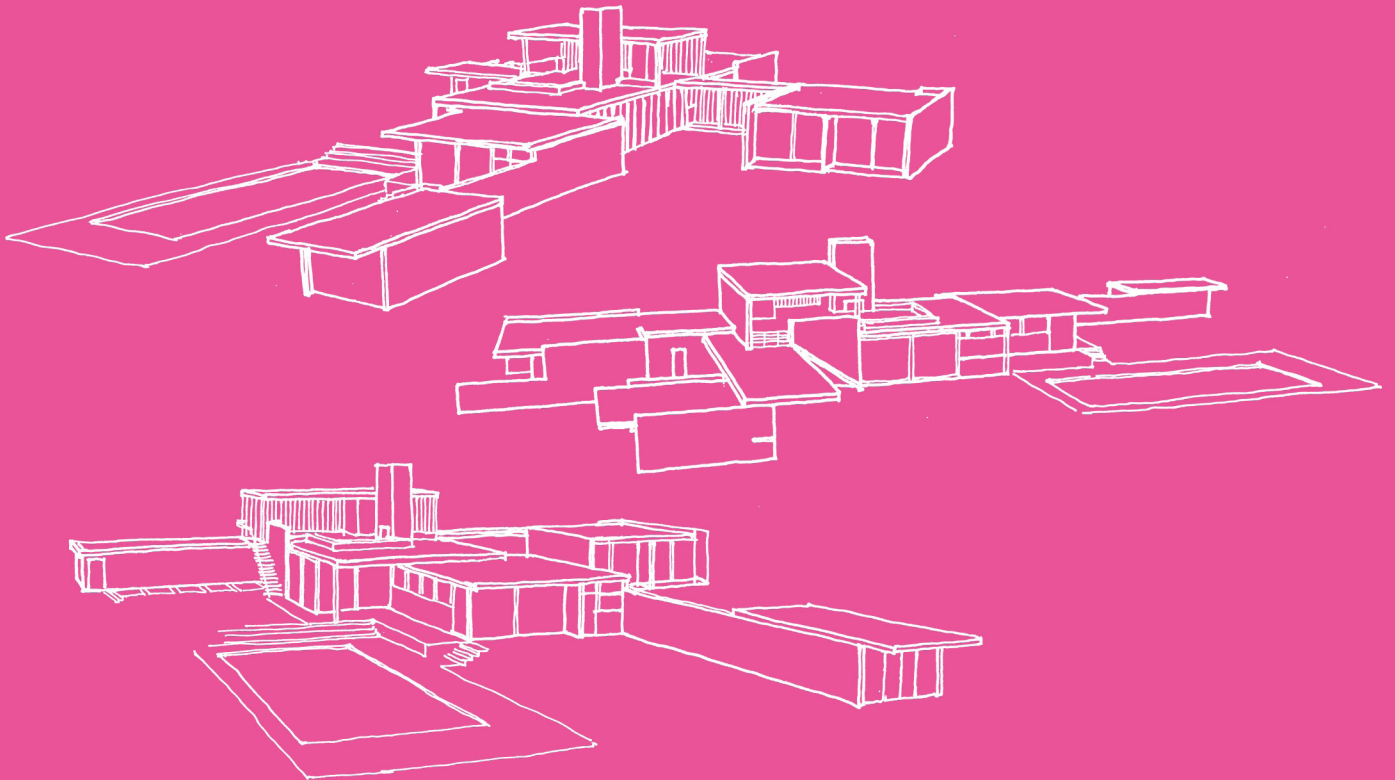


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A GUIDE FOR VISUAL THINKERS

Stephanie Travis + Catherine Anderson

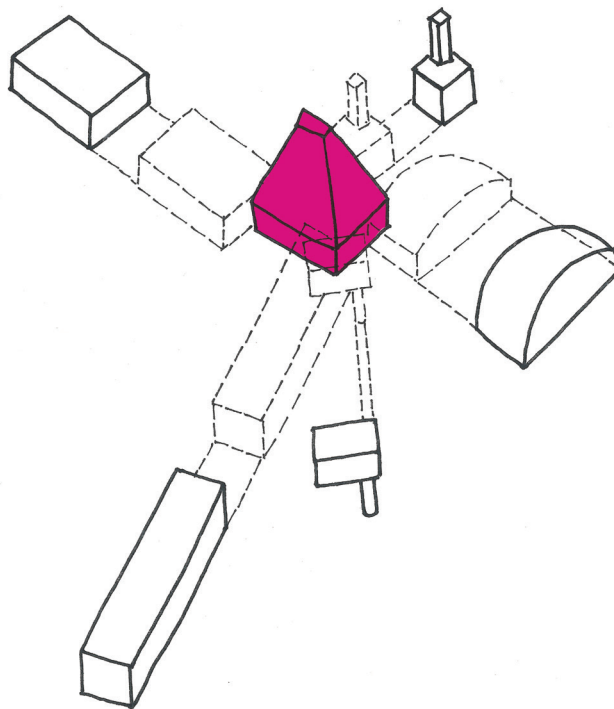


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25 CONCEPTS IN MODERN ARCHITECTURE

