

From Heinrich to Henry Kulka

Comparing Villa Holzner and Sharp House

Yue Guo

Colophon

TU Delft, Faculty of Architecture and the Built Environment

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Abstract

This thesis examines Heinrich Kulka's role in developing the Raumplan theory by comparing Villa Holzner in Czechia and Sharp House in New Zealand. While Kulka is often regarded as a follower of Adolf Loos, his later works demonstrate how he adapted Raumplan principles to new cultural, material, and environmental contexts. In Central Europe, Kulka adhered to Loosian ideas, emphasizing spatial hierarchy, fixed furniture, and enclosed interiors. However, upon emigrating to New Zealand, he adjusted his approach due to different construction techniques, economic constraints, and a milder climate. This led to greater openness in planning, the transition from fixed to attached furniture, and an increased focus on transitional spaces. Through this comparison, the study highlights Kulka's active role in refining Raumplan, proving it to be a flexible and evolving framework rather than a rigid doctrine, and demonstrating his lasting impact on modern residential architecture.

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The Raumplan theory, often solely attributed to Adolf Loos, is a spatial design strategy that prioritizes free spatial composition over conventional planar layouts. Instead of aligning rooms on uniform floor levels, it organizes space through interlocking volumes of varied heights, achieving spatial efficiency and functional needs. This approach highlights interior hierarchy, controlled views, and rich material expression hidden behind modest or minimal exteriors. In this study, the term Raumplan framework refers not only to this theoretical foundation but also to the architectural practices and spatial strategies it has inspired across various contexts.

While Loos is undoubtedly the key figure in the development of Raumplan framework, numerous other architects were also important in shaping and applying the theory. Among them, Heinrich Kulka stands out as a particularly influential one. As Loos's prominent student, trusted colleague and close friend, Kulka refined the concept and helped define and disseminate it.



Figure 1: Photo in 1928. Photographer unknown.
Left to Right: Adolf Loos, Hans Moller, Anny Moller, Heinrich Kulka.¹

¹“Henry Kulka 1900-1971 (Architects of Remuera) a Forerunner of New Zealand Modern Architecture - Remuera Heritage,” Remuera Heritage, July 29, 2023, <https://remueraheritage.org.nz/story/henry-kulka-1900-1971-architects-of-remuera-a-forerunner-of-new-zealand-modern-architecture/>.

Introduction

In fact, the widely recognized term *Raumplan* was first raised by Kulka in a project compilation he edited for Loos.² Moreover, recent documentations and interior analysis suggest that several projects attributed solely to Loos, such as the Rufer House (Vienna, 1922) and the Semler Residence (Pilsen, 1932), likely involved Kulka's direct participation.³

Following the declining health and eventual passing of Loos in 1933, Kulka carried forward the *Raumplan* practice independently. His work on Villa Holzner (Hronov, Czechia, 1937–1938), for instance, exemplifies his deep understanding of the theory. As Kulka's last European project before emigrating to New Zealand due to the persecution of Jews in Central Europe during World War II, this East Bohemian villa embodies the spatial principles of *Raumplan* theory while demonstrating Kulka's own interpretation of the approach.⁴

Kulka's relocation to New Zealand marked a significant shift in his career. Faced with an entirely new cultural and professional environments, he had to rebuild his practice and social networks from the ground up. To integrate into the English-speaking society, he anglicized his name from Heinrich to Henry. From 1940 to 1960, Henry Kulka was employed by Fletcher Construction Company and eventually became Chief Architect. In this company, his main projects were commercial and industrial buildings, where prefabrication and repetition dominated the construction logic. Alongside his corporate responsibilities, Kulka maintained a private practice, designing residential houses that reflected his European background. Many of his early commissions came from fellow Central European émigrés, such as the Halberstam House (Wellington, 1948), built for another Jewish family who had fled Czechia and had prior ties to Kulka's family.⁵ Over time, however, Kulka's clients broadened to include locals, as seen in the Sharp House (Auckland, 1964), a project designed after his retirement from Fletcher Construction Company.⁶

This essay examines Villa Holzner and the Sharp House through the lens of *Raumplan* theory, investigating how Kulka adapted its principles across different cultural, environmental, and material contexts. Given the limited documentations of both houses, this study includes redrawn plans, sections, isometric drawings and 3D models to facilitate a deeper spatial analysis. By comparing these two private residences, this research aims to highlight the ways in which Kulka not only implemented but also evolved the *Raumplan* framework, transitioning from a follower of Loosian ideas to an innovator who reinterpreted it in response to new contexts. Finally, this study intends to achieve a broader understanding of Kulka's role in bridging Central European modernist design with localized architectural solutions in New Zealand.

