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R. M. Schindler’s theory of space architecture and its theoretical application to his Space Development of 1945

Jin-Ho Park

Introduction

Rudolph Michael Schindler has been known as the first and foremost space architect in his own words, whose devotion to space as defining architecture remained vital and remarkably consistent throughout his professional career. The purpose of this research is systematically to interpret Schindler’s theory of space architecture, and then to discuss his theoretical project: Space Development. The first part investigates Schindler’s underlying forms of conception. For Schindler, forms of architecture begin with the space architect’s process of thinking, shaping, and feeling the building in his mind. Using a recently uncovered series of Schindler’s 1916 lecture notes, from the Schindler archive at the University California, Santa Barbara (UCSB), the investigation presents a new and critical examination of his theory. The second part interprets his theoretical project, Space Development, to strengthen the understanding of Schindler’s notion of space architecture. Along with Space Development, Schindler also developed two related projects in the same year, sharing the same compositional logic. This article further examines the spatial paradigm pertinent to his Space Development, investigates its relationship to two other designs, and demonstrates how his design theory became further clarified and strengthened through it in the final phase of his career.

Cornelis van de Ven attributed Schindler as being one who belonged to ‘the first exponents’ of the notion of space in architecture, along with Hendrick Petrus Berlage and August Endell; and considered his theories of space in architecture to be in line with the German school theory of ‘Empathy’ and the theory outlined in Geoffrey Scott’s book The Architecture of Humanism. Michael Schwarzer, author of German Architectural Theory and the Search for Modern Identity, endorsed this view. Schindler was one of the architects influenced by August Schmarsow and brought spatial issues to

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the front in the discussions of architectural history and theory of the 1920s and 1930s along with Gustav Platz and Siegfried Giedion. In 1993, Henry Francis Mallgrave traced Schindler’s early notion of space architecture found in his 1912 manifesto back to Otto Wagner, Adolf Loos, and German theorists such as Gottfried Semper, Heinrich Wolfflin, and August Schmarsow. Then, he concluded: ‘In Schindler’s view, architecture as an art had evolved to a more sublime and abstract level by relinquishing its symbolic capacity to speak. Humanity had “matured” to the point where it could dispense with its maudlin need for psychological shelter and find its path back to nature.’

Certainly, the unique development of Schindler-esque architecture was marked by a strong link between the two prime architectural traditions: the Austrian tradition of architectural theories continued by Semper, Wagner, and Loos, and an organic tradition in America promoted by Sullivan and Wright. While Schindler’s architectural theory epitomised the blend of the two traditions, his modernist practice expanded beyond the theoretical lessons. Accordingly, Schindler’s integrity of thinking and subsequent design applications showed bold clarity and consistency.

Schindler’s fascination with the theory was already evident in 1912 when he wrote a manifesto, entitled ‘Modern Architecture: A Program.’ The manifesto was virtually an early theoretical credo of his space architecture. In 1916, before Schindler came to Los Angeles, he delivered a series of lectures at the Church School in Spring Green, Wisconsin, and documented them in a booklet of his handwritten lecture notes. It is believed that these notes established a basic foundation from which Schindler could formulate his theory of architecture. Most of Schindler’s subsequent articles and later freehand lecture notes on space architecture derive from his 1916 lecture notes. It was most likely that his fundamental theory of space architecture had been formed at this time, and maintained within the more elaborate theory that evolved.

The theory of space architecture

The notion of space architecture dealt with mental processes as space was being conceived. Space was conceived as a geometrical form through the architect’s mind and with the help of materials. Then, the execution of architecture reflected the forms conceived by the architect’s creativity. Therefore, form creation referred not only to the act of physical fabrication but also to the entire mental process that led from inception to completion.

Initially, Schindler considered form conceptions in two different modes: ‘forms of nature’ and ‘forms of mind’. Forms of nature included organic and inorganic forms which were viewed as they are rather than as they were conceived by the human mind. These forms were the given, and, thus, could not be ‘invented’ into new forms. In contrast, forms of mind were the abstract realms of reasoning based on geometrical forms. Creative architecture could interpret forms of nature through geometrical forms of mind, thus creating something new. Actually, Schindler was not concerned with the inner vitality or structural logic of forms of nature themselves, but rather with the role or extent of forms of mind. Like other organic architects, he was insistent that forms of art were
based on eternal geometrical forms and made
unique not through the imitation of nature but
through the architect’s creative mind.17

