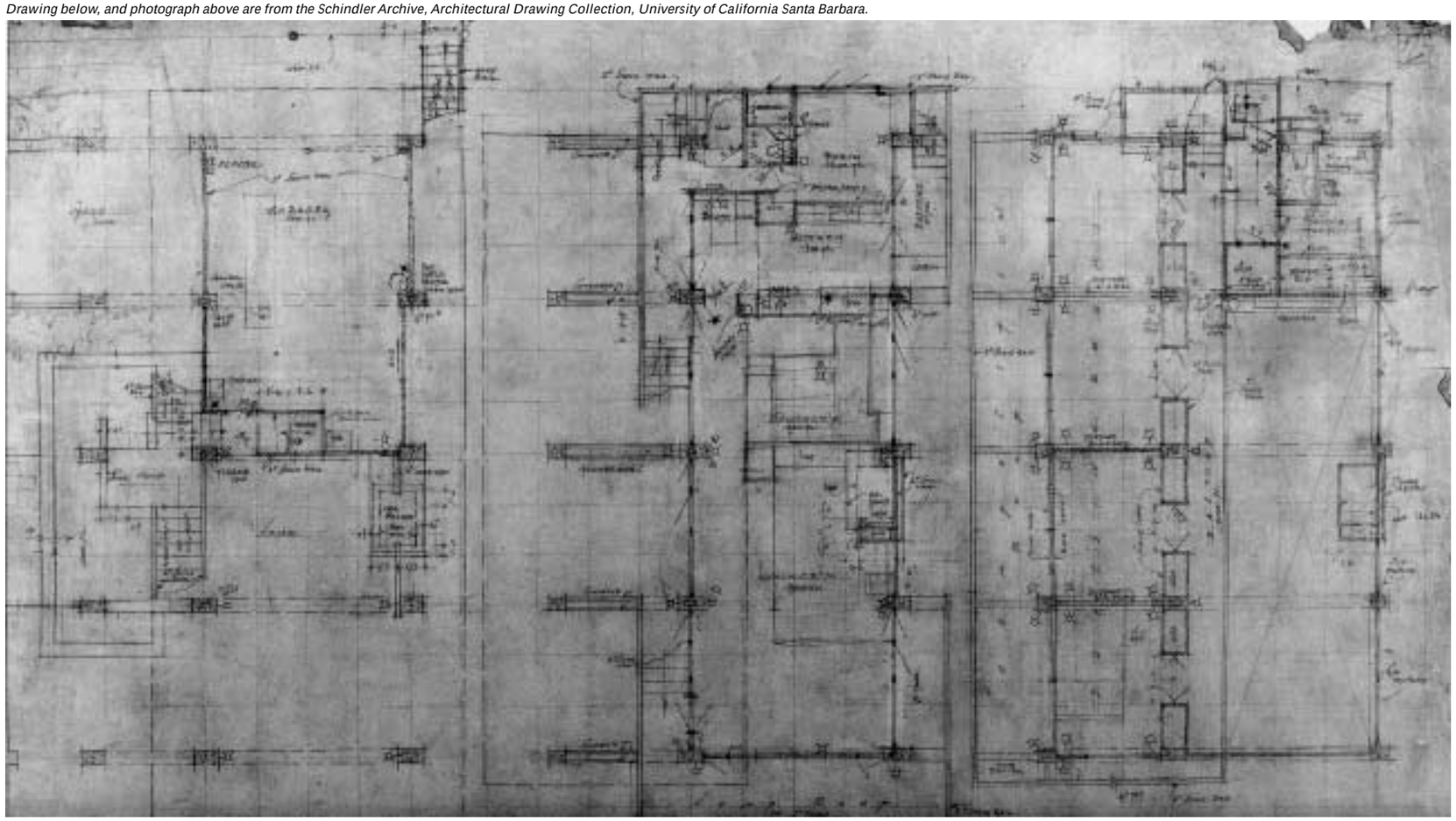
In 1915 Schindler made a trek to the desert Southwest, and his sketches of this time are noteworthy and memorable. However, it was during this trip that he came into direct contact with the indigenous architecture of the area. The architecture Schindler came into contact with was the adobe vernacular of the pueblo Indians. Later in 1919, while traveling to Southern California to work with Frank Lloyd Wright, Schindler spent a period of time camping at Yosemite. Here, while spending idle hours at the campsite, he began to recognize the interdependence and relationship of the camp fire, the tent and the forest. He did, perhaps, even notice how the combination of these elements of nature made him feel, both spiritually and emotionally. It is here that he also may have begun to understand the elements that make up a

The Lovell Beach House under construction.