² Heinrich Kulka, *Adolf Loos, Das Werk Des Architekten, Löcker eBooks*, 1931, <http://ci.nii.ac.jp/ncid/BA87397246>.

³ Giles Reid and Mary Gaudin, *Henry Kulka*, 2022.

⁴ Petr Svoboda and Martin Šolc, *Následovníci Adolfa Loose: práce v Českých zemích*, 2020.

⁵ Cherie Jacobson, "Ruffled by the Number of Windows: The 1948 Halberstam House by Henry Kulka," *Architectural History Aotearoa* 21 (December 10, 2024): 53–62, <https://doi.org/10.26686/aha.v21.9664>.

⁶ Reid and Gaudin, *Henry Kulka*.

⁷ "Book Review: Henry Kulka," *Architecture Now*, n.d., <https://architecturenow.co.nz/articles/book-review-henry-kulka/>.



Figure 2: Photo from the marriage of Adolf Loos and Claire Beck, July 18, 1929. Photographer unknown. Left to Right: Mitizi Schnabl, Loos's housekeeper; Unknown, possibly Bořivoj Kriegerback, Loos's key contractor in Pilsen; Claire Beck; Adolf Loos; Heinrich Kulka; Claire's mother Olga Beck. Photo courtesy of Janet Beck Wilson.⁷

Literature Review

Heinrich Kulka and Raumplan Theory Framework

Heinrich Kulka played a pivotal role in shaping the Raumplan theory framework. As the editor of Adolf Loos's collected works, he was the first to systematically explain Raumplan, focusing primarily on the circulation among spatial volumes with different proportions and the principle of spatial economy in modern architecture.⁸ After relocating to New Zealand, Kulka revisited and reinterpreted the Raumplan theory in 1960, shifting his focus toward complex spatial arrangements and materiality from a historical perspective.⁹ This evolution suggests that his architectural thinking was not static but adapted to new conditions over time.

Villa Holzner

Tanja Poppelreuter compiled the works of Heinrich Kulka in Europe, noting that Villa Holzner and several other projects for houses share similar cubistic characteristics with the previous Loosian houses, to which Kulka also contributed in design and construction processes.¹⁰ According to Svoboda and Šolc, it refers Villa Holzner back to Rufer House, the first Raumplan house constructed in 1922, in which construction process Kulka participated.¹¹ Additionally, the limited yet distinctive interior photographs of Villa Holzner can serve as valuable resources for further interior studies, combining with the knowledge on interiors in other Loos' houses.

Henry Kulka's career in New Zealand and Sharp House

Poppelreuter provides a brief overview of a broad historical context on Jewish architects who fled to New Zealand during the rise of Nazi persecution, including Heinrich Kulka.¹² His relocation marked a turning point in his career, pushing him to adapt his architectural ideas and practice to a completely new cultural and environmental setting. Reid and Gaudin present three of his residential projects in New Zealand in *Henry Kulka*, including the Sharp House, with a particular focus on his interior designs and how they diverged from his Central European background.¹³ Additionally, Sharp House has been referenced in student thesis projects in New Zealand, primarily in comparative studies of Kulka's late timber houses.¹⁴

Research Gap

While existing literature documents Kulka's architectural contributions, there is limited discussion of his role in advancing the Raumplan theory, particularly through his own designs after Adolf Loos's death and his subsequent emigration to New Zealand. Villa Holzner has been briefly mentioned in Czech sources, but no publicly accessible plans, sections, or digital models exist to analyze its Raumplan implementation in detail. Similarly, while the Sharp House has been discussed, it has not been thoroughly examined in relation to Raumplan principles. The key research gap is the lack of direct comparisons between two of design projects by Kulka, which would illuminate the evolution of Raumplan across different architectural contexts—Central Europe and New Zealand—while offering new insights into how he adapted and expanded the theory beyond its origins.

⁸ Kulka, *Adolf Loos, Das Werk Des Architekten*.

⁹ Ludwig Münz and Gustav Künstler, *Der Architekt Adolf Loos: Darstellung Seines Schaffens Nach Werkgruppen/Chronologisches Werkverzeichnis, 1964*, <http://ci.nii.ac.jp/ncid/BA15927173>.