Schindler seemed to adopt a critical approach to
antiquity. Leon Battista Alberti expressed the same
concern: ‘It is quite possible to project whole forms
in the mind without any recourse to the material,
by designating and determining a fixed orientation
and conjunction for the various lines and angles.
Since that is the case, let lineaments be the precise
and correct outline, conceived in mind, made up
of lines and angles, and perfected in the learned
intellect and imagination.’18 Not only was Alberti’s
rich legacy reflected in the Renaissance architects
and theorists, but also in the leading German archi-
tectural theorists of the mid-nineteenth century,
such as Gottfried Semper. Semper wrote ‘Architec-
ture creates original formations, which are not con-
tingent on fully finished natural forms but which
have evolved historically according to natural laws
and to the human mind’s inclination toward
order...’19 Schindler’s view was closely tied to
Semper’s collaborative discussion between natural
laws and the power of the human mind in the cre-
ation of architectural forms. Semper’s articles were
introduced to the Chicago architects, including
Sullivan and Wright.20 In particular, the idea
seemed to reflect Sullivan’s system of architectural
ornament and Wright’s notion of ‘conventional-
isation’ of nature or geometric abstraction from
natural forms.21 Their views definitely helped
Schindler to define his architecture.22

In defining form conceptions, Schindler stipulated
the reciprocal relationship of three terms: space,
room, and form. Although space and room were
alike in his German term, raum, Schindler differen-
tiated the compositional relationship between the
two concepts by introducing another term,
‘form’.23 He equated ‘matters’, which had attributes
such as material, colour or texture, plus ‘geometric
law’, with ‘form’; and ‘space plus law’, with
‘room’.24 Form and room were considered key com-
ponents of architectural composition where geo-
metric law was recognised as the sole vehicle
governing the composition. According to Schindler,
‘Form conceived by the human mind is always
founded on geometrical figures.’

For Schindler, space was architectural raw
material, which involved a boundless and infinite
continuum. Room was understood more or less as
an abstract geometric shape with non-materialistic
functions. It was a bounded and enclosed concept
of space25 that involved a process of an architect’s
abstraction and contemplation. He felt that
‘human beings could not conceive space’ but
instead always conceived rooms.26 An array of
rooms related to each other became an organism
that Schindler called a house, such that all rooms
related to each other. Finally, form or space form
was considered as a final product where both cor-
poral and intellectual properties were woven
together in the architect’s mind. It was the final
stage of the form conception process.

Schindler’s design application of this idea was
evident in his use of geometrical methodologies.
He comprehensively summarised his method in an
article, ‘Reference Frames in Space.’27 Although
published much later in 1946, he used this system
from his very early period, and it prevailed in his life-
long practice. His approach became clearer when he
stated, ‘And last, but most important [part of the unit system] for the “space architect”, must be a unit which [the architect] can carry palpably in his mind in order to be able to deal with space forms easily but accurately in his imagination.’ This led to a search for a basic unit of length for the building, where the dimensions are integer multiples or subdivisions of the basic length. Schindler also emphasised the human size as a ‘fundamental unit’, rejecting the artificiality of the metric system. Schindler characteristically noted that the divisions of the metre are ‘too small for conception.’ According to Schindler, it was essential to have such a method for human intellectual development of space forms. Thus, the complexity of space forms was freely and precisely manifested in the architect’s mind.

The expression of such space forms differed from personal taste and the architect’s subconscious imagination since ‘laws of the human mind have no formula.’ Schindler separated two kinds of expressions of forms: ‘intellectual form’ and ‘emotional form.’ The former allowed for explanation, but the latter only for contemplation. Since intellectual form was explanatory, viewing it through the idea of function delineated its form. On the other hand, emotional form could prove powerful, but its effect could not be explained by the intellect since it deals with sense perception. Here, Schindler seemed to separate the role of the architect from that of the observer. Intellectual form related to the architect’s reasoning and rational act of creation. By contrast, emotional form related to the observer’s subjective vision and emotional appreciation.

Intellectual form was referred to as the form with purpose. In Schindler’s words, ‘every room is conceived in view of its distinctive purpose, and its final form should be formed accordingly.’ In support of his philosophy, Schindler continuously echoed Wagner’s motto of ‘Form follows Purpose’. Schindler believed that this philosophy opened the gate to the discussion of the old ideas of ‘Form follows Construction’ and brought ‘new life to art.’ In Wagner’s own words, ‘It is therefore certain that new purposes must give birth to new methods of construction, and by this reasoning also to new forms.’ Wagner’s spirit was embedded in Schindler’s mind and emerged continuously through his creative works.