Photograph is from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

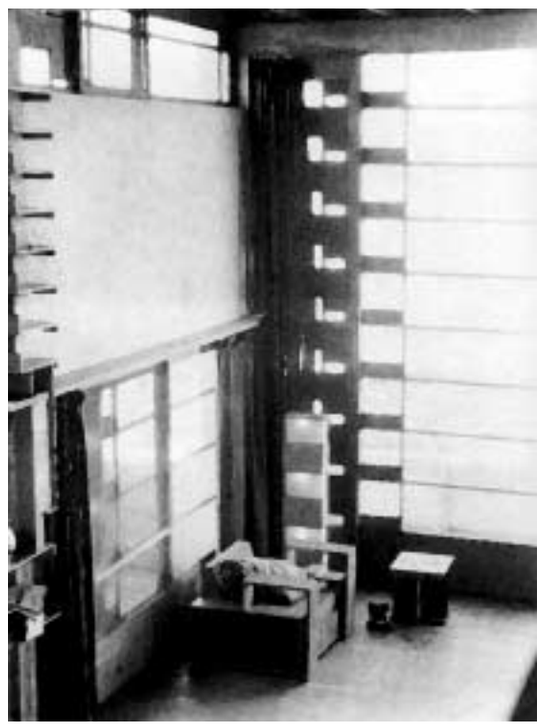
All furnishings, and fixtures for the Lovell Beach House were designed by Schindler. Each piece was built from the form-work used to fabricate the concrete frames.

Drawing below, and photograph above are from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.



Original construction documents for the Lovell Beach House. These demonstrate Schindler's "loose" construction administration. Note the various notations, sectional details of structure and general state of completeness. Also note how the frame is used to transfer heat and exhaust.

Photograph is from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.



The interior of the Lovell Beach House, shortly after construction, in 1926. This view is taken from the balcony looking toward the oceanfront window.

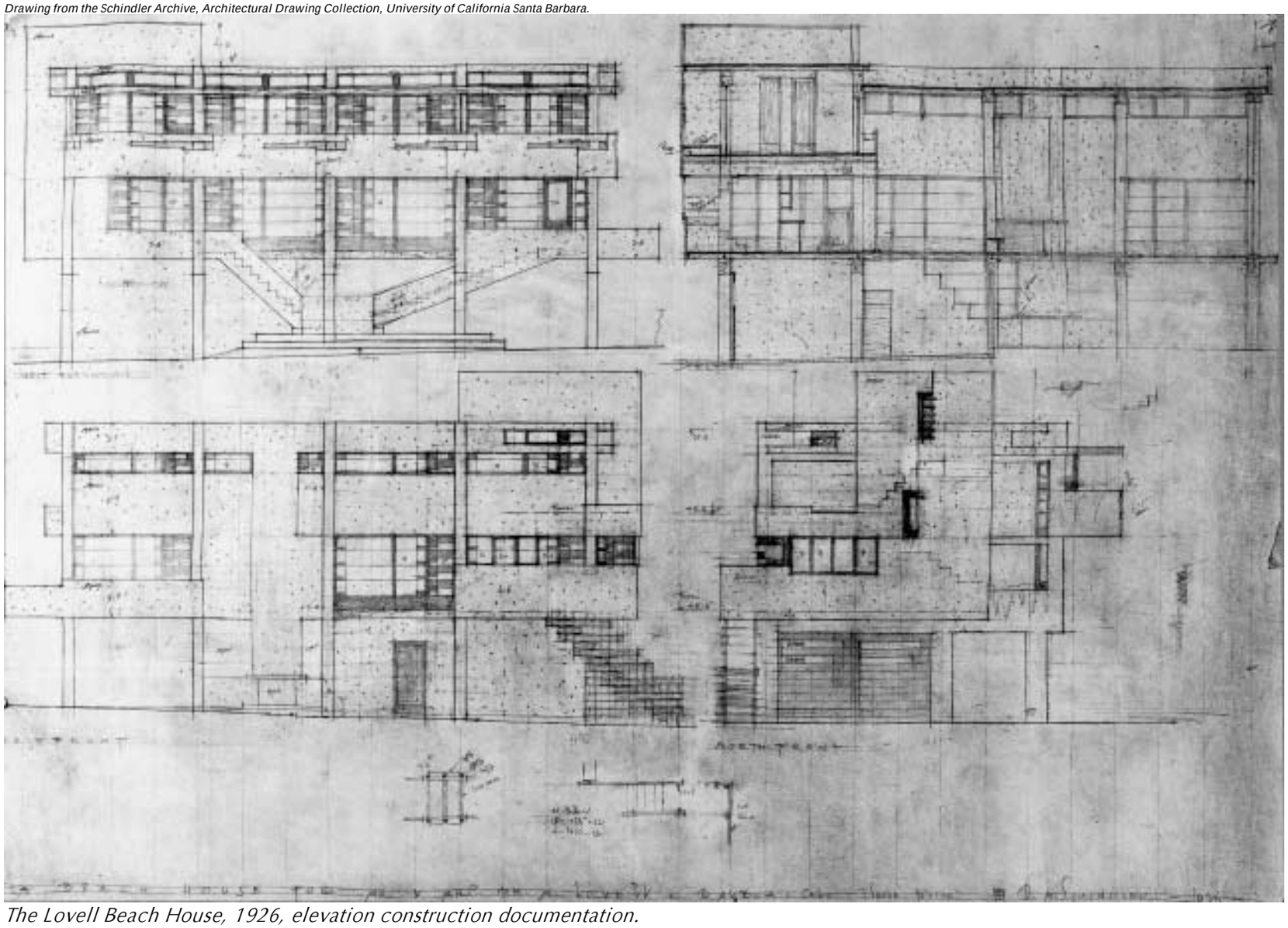
room.