¹⁰ Tanja Poppelreuter, "Raumplan After Loos," *Fabrications* 25, no. 1 (January 2, 2015): 84–103, <https://doi.org/10.1080/10331867.2015.1006761>.

¹¹ Svoboda and Šolc, *Následovníci Adolfa Loose: Práce v Českých Zemích*.

¹² Tanja Poppelreuter, "Before 1939: Refugee Architects to New Zealand," *Fabrications* 26, no. 2 (May 3, 2016): 180–201, <https://doi.org/10.1080/10331867.2016.1173164>.

¹³ Reid and Gaudin, *Henry Kulka*.

¹⁴ James Ho, "Authentic Living: Case Studies of Two Late Timber Houses by Henry Kulka" (MA Thesis, The University of Auckland, 2010).

Having studied under Loos and contributed to many of his projects, Heinrich Kulka developed a deep understanding of spatial functionality and volumetric organization.¹⁵ His architectural career in Central Europe was marked by a series of projects that reflected Raumplan principles. Villa Holzner in Hronov (CZ), designed in 1937, stands as the final and a refined example of his European works before his emigration to New Zealand.

Commissioned by Rudolf and Ilza Holzner, the owners of a Hronov textile mill, the villa was designed as a private residence. However, neither the Holzners nor Kulka witnessed its completion due to World War II and the persecution of Jews.¹⁶ Despite its relatively modest size, the villa embodies the Raumplan principles he developed under Loos' influence while integrating his own design sensibilities, achieving both functional efficiency and aesthetic harmony (see fig. 3).¹⁷

In 1997, the villa was converted into a medical clinic, altering its interior but preserving several original built-in furniture. Registered as a monument in the Central Registry of Architectural Sites of Historical Interest, it is preserved as a prime example of interwar avant-garde architecture nowadays.¹⁸

Architectural Features

Architecturally, Villa Holzner follows the tradition of Loos' cubic houses from the 1920s, characterized by a compact cubic form and minimalistic façade. Based on the principles of Raumplan, Kulka introduced complex floor height variations, interconnected living spaces, and strategic use of built-in furniture to maximize spatial efficiency. The villa also features typical Raumplan spaces, including a central living area with a fireplace, a dining room with a chamfered bay window, and double staircases. Yet, it also integrates regional adaptations, such as a sloped roof with an inserted attic, which distinguish it from earlier Raumplan projects.

The entrance façade of Villa Holzner demonstrates typical Raumplan features, presenting a seemingly simple and minimalist but carefully structured composition. The façade is symmetrical except for a single asymmetrical opening on the bottom left, subtly hinting at the spatial complexity within. The main entrance is marked by an additional portal structure and travertine cladding,¹⁹ standing out against the white cubic volume while remaining harmonious with the overall elevation. This careful material selection signals that materiality is central to Kulka's construction philosophy, and also an essential aspect of Raumplan practice.²⁰

Viennese architect Josef Frank, a contemporary of Adolf Loos, critiqued the modernist emphasis on rational, minimalist houses, arguing instead for a more organic, human-centered approach to domestic design in *The House as Path and Place*.²¹ However, Villa Holzner achieves to maintain an ordered cubic exterior while offering unconventional, varied spatial arrangements within. When moving through the villa, the interplay of different levels, visual connections, and circulation routes exemplifies Raumplan's deviation from rigid spatial conventions, creating a fluid and dynamic interior both horizontally and vertically.

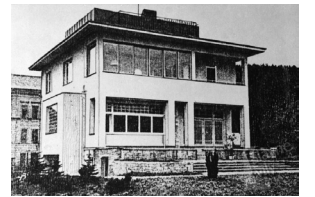


Figure 3: Photo of Villa Holzner from south facade.

Villa Holzner

The Ending of Kulka's European Works

¹⁵ "Henry Kulka 1900-1971 (Architects of Remuera) a Forerunner of New Zealand Modern Architecture - Remuera Heritage."

¹⁶ Direction.Cz and Direction. Cz, "Město HRONOV: Rodinná vila čp. 22," Hronov, n.d., [https://www.mestohronov.cz/vitejte-u-nas/clanek/rodinn-vila-p-22#googtrans\(cs\[en\]\)](https://www.mestohronov.cz/vitejte-u-nas/clanek/rodinn-vila-p-22#googtrans(cs[en])).

¹⁷ Poppelreuter, "Raumplan After Loos.": "Vila Rudolfa a Ilzy Holznerových, Královehradecký - Slavne Vily, Cz."

¹⁸ Svoboda and Šolc, *Následovníci Adolfa Loose: Práce v Českých Zemích*.