Emotional form related to the observer’s aesthetic judgement and appreciation of space and space forms. It relied on the observer’s emotional condition and intuitive perception. Although empirical knowledge involved the architect’s creation, according to Schindler the space architect created new designs by their own intellect and conceived the non-existing form through their mind. Conversely, the observer simply contemplated the forms of space and felt the power of empathic space.

Later, Schindler summed up his notion of form expression: ‘The house of the future is a symphony of “space forms”—each room a necessary and unavoidable part of the whole. Structural materials, walls, ceiling, floors, are only means to [an] end: the definition of space forms. They lose their individual importance and are simplified to the utmost—a simple weave of a few materials articulates space into rooms.’ All the parts of the building were subtly integrated into an organic whole. The
different parts of various elements were so entwined that the building remained organically unified.\textsuperscript{33} The parts have no independent meaning unless they combine as members of the whole. As in Richard Wagner's Gesamtkunstwerk in music,\textsuperscript{34} every architectural element was digested to create the final whole in a mode of organic expression. This concept was common in the works of the artists and architects who influenced Schindler, including Wright, Sullivan, Loos, Wagner, and Semper.\textsuperscript{35} This approach ultimately formed the essence of Schindler's space architecture that evoked a spatial-feeling of beauty which Schindler described as 'charming'.\textsuperscript{36}

Using this approach, Schindler pursued the architectural sublimity that proposed that all living rooms for human beings must be cosy, liveable and ultimately charming spaces.

In this discussion, Schindler did not relate form conceptions to psychological, visual, sensory experience, or movement within. On the contrary, form conceptions were related purely through the architect's mind and its reasoning with geometric laws. Perhaps, the claim by Cornelis van de Ven and Schwarzer that Schindler's space architecture was in line with Schmarsow's theory of space seems questionable. It was most likely that Schindler was exposed to Schmarsow's theory while he was in Vienna. However, Schindler's approach to the creation of space was fundamentally different from Schmarsow's theory since the creation of space was based on the phenomenal intuition of space. For Schindler, that intuition came from the sensory experience by the movement of the body through the space, and also from Wolfflin's theory of the psychological perception of physical forms.

Schindler crystallised his idea of space in his mind, instead of visualising it through a physical model, bodily movement together with the perceptual process, or other methods. As a result, his houses provided a full array of new spatial experiences, and, at times, surprises, due to the complexity of their spatial flow. His instructions for creating rooms were: 'Do not start to draw before everything is shaped in your mind. Feel the [building], let it grow in your conception until it gets stronger and stronger—absolute—[in] its form.'\textsuperscript{37} This could only be done in a 'mature' architect's mind.

The most direct figure in the formation of Schindler's theory was Adolf Loos. Borrowing Semper's dressing theory in his paper, 'The Principle of Cladding',\textsuperscript{38} which denoted spatial creation as a fundamental notion in architecture, Loos further expanded Semper's paradigm of blending elements of architecture with the space notion. He proposed a conceptual sequence of architectural tasks: first, the creation of warm and liveable space as the architect's primary role, in particular through the device of the carpet; and secondly, the making of a structural frame to support the carpet as the architect's subordinate task. Based on this concept, he suggested two basic elements of spatial constituents: the covering and the walls. Loos developed these ideas into his theory of Raumplan. Although the term Raumplan was coined not by Loos himself but by Heinrich Kulka with Franz Glück, Loos provided a glimpse of his idea of the theory: 'I do not design plans, façades, sections, I design space. Actually there was neither a ground floor, an upper floor, nor a basement. There were merely interconnected spaces, vestibules, terraces. Every
room required a specific height—the dining room a
different one from the pantry—therefore the floors
are on varying levels. After this, one must adjust
the spaces with one another so that the transition
became unnoticeable, natural, and most impor-
tantly, practical.\textsuperscript{39}