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A GUIDE FOR VISUAL THINKERS



Stephanie Travis + Catherine Anderson

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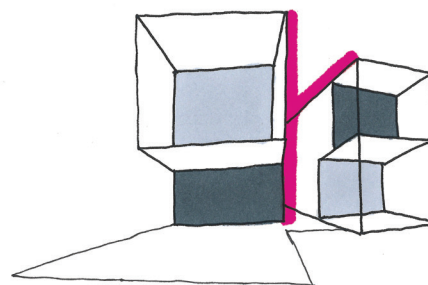
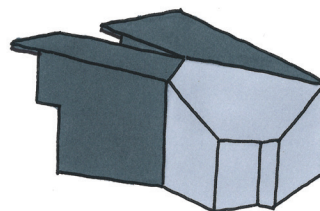
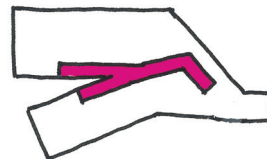
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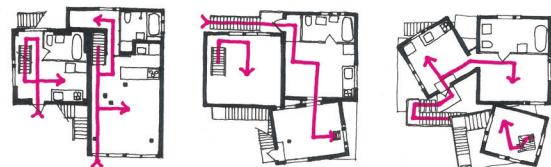
DEDICATIONS

stephanie travis
to mark, samantha + matthew

catherine anderson
to scott + caroline

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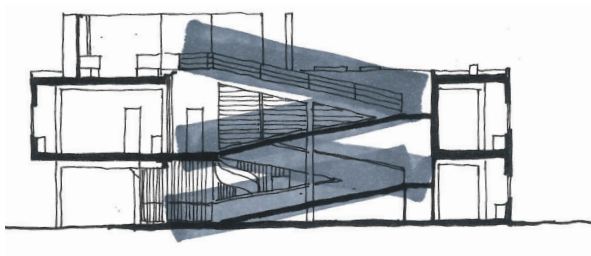
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ABOUT THE AUTHORS

Stephanie Travis received her Master of Architecture with distinction and Bachelor of Science in Architecture from the University of Michigan, Ann Arbor. Since 2009, she has been an associate professor and program head of interior architecture at The George Washington University (GW) in Washington, DC. Prior to GW, Stephanie worked in New York City for Gensler and Vicente Wolf Associates; she is also a LEED Accredited Professional. She brings her passion for modern architecture and design to her courses and research; her love of drawing led to her best-selling book, *Sketching for Architecture + Design* (Laurence King Publishing, 2015), which has been published in seven languages and is sold in museums around the world. She has brought students abroad to study modern and contemporary architecture in cities such as Paris, London, Copenhagen, Berlin, and Milan. Stephanie has also published and presented many peer-reviewed articles on the topics of design pedagogy and modern architecture, and was the 2018 recipient of the Design Principles and Practices International Award for Excellence for her article *Pure Form: The Interior of the Hirshhorn Museum in Washington, DC*.

Prior to her position as an assistant professor at the George Washington University Interior Architecture Program in Washington, DC, **Catherine Anderson** worked in a variety of architecture and interior design firms for over twelve years. Her primary practice experience was focused on commercial projects for a wide range of clients such as law firms, nonprofits, associations, and embassies. She earned a Bachelor of Science in Architecture and a Master of Architecture from The Catholic University of America's School of Architecture + Planning that included a summer semester abroad in Rome and Slovenia. She was awarded the American Institute of Architects' (AIA) Henry Adams Medal, the highest honor for a graduating student in an accredited architecture program. A LEED Accredited Professional, her teaching focus is on sustainability as well as the design process and design thinking. Her work includes participation in the US Department of Energy's 2013 Solar Decathlon with Team Capitol DC's submission, *Harvest Home*, which won a 2014 AIA DC Design Award.



INTRODUCTION

When an educator inquires about the concept as the impetus for work, the beginning design student is often perplexed. After all, what exactly is a concept (or *parti*, the word often used in architecture school)? How does one derive a “correct” concept? Why is it even necessary? This initial step in the design process is met with frustration and angst for many—yet without it, one cannot truly begin to design. It would be akin to writing an essay without knowing the paper’s topic. The architect Steven Holl rigorously adheres to an overarching idea, stating that he is “almost obsessive about following the concept” as it “drives the design, it guides the design.”¹

There are many different ways of generating a concept; as with design, a prescriptive or correct way to proceed does not exist. Inspiration and observation often go hand in hand when thinking divergently during the initial phase of design. However, going too far afield can lead to “wandering” as more words enter the ever-crowded space of possible contenders to be *the* concept. Indecision (or “analysis paralysis”) sometimes becomes the default position when students face too many ideas. To avoid being stymied at this early stage, many students half-heartedly select a word or phrase, hoping that their selection is a best guess or assuring themselves that they can abandon their concept if (when) another idea seems more appropriate.

This book offers one approach to demystify this seemingly elusive process: select a verb and a noun that come together to create a concept. We believe that this method highlights or elucidates an action (verb) that is *visible* in the forms (nouns) that shape the architecture. It is important to note that not all verbs are appropriate to use. Suggesting that the creative process can be harnessed into an equation is not our intention; however, beginning design students can benefit from using this framework for concept development.

As educators, we underscore that the concept must be seen or evidenced when asking students to describe and defend their work. To this end, we have curated words that describe the process of *doing* (such as *sliding*) demonstrated in existing works; this is not unlike the *Verblast* that the artist and sculptor Richard Serra developed in 1967.

This is not to suggest that the concepts identified in this book are the definitive ideas that were intended when these seminal works of architecture were created. At times, our words and the architects’ characterization of the structures do align; for others, we have distilled the predominate contours of the buildings and interpreted them in our own way. We also acknowledge that

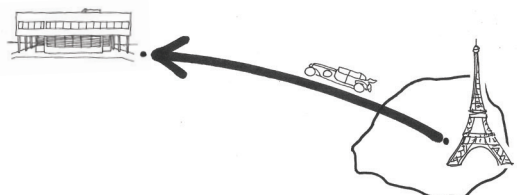
by parsing these great works of architecture into two words, it may appear that we intend to oversimplify the multiple layers of meaning that historians, theorists, and architects have carefully observed. Instead, our objective is to be straightforward by using less jargon that has to be unpacked and providing more diagrams when explaining the design strategies of architecture.