It was Frank Lloyd Wright's Hollyhock House that I believe gave Schindler the final clues as to how he would proceed with the design of his own dwelling. Studying the Hollyhock house one recognizes several elements significant to the building's design. Among those significant design elements are: the reliance on a 4' grid (based on a loose 20' grid of olive trees present on the site where Hollyhock House was built), the relationship of thick protecting wall to lightly framed glazed openings, and the garden. Of course this is not to say or even suggest that Schindler copied Wright. Contrary to that notion, it appears that Schindler sensitized many of the experiences that we know that he participated in and made what he observed his own. With those experiences Schindler developed an idea that would revolutionize our concept of house.

Relying on the mission, its thick wall, and the Mexican domestic dwelling with its outdoor central courtyard for communal living, Schindler developed a double 'L' shaped house plan for two families. It is constructed of reinforced tilt slab concrete, which support a light frame roof, sleeping porches, and is balanced on the opposite side by a glass window wall. The structure itself encloses on three sides the living room of the houses, an open grass patio. This house, the first to introduce the idea of the sliding wall opening the inside to the outside, has had great influence architecturally on the Los Angeles area as well as the domestic scene.

Considered by many to be Schindler's single greatest masterpiece in form and dwelling is the Lovell Beach House at Newport Beach, 1922-26. Philip Lovell was a columnist for the *Los Angeles Times*, his column, *Care and Health of the Body*, promoted the idea that the house must encourage and enable healthful living. At the request of Philip Lovell, Schindler wrote a series of articles for Lovell's newspaper column. These articles, written before the construction of the beach house, were intended to introduce the public to both Lovell's and Schindler's controversial ideas on health and architecture. Additionally, Lovell intended that these articles would enlighten the general public regarding the matters of living within a healthy environment. Furthermore, he intended that his readers would understand that this healthy environment could only be attained through a considerate architecture. These articles, of which there were six, cover topics ranging from construction technology to lighting and plumbing. As a body of written work they also serve to inform contemporary scholars about how Schindler viewed his art and craft. This is perhaps best shown in the last article of the series that appeared in the *Times* on May 2, 1926:

Drawing from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.



The Lovell Beach House, 1926, elevation construction documentation.

Shelter or Playground

It is not enough appreciated how directly and clearly our attitude toward life is expressed through our houses. The peasant who is trying to build his house exactly like his father's modernizes it unconsciously. The architect, however, who does not work freely from memory, but who uses reproductions to help his imagination is too conscious about his effort and creates dead replicas.

Our present houses are too strongly under the influence of the past and its outlook on life. Fear dictated originally the form and spirit of the house. The behavior of our ancestors was over shadowed by constant defense reactions against real and imaginary enemies. The emphasis of the historian upon war and its physical heroism proves the tremendous need to counteract these fear complexes.

No wonder that everybody's house was his castle, and that all rooms tried to appear comfortable by emphasizing their safety through their heavy walls, small windows, ponderous grilles, thick curtains, and dim light.

This spirit was only partly broken when the crumbling of the caste system started the lower classes on a period of social climbing. The house was and is a source of social prestige. The parvenu who had access to the front rooms of the aristocrat insisted that his home be historical in design, and that every one of his own rooms be a replica of the luxurious salon which impressed him.

The American house of today is entirely a product of this attitude. Neglecting to consider the changes in our mental and physical life, it tries to give social prestige by masquerading in outworn historical styles.

These changes, however, demand expression. The earth, the sky and the neighbor, the curse of the past and the retribution of the future, have lost their frightfulness.

Our high mechanical development easily controls our living conditions. Our knowledge about our own bodies releases us from slavery, and Nature becomes a friend. The house and the dress of the future will give us control of our environment, without interfering with our mental and physical nakedness.

Our rooms will descend close to the ground and the garden will become an integral part of the house. The distinction between the indoors and the out-of-doors will disappear. The walls will be few, thin, and removable. All rooms will become part of an organic unit, instead of being small separate boxes with peepholes. How petty the attempt to erect each one of different materials

and to decorate them separately in different "styles!" Each house needs to be composed as a symphony, with variations on a few themes.