Significantly, Loos’ building appeared to be a box-
like form from the exterior: however, his interior
spaces are integrated on various levels, and are con-
tinued from one space to the other (Fig. 1). Thus the
simplicity of the exterior appearance showed a great
contrast to the inner complexity of the building. This
idea was very much evident in his works, particularly
his later Villa Müller.\textsuperscript{40} Schindler joined Loos’ private
Bauschule where Loos lectured in three areas: build-
ing from inside to outside, art history, and the
science of material.\textsuperscript{41} In his lecture, ‘Building from
Inside to Outside’, Loos described his spatial idea:
‘the project must be formed from the inside to the
outside ... This way I brought my students to think
three-dimensionally in the cube’.\textsuperscript{42} Loos’ influence
on Schindler was evident in Schindler’s own words:
‘The only way to really perceive a “space form” is
by being inside of it.’\textsuperscript{43} Loos’ spatial paradigm
directly influenced Schindler and flourished in
Schindler’s theory and practice. In Schindler’s
designs, it was hard to predict their space-form
with plans, elevations, and sections. As Loos
insists, for Schindler these drawings were just a
2-D notational form, like a scale in music.\textsuperscript{44} Basically,
Schindler’s approach was not one of figure and
ground. Unlike Loos’ approach, which has a great
contrast between the simplicity of the exterior and
the complexity of the interior spaces, in Schindler’s
space architecture, the interior and the exterior
spaces were both intertwined inside out. In the
interior, the spaces flowed into each other and, on
the exterior, simple and rectilinear space-forms

\begin{figure}
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\includegraphics[width=\textwidth]{figure1.png}
\caption{Left, Adolf
Loos, the Moller House,
Vienna, 1927–28;
right, Rudolph M. Schindler, The
McAlmon House, Los
Angeles, 1935}
\end{figure}
were highly interlocked. Their union created a rhythm of complex combinations. Thus, it was often hard to distinguish where the building started or ended; it was frequently lacking a clear main façade.

**Space Development, Schick house and Braden house, 1945**

After a number of years of practice as well as theoretical clarification of his space concept, Schindler developed a small house project, called Space Development. It has become known as his theoretical exploration and prototypical development of the space concept. It was designed in 1945 when Schindler was 48, at the highpoint of his architectural creativeness.

With Space Development, Schindler reinterpreted his early notion of space architecture particularly expressed in his 1912 Manifesto: ‘the contemporary architect conceives the raum and forms it with ceiling and wall … There are no more columns with base, shaft and cap, no more wall masses with foundation course and cornice. He sees the daring cantilever, the freedom of the wide space, the space forming surfaces of thin wall screens.’ Most of these ideas were surely rehearsed in Space Development with ‘hollow adobe’ rather than with sculptural mass, and with various layers of walls and ceilings. Neither heavy structural load nor centralised support was indicated in the design. Instead, the skin enclosure of ceilings and walls wrapped up the space form and complementary window planes filled their gaps. This project was an example of his ideal residence, embodying his vision of space architecture.

Schindler left only two sets of plans. He never developed any other drawings including perspectives, sections, and elevations. Two reasons have been assumed for this. First, these drawings were not necessary for his theoretical exploration of the space concept. For Schindler, the spatial richness of the project was purely derived from the architect’s imagination, in his words, ‘forms of mind’. He wrote that ‘space can only be grasped by the architect’s mind by envisioning it’, or, as he put it, ‘by being inside of it’. He continued, ‘no perspective or model, even though it were sectional or transparent, could help much in designing space.’ Second, since such drawings were mere technical descriptions or presentations of the project aiding people to picture how a building may look, in Schindler’s mind the floor plans were enough to present the three-dimensional whole.

The single-storey house was of a relatively small size and divided into three major areas: the kitchen with services room; three bedrooms, which directly connect to a large terrace; and the living room with an entrance and a bath. The spatial division was conventionally derived from each of their functions. On the ground plan, two opposing outside views were provided: one from the living room to the outside patio and the other from the terrace. Neither the site location nor structural details and materials were known, other than some indication of built-in furniture shown in plan.