We gave ample consideration to the book’s title, understanding that the featured buildings are classified as either modern or contemporary. The former word refers to a time period in history that roughly spans early to late twentieth century, while the latter calls to mind any work that is of the present era; what is *contemporary* continually progresses and is redefined. While the majority of the structures we selected fall under the designation of *modern*, our intention is not to use the word in the historical sense but, rather, to describe something as novel and engaging or to express a sensibility that abandons traditional norms.

Our hand-drawn diagrams serve a purpose: during the formative and initial process of concept formation, the connection between the hand, eyes, and brain creates a feedback loop. Steven Holl states: “I believe in the analogue as the beginning of architecture . . . The very first thought, the meaningful first diagram, the ‘concept’ for the building, is a combination of eye and mind and hand, and, one hopes, the spirit. I always begin with these little five by seven drawings in my watercolor notebooks.”²

The precise lines of a computer-generated drawing can appear sterile, final, and complete; at times, they nearly eliminate room for process and exploration. The initial stages of the design process—iterative, messy, and unpredictable—only benefit from a forgiving and intuitive method that permits imprecise lines and the looseness afforded by hand drawings.

Our diagrams are an abstraction, another way of communicating ideas through representation. They are not intended to be precise documentation of a building; rather, each drawing in this book is meant to convey a supporting idea. Together, they provide a broader understanding of the architecture in each chapter, in addition to the main concept. We hope this book inspires many—from the beginning design student to the architecture enthusiast—to see the myriad ways an idea can be articulated in form, drawings, and words.



1

ROTATING L-SHAPES

Schindler Chace House

When configured in a pinwheel arrangement, multiple L-shapes create a dynamic form, providing a visual and physical expanse between inside and outside.



A Viennese by birth, Rudolph M. Schindler traveled to the United States in 1914 and found employment in Chicago as a young architect. However, grander ambitions were in his sights as he wrote to Frank Lloyd Wright, only eight months after his arrival from Austria, in the hopes of securing a position at his firm. Schindler deeply admired the American architect's work, as noted in his own words about Wright: "his art is spatial art in the true sense of the word . . . The room is not a box—the walls have disappeared and free nature flows through his houses as in a forest."¹

His aspiration was realized as he initially worked in Wright's home and studio, Taliesin, in Wisconsin. When the firm received the commission of the Hollyhock House for Aline Barnsdall, he was sent to Los Angeles to oversee its construction. Schindler consummately embraced life in California and stayed, deeply moved by the natural beauty of the environment while creating architecture that responded to the mild, temperate climate.

Stepped back from the edge of Kings Road in West Hollywood and integrated with the landscape stands a modest house of wood and concrete that Schindler designed in 1922 for his wife, Pauline, and another couple, Clyde and Marian Chace. The architect would describe the home as a "cooperative dwelling

for two young couples." Writing to his in-laws, the Gibblings, he notes that "the utility room therefore must be in the center of the structure" in order for all the inhabitants to access the kitchen, storage, and laundry facilities—a communal and democratic use of space. The floor plan is completely unorthodox; gone are the confined, dimly lit rooms that would have been prevalent in its time. Typical rooms—such as a dining room or living room—were dispensed; instead, each person had an ample-sized studio with direct access to an expansive, outdoor space and a fireplace. The studios afford ultimate flexibility, with the furniture arranged to suit the occupant's hourly or daily needs. Rather than allotting bedrooms, the roof provides space for "sleeping baskets" or frames of wood, supporting a platform for a bed. In his correspondence to the Gibblings and in a brief written description of the house for a publication, Schindler refers to the experience of this dwelling as "a social 'campfire' affair" while fulfilling the "basic requirements for a camper's shelter." The catalyst for this romantic view of rustic domestication likely comes from a camping trip to Yosemite; he made a deep, emotional connection to the place as he wrote about it was "one of the most marvelous places in America." Pauline would observe, in later years, that her husband's residences "are intimately related to the earth. Meant for a life which flows naturally from the house out of doors but which at the same time maintains an intense privacy."²

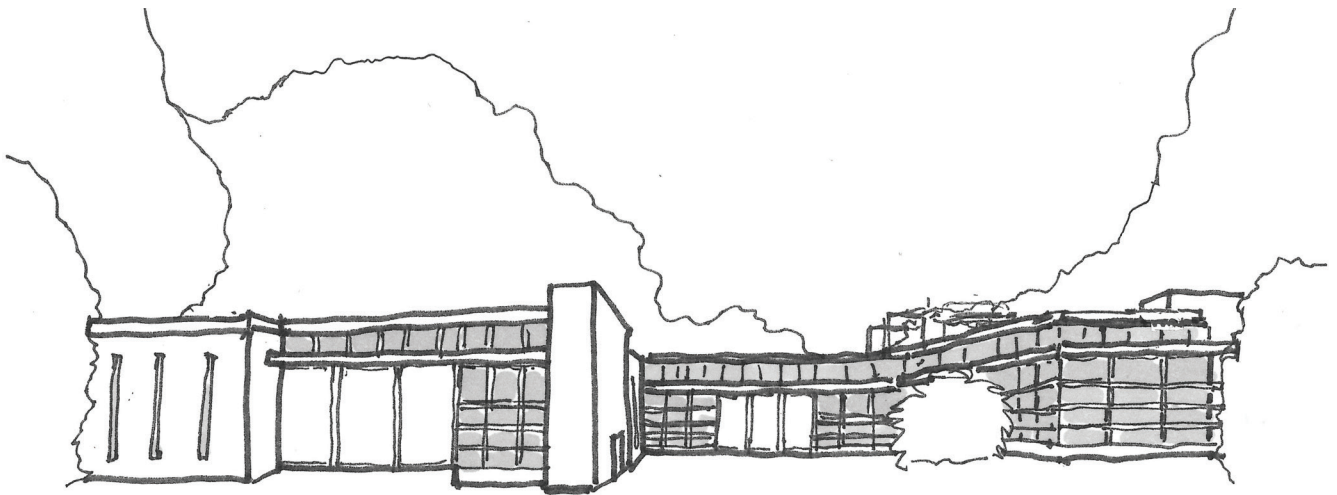


Diagram 1. This view, looking east, shows the guest bedroom and garage on the left; to the right, the studios belonging to Pauline and Rudolph Schindler surround an outdoor courtyard, seen as an extension of their rooms.