¹⁹ Ibid.
²⁰ Adolf Loos, *Ornament and crime: Thoughts on design and materials*, ed. Shaun Whiteside and Joseph Masheck (London UK: Penguin Books, 2019).

²¹ Christopher Long, *Josef Frank: Life and Work* (University of Chicago Press, 2002).

The image has been removed from the layout due to confidentiality.

Figure 4. Axonometric drawing of Villa Holzner.²³

Floor Plans and Layout

The spatial organization of Villa Holzner reflects both the foundational principles of Raumplan and Kulka's individual refinements. Unlike many Loosian houses, Villa Holzner introduces multiple functional entrances at different levels, creating a dynamic engagement between exterior and interior spaces.

- The main entrance, accentuated by travertine cladding, leads directly into a vestibule before opening into the reception hall.²²
- A servant's entrance on the east façade descends five steps into the ground, creating a modest and separate access route.
- The garage entrance, with bespoke metal doors, is located one level below ground, integrating seamlessly into the overall structure.
- A terrace door at the rear of the villa sits one level above the ground, further emphasizing the multi-level organization.

Basement Level (see fig. 11): The basement contains three different functional zones: garage, servant quarters, and a main reception area. Each part can be accessed independently through different entrances while strictly separated visually by partition walls. The garage is half meter higher than servant areas. The main reception area is slightly elevated above the garage level, reinforcing the spatial separation between public and service areas. This deliberate height differentiation eliminates the need for extensive internal corridors, optimizing circulation.

Ground Floor (see fig. 12): The main living area is designed as an open, yet hierarchically structured space. The study and a small storage room are positioned a meter above the rest of the floor, establishing a subtle distinction without physical partitions. The main living and dining areas are not separated by walls but are instead defined by variations in built-in furniture and cladding selections. The kitchen and preparation rooms are set apart from the main living space, ensuring functional efficiency without disrupting the openness of the layout. The half-covered terrace on the ground floor connects to both the main living area and dining room, allowing uninterrupted views toward the garden from each space. The two-leveled design subtly reveals the interior floor height differences and serves as a transitional place between the interior space and the garden landscape.

First Floor and Attic (see fig. 13 and fig. 14): As the functions transition from public to private, corridor spaces become more pronounced. On the first floor, it hosts four bedrooms aligned along a central hallway leading to a veranda and a loggia. The attic, inserted into the sloped roof, accommodates a guest room and laundry. Unlike Josef Frank's concept of the attic as a dynamic, free-flowing space,²⁴ the attic in Villa Holzner remains a rigid cubic volume, prioritizing functional necessity over spatial expressiveness.

²² Long and Frank, *Josef Frank: Life and Work*.

²³ Heinrich Kulka, *Axonometric Drawing of Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

²⁴ Aina Macedo Coll, *Adolf Loos: his interior linings* (Barcelona, Spain: ETSAB, 2022).

²⁵ Heinrich Kulka, *Elevation Drawings*, c. 1937, ink pen on paper, private collection of Kulka Estate. Used with permission.

²⁶ I. Bing, *File:Villa Holzner Raumplan, North Facing Façade. Hronov, Czech Republic.jpg*, 2020, https://commons.wikimedia.org/wiki/File:Villa_Holzner_Raumplan_north_facing_fa%C3%A7ade_Hronov_Czech_Republic.jpg.

²⁷ I. Bing, *File: Villa Holzner Raumplan, South Facing Façade. Hronov, Czech Republic.jpg*, 2019, https://commons.wikimedia.org/wiki/File:Villa_Holzner_Raumplan_south_facing_fa%C3%A7ade_Hronov_Czech_Republic.jpg.

The images have been removed from the layout due to confidentiality.