There was no clear evidence of his use of a 48-inch space reference frame on the plan. Axial or symmetrical approaches did not appear in the ground plan. The ground plan appeared to be developed not from an order but from a random
structure. Unlike his earlier design, the ground floor plan looked less formal. Closer inspection revealed that the key geometry of the composition was a square from the start. Various rotated squares were superimposed in the layout of the plans and ceilings as the underlying law of the plan juxtaposition. They were set at an angle of 45 degrees to each other in both orthogonal and diagonal axis. Geometrical articulations of the square were permitted to overlap and then eventually to disappear in various plan designs. The shape of the roof with the open clerestory area revealed the initial geometry of the square that was an integral part of the spatial composition. The shape of the roof was presented as a pyramid form. It covered not only the major living room but also part of the kitchen and a bedroom. It also allowed the movement of air between rooms over the ceilings without opening the doors. The axial arrangement of the ground plan imposed directions to provide various views from the interior. Space Development was a prime example of Schindler’s design process where the metaphysical space with geometric laws was translated and manifested into architectural form. McCoy clearly stated the way that Schindler designed the project, ‘The plan was at first almost square … Schindler closed the square, then rotated the plan, laying down square on square to produce triangular projections. We recognised the beginning of a plan like one on the boards and taunted him, but he was off to an interplay of rectangle and square. We had lost him. Then he began playing plan against elevation by slicing off corners of rooms to vary the ceiling height.’

Earlier in his projects, an overlapping combination of two axes at an angle of 45 degrees in a single-storey house was a predominant theme for the spatial arrangement. While designing this project, Schindler was preparing for the publication of his article, ‘Reference Frames in Space’. In this, he states his belief that ‘room walls used to create space forms do not rise straight and box like from floor to ceiling, but may project or recess in between. Hence it is often necessary to make several successive floor plans on different levels between floor and ceiling.’ His use of these elements was based on Semperian notions: that is, Schindler used walls not just as structural functions but as spatial dividers, preferring simple, thin, removable and even translucent walls to more permanent structural incarnations. Schindler moved from his early skeleton design to ‘skin design’, which wrapped the space directly by screen or enclosure. Schindler translated and accentuated his idea in Space Development by setting his various floor plans at various heights: 3-feet about the counter height, 7-feet above the door height, 9-feet over the square clerestory window height and above the square roof (Fig. 2). Each floor plan illustrated different walls and roof juxtapositions. Basically, Schindler stratified a sequence of differentiated ceilings in various heights and shapes, centering the highest portion in the living room.

Various layers of ceilings seemed to hover over the main body of the house. Between various ceilings, different levels of clerestory or walls were formed. Here, the architect added clerestory in areas where daylight could penetrate. The use of clerestory windows between the ceilings was a standard
architectural element throughout his career. Natural light interpenetrated into the house in many directions. With various ceilings and wall openings, constant evolution of the spatial extension could be experienced in the living room: upwards and outwards.

In many of Schindler's projects, the distinction between walls and roof was visually dissolved.
Hence, roofs became walls, and vice versa. McCoy offered a short but valuable dialogue with Schindler on the design process: roofs and walls are ‘the same thing. You don’t set a roof on a house. A house is its roof. Just as a house is its foundations.’ The source of this idea was derived directly from Loos’ theory of spatial paradigm. In Schindler’s designs, it was hard to predict space-form with plans, elevations, and sections because for Schindler these drawings are just a two-dimensional notational form, best likened to a scale in music.

Schindler’s preoccupation with the mutual relationship between components such as walls, roofs, and floors was extraordinary. His earlier use of regular angles such as 30, 45, 60 and 90-degrees was not confined to the floor plans anymore. It advanced to all three-dimensional forms, including roofs and walls where the distinction of these elements tended to disappear; for example, roof and walls are tilted as a single object in the Kallis house of 1946 and the Spangler project of 1941–1946. It became almost the signature of his late style. This approach formed various roof geometries where it provided a spatial dynamism within the house. This tendency in Schindler’s later work led his roof manipulation to floating and angled roofs that were detached from the walls. At times, various roofs were moulded above the walls without the reference of the room form.

Through careful investigation of the archival materials, it has been found that Space Development was directly interpreted into two practical, but never-built designs during the same year: the Schick house and the Braden house (Fig. 3). The Schick house was designed for Henry C. Schick, and the Braden house for Dr M. A. Braden. The plots of the two houses were located side by side. Later on, the two plots were used for the Laurelwood Apartments of 1946/49, where both Schick and Braden were co-clients.

These two designs have never been treated in any depth, nor has anyone analysed the relationship between them. This neglect may have been be due to the lack of documentary evidence about the origin and purpose of each scheme, or to a lack of scholarly investigation of the original archival materials. Schindler’s plot plan sketch clearly addressed an existing contiguity between the two houses. The two projects aligned with one another.
at approximately 45 degrees and sat across the small lane vertical to Laurelwood Drive. They are on a gentle slope, unlike Space Development which illustrated Schindler's theory on a flat site.