Rotating L-Shapes

The **rotating, L-shaped** arrangement suits three purposes. First, the entrances into each couple's suite as well as a shared bathroom are located where the two arms meet. This supports the notion that the couples are together but separate—a radical departure from the way households were perceived at the time. Secondly, few doors separate the studios; the 90-degree placement of them provides adequate privacy. Lastly, the two studios embrace an ample exterior garden space that serves to spatially extend each room. Moveable screens and glass create ambiguity between inside and outside, allowing the inhabitants to fully soak in the mild California weather as a natural part of daily living. Conceiving the landscape as an extension of the architecture—while seemingly obvious—was not a common approach. Schindler took great pains to design the site with the same rigor and attention to detail as the house; he writes, "The shape of the rooms, their relation to the patios and the alternating roof levels, create an entirely new spatial interlocking between the interior and the garden."³

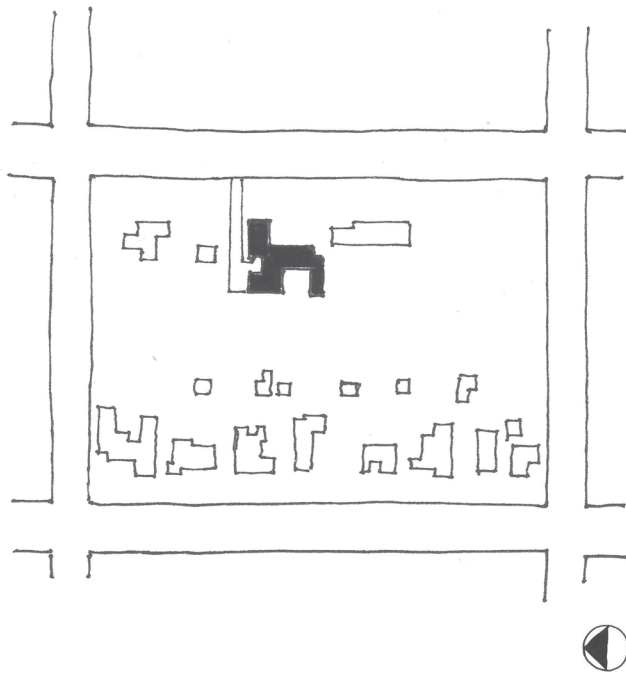


Diagram 2. Schindler positioned the structure to take advantage of the outdoor areas directly to the east and west of the house, as also shown in Diagram 3.

In his words, Schindler firmly believed that an architect "needs a unit dimension which is large enough to give his building scale, rhythm and cohesion." The preoccupation with this unit, integral to a proportional system, based on "a simple relation to human stature" had to be flexible and "small enough to fill all needs for detail sizes by sub-dividing into simple fractions . . . 1/2, 1/3, 1/4 at the most." Pragmatically, the length of the unit had to align with industry-established standards for dimensioned construction elements, such as "lumber lengths, door and ceiling heights." He confidently states that "the four-foot unit will satisfactorily fulfill all specifications"; consistently, throughout Schindler's architecture, the employment of this unit is evident, and the house at King's Road is no exception. He adheres to this "four-foot unit," establishing an underlying order with rigor: the concrete panels that were poured in place and tilted up are four feet wide; the wooden vertical members as well as the roof joists are spaced every two feet; the lattice-like articulation of windows is further reduced with vertical strips of wood, placed every twelve inches. Yet, visually and spatially, there is a great deal of variety, which speaks to Schindler's adroitness and confidence as an architect who believes, as he wrote, that "proportion is an alive and expressive tool in the hands of the modern architect who uses its variations freely to give each building its own individual feeling."⁴

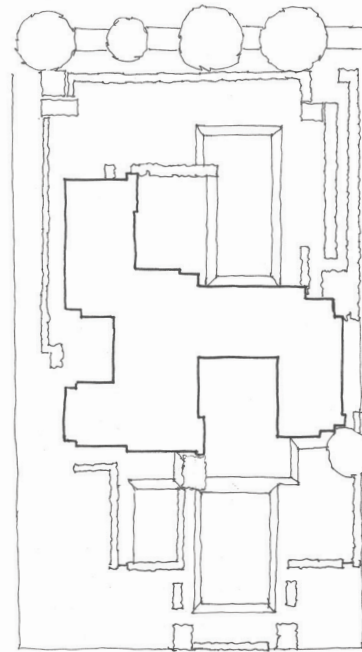


Diagram 3. It is common today to incorporate the landscape with the architecture; however, when Schindler designed his home, this comprehensive approach was unconventional. As seen in this diagram, the linear hedges and rectangular areas of lawn provide privacy while extending the vocabulary and proportions of the house, establishing connections with the outdoor spaces and the interiors.