Figure 5. Villa Holzner North Façade Elevation.²⁵

Figure 6. Villa Holzner West Façade Elevation.²⁵

Figure 7. Villa Holzner East Façade Elevation.²⁵

Figure 8. Villa Holzner South Façade Elevation.²⁵



Figure 9. Symmetrical travertine, north facing façade of Villa Holzner.²⁶



Figure 10. South facing façade of Villa Holzner.²⁷

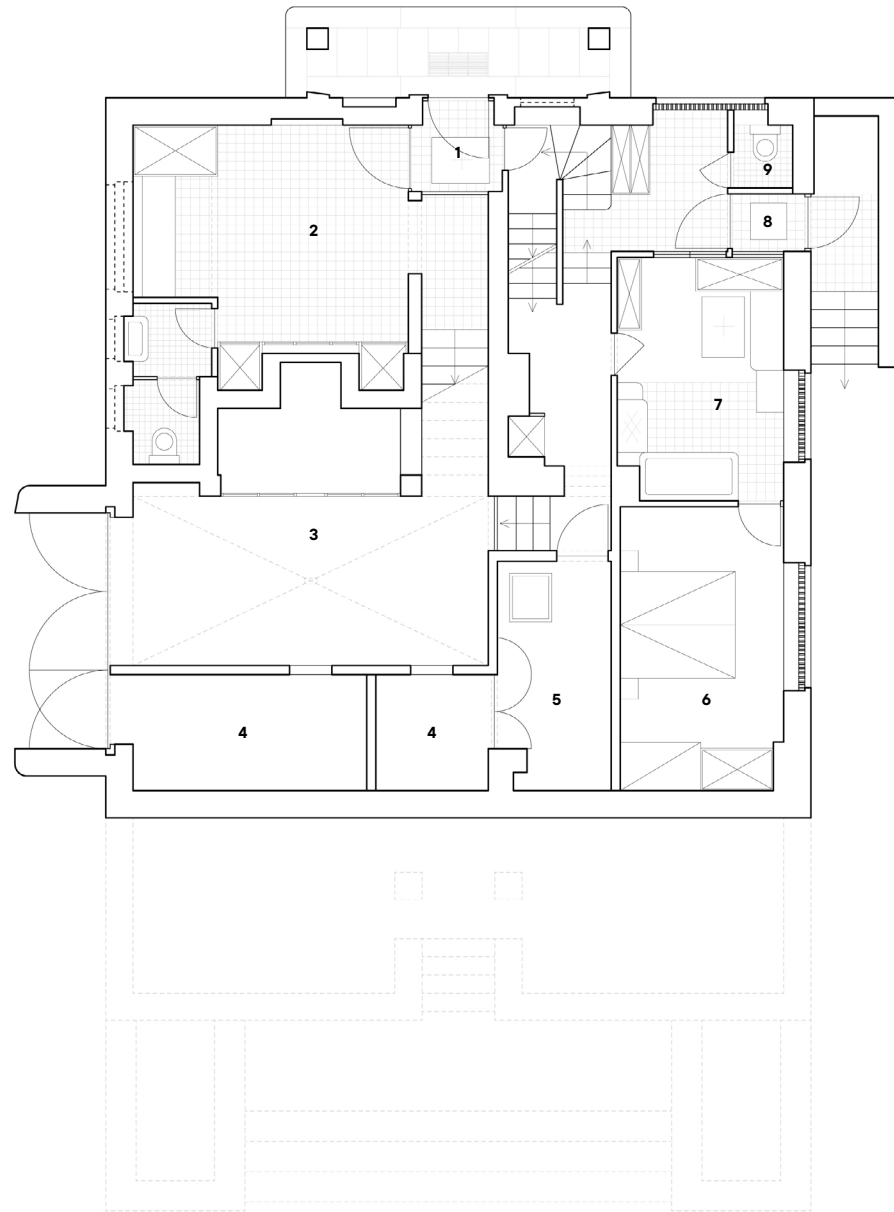


Figure 11. Basement Plan

- 1. Vestibule - Main Entrance
- 2. Reception Hall
- 3. Garage
- 4. Storage
- 5. Energy Room
- 6. Servant's Bedroom
- 7. Utility Room
- 8. Vestibule - Servant Entrance
- 9. Toilet