The spatial configuration of the Schick house was almost a replica of Space Development, except for minor practical modifications (Figs 4,5). The built-in chairs in the living room disappeared, but the height of the wall and furniture between the living room and bedrooms was reduced to make the living accommodation more open spatially. The porch in front of bedrooms was enlarged. One of the bedrooms was expanded toward the porch. Unlike Space Development, the Schick house added the garage and some additional spaces underneath the main floor plan for practical reasons, since the site was sloping.

The plan of the Braden house appeared to be a derivation of the Schick house (Figs 6,7). Both houses shared the same section design of the fireplace, footing details and framing note. Their use of material and framing was identical as well. The area of this house was 1400 sq ft for the main floor and 360 sq ft for the ground floor plan; about the same size as the Schick house (1300 sq ft for the main floor and 600 sq ft for the ground floor plan). The living room was slightly elongated to the north compared to the Schick House, and yet the house provided two bedrooms. One bedroom was large enough to accommodate a separate bath and dressing area. The house had the garage added on the ground floor. Unlike the gabled roof of the Schick house, that of the Braden house was flat. Three horizontal layers of roof structures overlaid one another, like the Schick house. Each roof was 12 or 24 inches apart with a clerestory. The interlocking form of the living room, wide openings and clerestory in the main living space, along with the complexity of roof form in the Braden house, seemed to foreshadow Schindler's later works. In particular, the Armon House of 1946/49 in which the roof along with the clerestory...
windows of the living room just overlapped other rooms where they did not conform to its shape.62  
The two projects were topologically almost equivalent in plan except for some additional rooms. They were initially planned as the same size of building area (1200 sq ft),63 but slightly adjusted to the necessity of each client. Above all, the same spatial logic underlies both houses. Passing through the entrance hall, the living room was reached, directly overlooking an exterior courtyard. Then, the kitchen and service areas were located on one side, and bedrooms and a porch on the other. The differences were minor. In the Schick House, there were three bedrooms. They all had direct access to the porch. A guest bedroom with a bath was located in a separate floor next to a garage on the basement floor. In the Braden House, there were two bedrooms, where one of them had its own bath and the other was directly connected to the living room. They were similarly accessible via the porch.  
There was no clear identification of his use of a reference space frame in either project. The 4-foot unit grid was identified neither in plan nor in elevation. Although a 12-inch clerestory height in both houses seemed to be their basic module, a vertical module was not clearly identified either. The space reference frames were no longer used as expressive elements, unlike in his early projects. Instead, they were inherent in the building as hidden principles where elements of spatial compositions were superimposed on the transparent space reference frame. The approach mirrors Gottfried Semper's thinking, ‘the task of an intelligent architect should be to see and pursue the rise and development of basic ideas and to reduce to its simplest expression the law that lies hidden within the artistic covering.’ (Fig. 8.)64
Figure 8. Axonometric models in different heights: Left, the Schick House right, the Braden House (Drawn by the author.)
Conclusion
In summation, Schindler’s theory of space architecture was systematically formulated based on his 1916 Church School lecture notes. One thing is apparent from this study. His early notion became a constant framework, restated and sharpened in varying degrees of clarity throughout his lifelong practice. Although his designs look different, this notion of space architecture was continuously developed to ‘achieve its ripe form’. The consistency of his thought from the 1912 manifesto through to his more elaborated 1916 lecture notes and his late writings was truly impressive.

Space Development of 1945 summarised the way that Schindler practised, and represented the culmination of his architectural ideology as well as his design development, and a synthesis of his beliefs about the space concept. In addition, the theoretical application of Space Development to the subsequent practical designs, the Schick House and the Braden House, offered a very striking piece of evidence that there existed a primary logic and pattern to his development of space architecture. Although not built, these two projects demonstrated that his space notion and compositional themes were recurrent in different designs. In Schindler’s words, ‘If it would be possible that the same influence repeats itself in two buildings—they would have to be alike, in all the smallest details.’ This approach was Semperian.

Semper notes in his discussion of the ‘Essence of True Theory of Building’, ‘architecture is based on certain standard forms which, contingent on an original idea, through constant reappearance make possible infinite variations that are conditioned by particular needs and closely defined circumstances.’