Our present scheme of social life in which we drudge behind the scenes most of the time in order to present an "impressive" face for a few moments of company is outworn. In driving out the king, we have lost the careless instigator of fashionable social manners. Our own everyday actions must achieve the dignity of the past ceremonials. Each one shall create his own fashions-but only for himself.

Our house will lose its front-and-back door aspect. It will cease being a group of dens, some larger ones for social effect, and a few smaller ones (bedrooms) in which to herd the family. Each individual will want a private room to gain a background for his life. He will sleep in the open. A work-and-play room, together with the garden, will satisfy the group needs. The bathroom will develop into a gymnasium and will become a social center.

A simplified cooking will become part of a group play, instead of being the deadly routine for a lonely slave.

The architect will try to divine the possible development of his client, and will design a building which may grow with him. The house will be a form-book with a song, instead of an irrelevant page from a dictionary of dead form dialects.

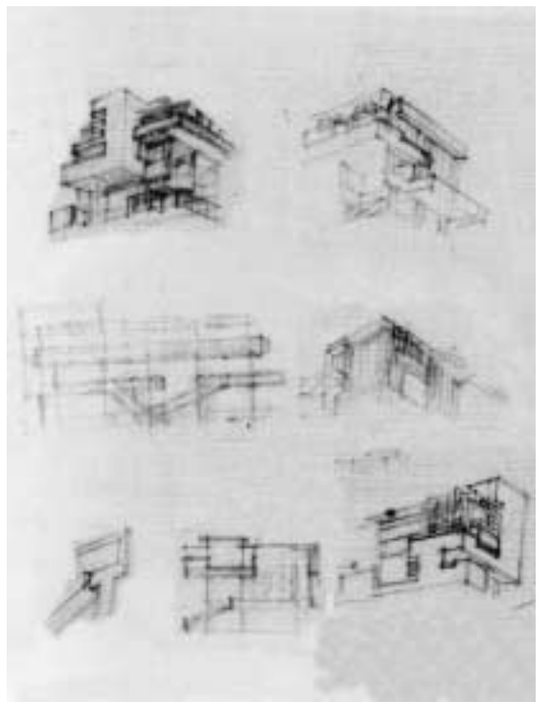
And life will regain its fluidity."[6]

It was with these revolutionary ideals that he set about designing the beach house.

The house is constructed of five concrete bents, elements that Schindler would refer to as space reference frames. The frames lift the house up from the beach and at the upper levels are infilled with gunite panels. These panels are used to divide spaces within the frames, wood floors and roof. This house sets a precedent more of attitude, than anything else. The house speaks of how architecture could accommodate the Los Angeles life style. With the house set upon the five bents of concrete, air was allowed to flow up under the building to complete a natural ventilation cycle. The spaces on the ground allowed the beach to come literally into the house. These wind blown sands under the house acted as the children's playground. Balconies were adjacent to dressing rooms and acted as sleeping porches. Conceptually, this sounds appealing; however, Schindler made a grave error and did not detail the draining of these porches properly. They were closed in after several very wet winters. One could view the ocean from virtually every room in the house. To complete this package he topped the house's flat roof with a full exercise facility with an area for nude sunbathing. Here, as in the Wolf House on Catalina, Schindler separated the entry. If one came from the beach there was adjacent to the children's playground an outdoor shower for cleansing. After taking a shower, one would rise up into the house via the steeper of two stair cases adjacent to the north side of the house. This stair, if studied in plan, leads directly up to the roof-top gymnasium. The alternative entrance, the less steep stair on the north side of the house, provided a formal entry into the dwelling. This stair takes the visitor directly into the work-and-play room on the first floor. A third staircase (shown in the computer rendering) no longer in existence was built to allow access for servants to the service portion of the house.

As much as Schindler's life work has been praised in recent times, it still has validity in our time. His concerns of economic control and misguided design were often demonstrated by him. Yet, his work has retained a simplicity and a self awareness that makes it all the more thoughtful and satisfying today. As he said towards the end of his life:

"We have come down to earth. This is expressed in modern architecture. Modern architecture lies down flat on the ground like a kitten who suns itself. It does not rise to a pyramid."[7]



Sketches of the Lovell Beach House done by Schindler in 1922.

Computer rendering by author, digital model created by Students from Washington-Alexandria Architecture Consortium-Computer Design course.

View of the south and east elevations of the Lovell Beach House as it may have appeared at night in 1926. The staircase and balconies shown here were removed in the 1960s.

Drawing, left, and photo below, from the Schindler Archive, Architectural Drawing Collection, University of California Santa Barbara.

The Lovell Beach House, 1926, photographed after plantings had matured, probably in the early 1930s.