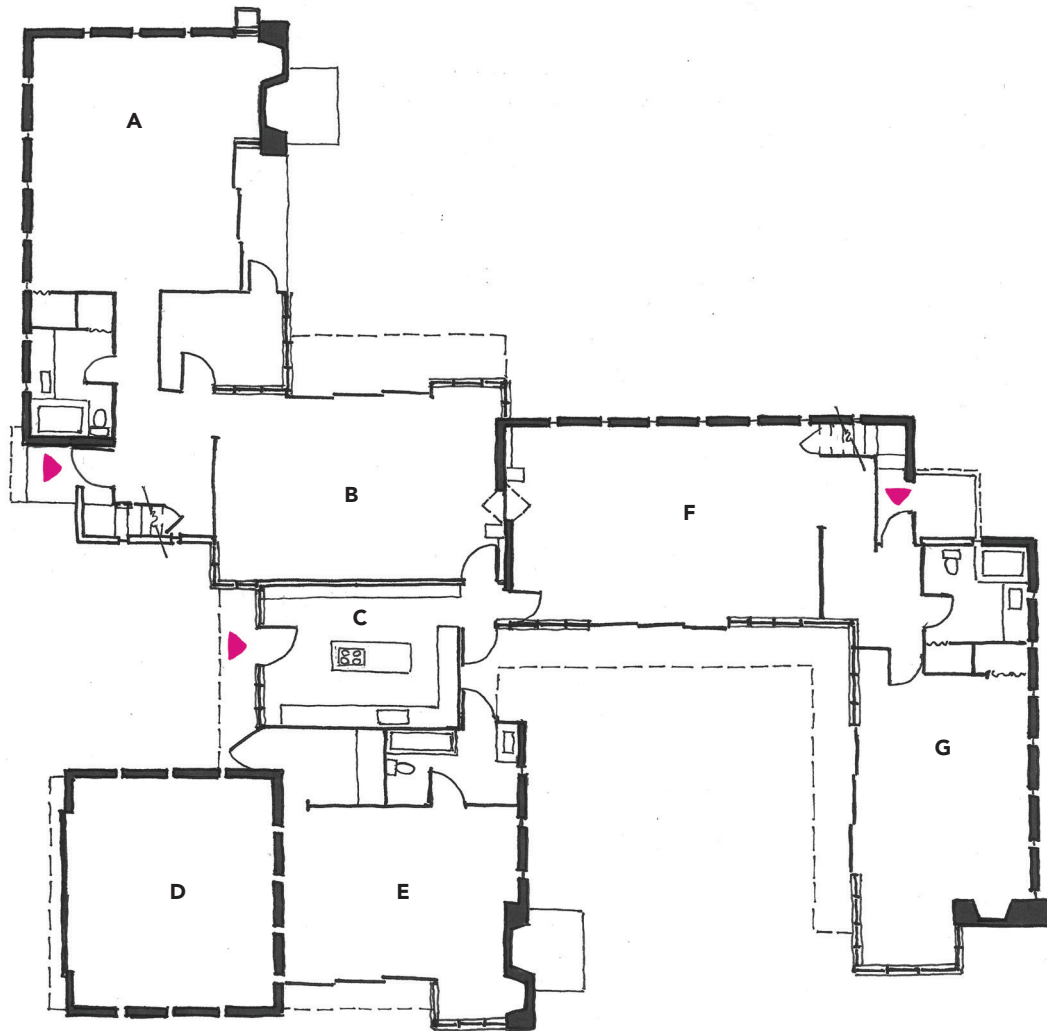


Diagram 4. With so much variety of spaces and the interplay of concrete and wood-framed walls, the complexity of the floor plan corresponds to the experiential diversity of the spaces. Schindler shunned the accepted use of nomenclature as he identified the largest spaces as studios rather than bedrooms; they were ample enough to support many activities.

- A.** Clyde Chace Studio
- B.** Marian Chace Studio
- C.** Utility / Kitchen
- D.** Garage
- E.** Guest Bedroom
- F.** Pauline Schindler Studio
- G.** Rudolph Schindler Studio

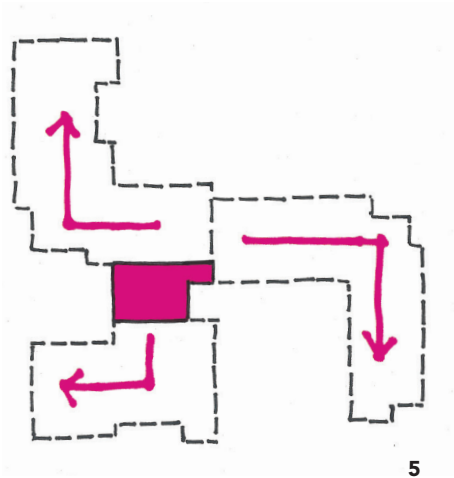


Diagram 5. The arms of house—shaped as “L”s—appear to rotate out from the center or core (the utility room), in pink.

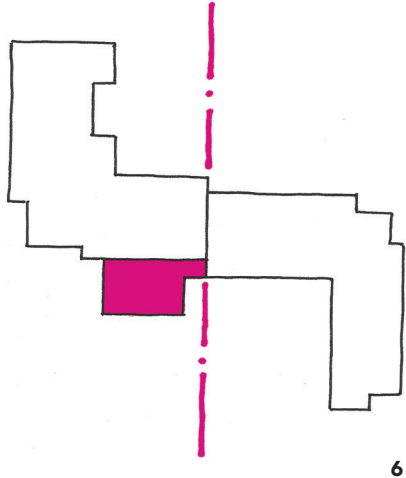


Diagram 6. The line designates where the house “split” between the Chaces and the Schindlers. Although the utility room (in pink) was on the Chaces’ side, Schindler’s intention was for all residents to use it.