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Notes and references
1. Schindler would have been familiar with Loos’ way of looking at traditional architecture in regard to modern development. H. Kulka described the notion quoting Loos’ own words: ‘Do not be afraid to be called old-fashioned; it is only permissible to alter traditional building methods if one can improve upon them. The truth, even if hundreds of years old, has more spiritual connection with us than the lie which strides besides us . . . tradition is a reservoir of strength from countless generations, and the firm foundation for a healthy future.’ H. Kulka, ‘Adolf Loos, 1870–1933’, Architect’s Yearbook, 9 (London, Paul Elek, 1960), pp. 7–21.
3. R. M. Schindler, ‘Answer to questionnaire from the school of Architecture, University of Southern California’ (Schindler Archive, University of California, Santa Barbara, UCSB).


11. H. F. Mallgrave, op. cit., 1993. See also Schindler’s manifesto (1912), Schindler Archive.

12. The size of the booklet is about 8 1/2 by 5 3/4 inches. Some were written on the Henry L. Ottenheimer Architect’s stationery.

13. In the lecture notes, Lecture I, ‘Introduction’, Schindler expounded on the character of his lectures: ‘[T]he form of lectures was not developed’, but would ‘cover all ground’, providing a ‘skeleton of ideas.’ Then, he declared, ‘I want to show our problem of architecture, new conception, new aims …’


15. There are also a number of scribbles and marginal notes housed in the Schindler Archive where he summarised and itemised the content of his various public lectures. Most of his later lectures are based on his 1916 lecture notes.

16. Schindler’s 1916 lecture notes elaborated on what young Schindler envisaged for architecture as a whole. They were a collection of his ideas and convictions during the formative years relating to his theory of architecture.

17. Schindler studied the works of great theorists and architects of the period, in particular, Semper, Wagner, Sullivan, Wright, and Bragdon. Their views helped Schindler to define his architecture. Their names are listed in his various freehand lecture notes.


20. It is interesting to point out that L. Sullivan and F. L. Wright in America were also exposed to Semper’s theory. Semper’s influence on the Chicago architectural environment was discussed in Frederick Baumann’s article, ‘Thoughts on Architecture’; in which he described the origin of architecture based
on Semper’s four elements of architecture. Wright’s access to Semper’s theory in the US may have been due to John Root and Fritz Wagner’s English translation of ‘On Architectural Styles’, Inland Architect and New Record, 1889–90.

21. See F. L. Wright, Ausgeführte Bauten und Entwürfe (Berlin, Ernst Wasmuth, 1910), and also, Alofsin, op. cit., 1993, pp. 120–126.

22. As a matter of fact, all these names repeatedly appeared in his 1916 lecture notes as Schindler’s references.


24. Geometric law, or inner law to Schindler, includes proportion, symmetry, rhythm, etc. He pointed out, ‘Human conception is always based on geometrical figures. If it is not recalling of forms of nature, form has to have an inner law’ (Schindler, 1916 lecture notes, op. cit., Lecture VI).


26. Schindler expressed this idea exactly as his 1912 Manifesto.


33. Schindler also believed that a residence should be made to fit the owner’s personality, to be a frame for their life, and to give room for their development. The house has to live with the owner, and has to grow old with them (Schindler, op. cit., 1916 lecture notes, Lecture XII). His view recalls Loos’ April, 1900 article, ‘The Story of a Poor Rich Man’. See L. Münz and G. Künstler, Adolf Loos: pioneer of modern architecture (London, Thames and Hudson, 1966).

34. The concept is associated with Richard Wagner’s idea of a total integration of music, drama, and spectacle in which the arts involved are so interdependent that none dominates to the detriment of the others.

35. Semper, in particular, sees a Gesamtkunstwerk where architecture will be composed of the synthesis of various elements such as ornament, colour, material, form and space. See Mallgrave, op. cit., 1989.

36. It seems that Schindler is to ‘charming’ as Hendrick Berlage is to ‘repose’. Berlage’s notion centres on the fact that architectural restfulness is the result of the homogeneous balance of various qualities, rather than the cause. Also, Schindler’s ‘charming’ parallels Geoffrey Scott’s term, ‘coherence’. Scott, op. cit., 1974.


40. Kulka regarded the project as ‘the pinnacle of Adolf Loos’s creative work’. Duzer and Kleinman, op. cit., 1994, p. 60.


43. Schindler, op. cit., 1946.

44. Schindler’s approach to architecture is absolutely three-dimensional. He criticised a mere two-dimensional draftsmanship. Good-looking drawings, for Schindler, are always bad architecture. He provided three reasons: first, ‘room conception cannot be drawn’; secondly, ‘drawings cannot give value of materials. [A] good [architect] will give empty drawings. [They] do not fill with lines’; thirdly, ‘drawing = art of its own-expression of one art can not be given by others. A good novel can not make a good play. [They are] fundamentally different.’ In this, Schindler had an analogy between music and architecture: ‘architecture [is] like music; notes are not music.’ (Schindler, op. cit., 1916 lecture notes, Lecture V: ‘The Architect.’) Schindler’s point of view clearly reflects Loos’ viewpoint. According to Kulka, op. cit., 1960, Loos stressed, ‘The best draftsman can be a bad architect and the best architect can be poor at drawing. It is wrong to suppose that a talent for graphic art is a prerequisite for the study of architecture. This leads to the assumption that architecture is created at the drawing board.’


46. See Hollein (H. Hollein, ‘Rudolph M. Schindler’, Bau, 4, 67–81 [1966]); Sarnitz, op. cit.; McCoy, op. cit.,. Unfortunately, there exists no further interpretation of the project in these literatures.

47. Gebhard, op. cit., Catalogue no. 3404–3411.


49. His way of thinking with regard to the medium of architectural presentations was consistent from the beginning of his career. He criticised a mere two-dimensional draftsmanship: ‘good looking drawing’ is always ‘bad Architecture’ and ‘good draftsmen are mostly bad architects’. Schindler was extremely candid and straightforward in his position. He provided three reasons for this. First, room conception cannot be drawn; drawing is only ‘translation of the conception’. Second, ‘drawings cannot give value of materials’. Third, ‘drawing is art of its own’ as he metaphorically explained: a good novel cannot make a good play; architecture is like music, as notes are not music. His analogy is deeply rooted in the fact that thinking in three-dimensions in architecture is absolutely different from thinking in two-dimensions (op. cit., Lecture Note, 1916, V).


51. McCoy, op. cit., (1987), sees the Mildred Southall House of 1938 as a transitional work and the A. van Dekker House of 1940 as a full transitional work: the Mildred Southall House stands out the most. Two axes are overlapped in the piano nobile to provide maximum living space and views. Architectural Forum recorded the house under the title, ‘Angles and rectangles characterize plan of small studio home’, noting: ‘By placing the main rooms at a 45 degree angle to the lot line, both the studio and nursery enjoy a fine view.’ Architectural Forum, 86 (February, 1947), pp. 100–102.

52. Schindler, op. cit., 1946.
53. McCoy, op. cit., 1987

54. ‘I do not design plans, façades, sections. I design space. Actually there is neither a ground floor, an upper floor or a basement, there are merely interconnected spaces, vestibules . . . ’ H. Kulka, op. cit., 1960, pp. 7–21.


56. Ibid., Catalogue no. 3373–3392.

57. These geometric roof forms are interpreted at times as a break with the De Stijl movement or as against the International Style movement. See D. Rouillard, Building the Slope—Hillside Houses, 1920–1960 (Santa Monica, California, Arts + Architecture Press, 1987), p. 57.


59. Presumably, they originally planned a house on each site, but later on they decided to build apartments.

60. Gebhard, op. cit., p. 430. Another juxtaposition of two houses is also illustrated in Gebhard, op. cit., Catalogue no. 1742.

61. In both projects, Schindler wrote a Framing Note on each drawing, ‘All horizontal framing lumber shall be grad #1; provide diagonal braces at all corners & every 25 feet’ provide 2" firestops at ceiling, floor & in between; provide solid blocking at all bearing partitions; nailing, cutting, plastering, etc. according to city code 1945; all lumber below first floor to be redwood’.

62. Their clerestory and living room windows are similar too. In the house, trellis, which is his common element, is used as an interactive element between inside and outside. See, Judith Sheine, R.M. Schindler: Works and Projects, GG (1998), pp. 210–213.

63. See their site plans, Gebhard, op. cit., p. 424 and Catalogue no. 3118.


65. He indicated three main principles of ‘Planning’ in his 1916 Lecture Note. First, ‘every building is the resultant of many components—to be organism.’ Secondly, ‘If it would be possible that the same influence repeats itself in two buildings—they would have to be alike, in all the smallest details.’ Thirdly, ‘a building, on which all influences had free access to form in proportion to their forming power, is absolute, cannot be changed. Architect to know building is not playing—Has to get essence of all this influence. Has to establish equilibrium between them—organism—work to make building absolute solution.’