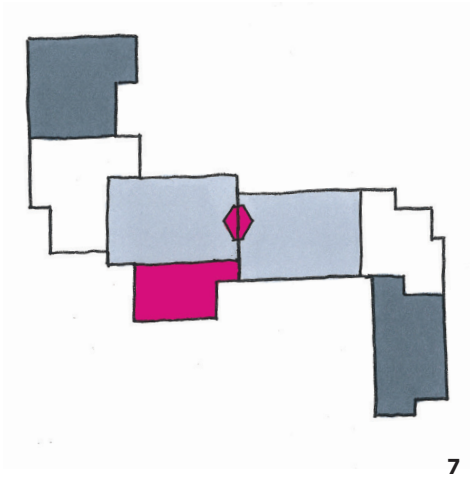
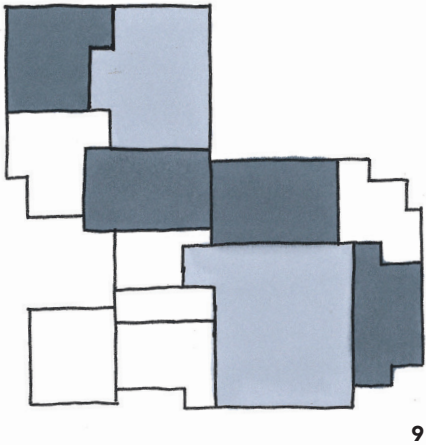


Diagram 7. Shown in pink, the utility area and fireplaces in Pauline and Marion’s studios (light gray) were used for meal preparations. Schindler centrally located the utility area as a democratic gesture, allowing everyone to access this space. White represents zones each couple shared, and the dark gray boxes are the studios of Clyde and Rudolph.

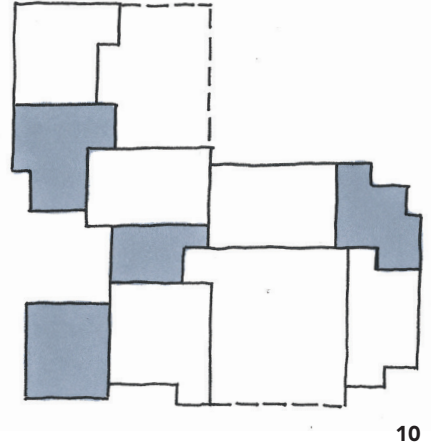


Diagram 8. Each person had their own studio, shown in gray: Clyde (upper left), Marion (middle left), Pauline (middle, right), and Rudolph (lower right). The areas in white are areas that were shared and not designated for a specific individual.



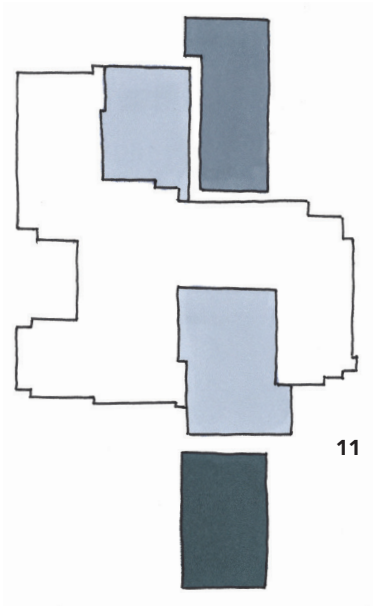
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Diagram 9. In this diagram, the dark gray areas represent the studios with the medium gray spaces showing the generous outdoor spaces each couple shared. Communal or non-designated spaces are in white.



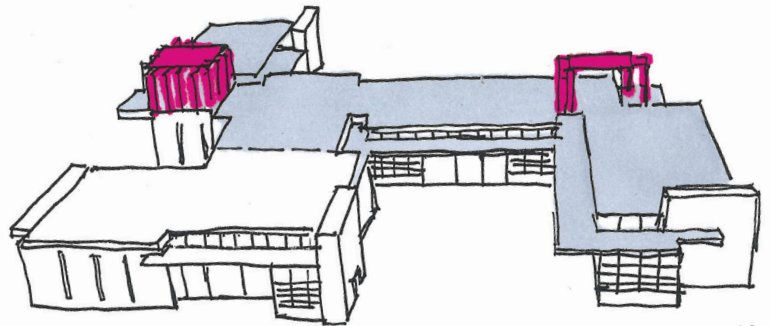
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Diagram 10. Each couple shared two spaces: an entry (that included a bathroom), shown in gray, and outdoor space (bordered by the studios and dashed lines). A garage (lower left) and the kitchen/utility room were also used by all members of the household.



11

Diagram 11. The outdoor spaces were differentiated by Schindler as "patio" (shown in light gray), "garden" (in medium gray) and "sunken" (shaded the darkest gray).



12

Diagram 12. Schindler designated roof-top spaces (in pink) for sleeping during the warmest nights for each couple. Studios and shared spaces are shown in medium gray.

2

MANIPULATING VOLUMES

Masters' Houses

Playfulness and manipulation of volumes provide expressions of novelty by using forms that are modular and mass produced.



Due to political forces that were unsympathetic to the ethos and philosophy of the school in the city of Weimar, Germany, the Bauhaus shut its doors there in 1925. The search for a new location ended when the progressive mayor of Dessau, Fritz Hesse, welcomed the institution with a generous agreement to fund the construction of a large building for classes and housing for faculty. It was a serendipitous turn of events for Walter Gropius, the founder and director of the Bauhaus. At its previous location, housing for students and faculty did not exist; this *tabula rasa* enabled the architect to promulgate the doctrines and spirit of the Bauhaus in the *Meisterhauser*, or the Masters' Houses, which were completed in July of 1926.

In total, Gropius designed four houses for seven faculty members on a quiet, residential street, located conveniently within a very short walking distance from the main campus of studios, workshops, and students' dorms. The house that he shared with his wife, Ise, was the only detached residence; the other three structures were semi-detached, each housing two instructors and their families: Laszlo Moholy-Nagy and Lyonel Feininger, Georg Muche and Oskar Schlemmer, and Wassily Kandinsky and Paul Klee.

The philosophy of the Bauhaus and the severe housing shortage in Germany after World War I were the actuators for Gropius' approach to the design of the residences. He envisions a utopian way of life, writing: "The overarching principle of the Bauhaus is the bringing together of many arts to form a new unity . . . that . . . requires life itself to attain purpose and meaning." Acutely aware of the dire need for housing, he addresses this concern by penning the essay, "How Do We Build Decent, Beautiful, and Inexpensive Housing?" In it, he defines the paramount role of the architect as the visionary, the one who literally gives form to his query, "How do we want to live?" This new, modern way of life would be hygienic, efficient, and facilitated by machines to ease the burdens of mundane tasks.¹



Diagram 1. Asymmetric and box-like volumes of the Masters' Houses, as viewed looking southeast, defied the conventional ideals of a typical dwelling when they were built in 1926. Even today, their appearance sharply contrasts with the traditional houses on the quiet, tree-lined residential street of Ebertallee.

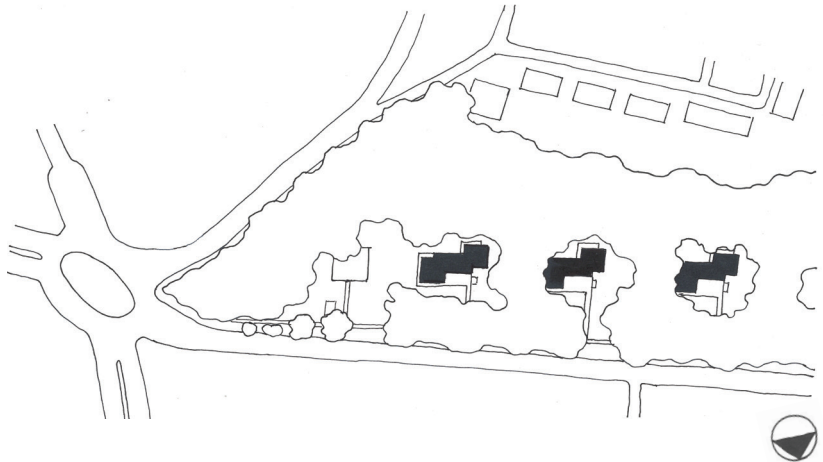


Diagram 2. Only a short walk to the Bauhaus, the homes were conveniently located for the instructors and their families. Each structure accommodated two instructors and their families (shown in black); Gropius designed a fully detached house for himself and his wife, located on the left.

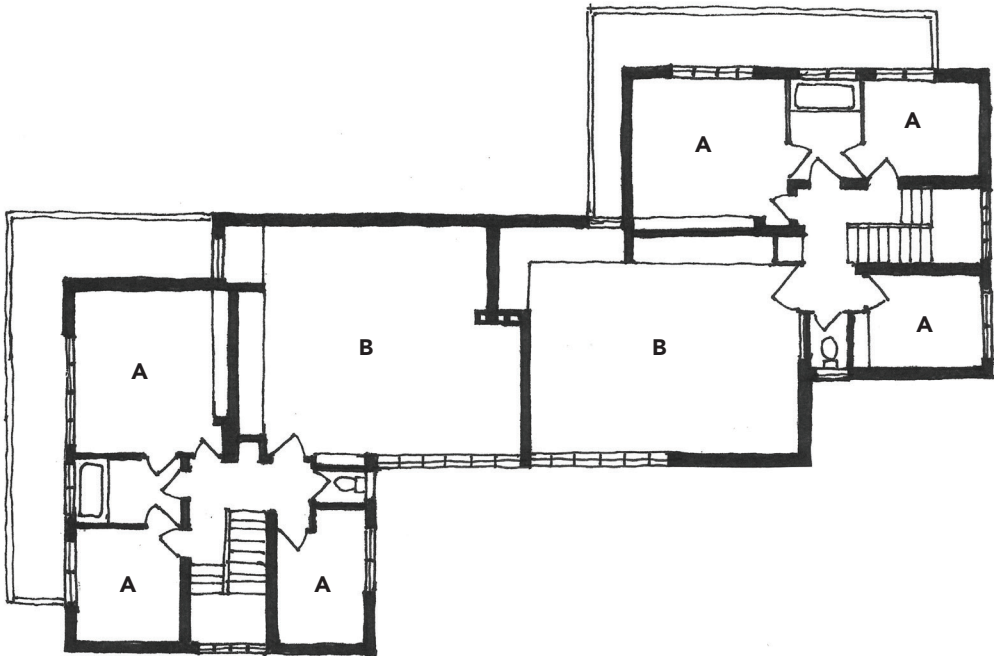


Diagram 3. On the second floor plan, the ample studio space demonstrates the importance of pursuing artistic and design endeavors on a daily basis for the inhabitants.

- A. Bedroom
- B. Studio

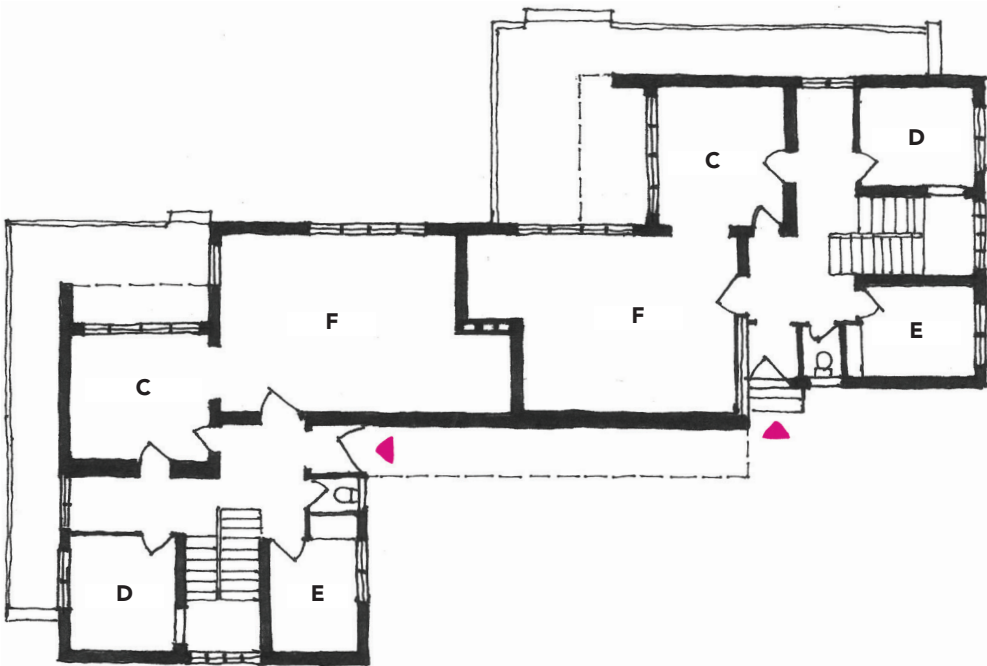


Diagram 4. The ground floor plan depicts a semi-detached house that was adjoined at the living room.

- C. Dining
- D. Kitchen
- E. Storage
- F. Living

Assembly of mass-produced “large-scale modular building blocks,” as Gropius describes them, where each box accommodates a particular function—such as bathing—gives shape to the structure or, in his words, “give[s] the whole design of the house its form.” Rather than perceiving the homogeneity of machine-made goods pejoratively, the architect believes there is inherent worth in these products. He writes: “The particular nature of the machine is such that it develops its own novel ‘authenticity’ and ‘beauty.’” Gropius rationalizes that modularity and uniformity can be embraced, noting, “One need not fear that such standardization will violate the individual” as this approach “provides a sense of order and calm.” From this perspective, the Masters’ Houses follow the logic of this additive architecture of “building blocks” or orthogonal rooms that cluster together near the hierarchical spaces of the large living rooms and the lofty studios.²

Despite his enthusiasm for simple, machine-made building components, Gropius recognizes the potential for architecture, devoid of novelty, to produce soulless and monotonous structures. In the architect’s capable hands, thoughtful composition of the parts or **manipulation** of the **volumes** allows for self-expression. He argues, “Complete standardization . . . is not to be recommended, since the violation of all individuality is always shortsighted and wrong.”³

Variation is achieved in several ways with the Masters’ Houses. First, Gropius mirrors the plan twice, along its x and y axes, creating two areas that are then matched and pushed together like puzzle pieces. Then, he volumetrically emphasizes specific rooms—the living area and studio—and differentiates the heights of the flat roofs, so that from the exterior, the semi-detached house is an artful collection of proportionally composed cubes. There is no semblance of modularity or symmetry. Lastly, balconies and projections further reduce the monolithic cubes and provide additional articulation of the house, affording a surprising degree of visual complexity while reducing glare.

Color, used sparingly on the exterior, is applied more liberally inside, depending on the resident. In varying degrees, each master experimented with color for the interior walls. Some, such as Feininger, took great care and delight with the palette he selected; he wrote that “[t]he stairwell is my pride and joy, so cheerful with red banisters.” Restoration of the Klee-Kandinsky House during 2017 to 2018 would reveal extensive experimentation with color. More than 170 different shades and hues were discovered, underscoring Gropius’ beliefs when he wrote: “Despite the standardized homogeneity of the parts, the individual still has ample room for personal variation.”⁴

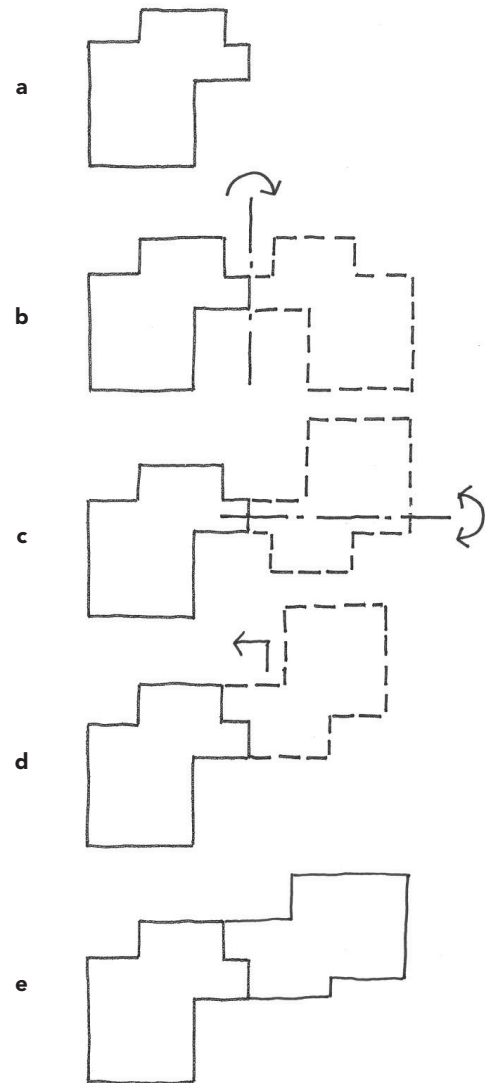


Diagram 5. Gropius’ scheme was to take a simple module (a) and mirror it (b). To avoid symmetry, the mirrored portion was flipped along the axis as shown (c) and moved (d), fitting together in a similar way to a double-rabbit wood joint. Lastly, minor modifications were made, elongating the form horizontally (e).