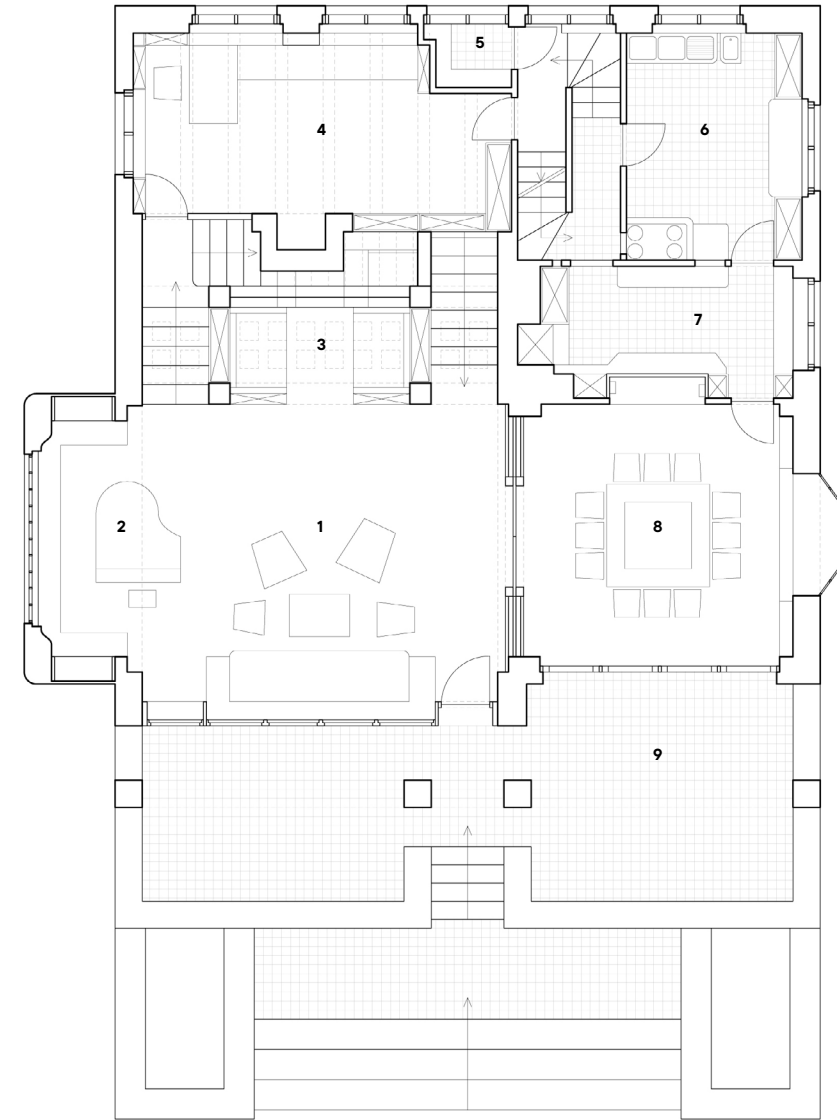


Figure 12. Ground Floor Plan

- 1. Sitting Area
- 2. Music Area
- 3. Niche
- 4. Study
- 5. Storage
- 6. Kitchen
- 7. Preparation Room
- 8. Dining Room
- 9. Terrace
- 10. Garden



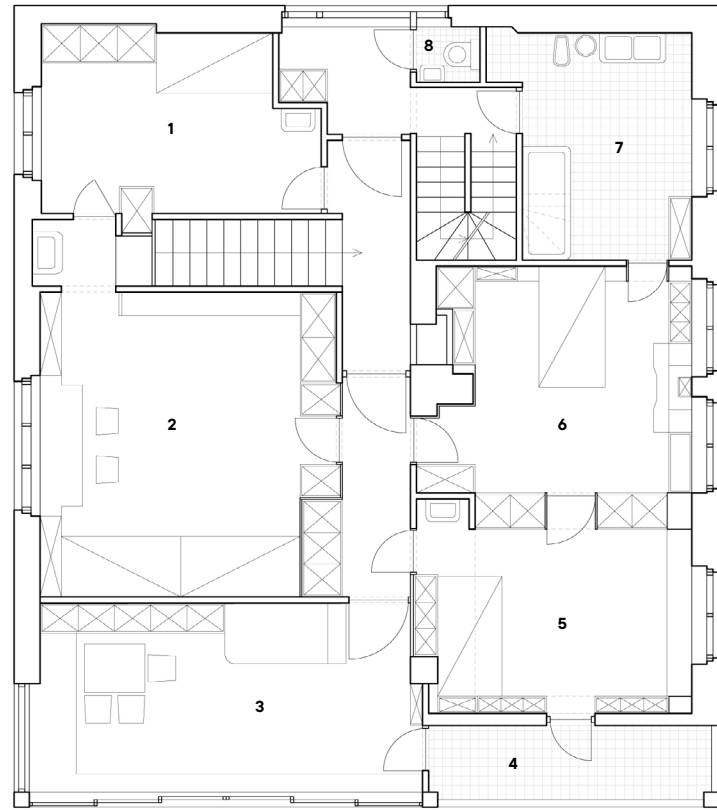


Figure 13. First Floor Plan
 1. Bedroom
 2. Children's Room
 3. Veranda
 4. Loggia
 5. Man's Bedroom
 6. Lady's Bedroom
 7. Lady's Bathroom
 8. Toilet

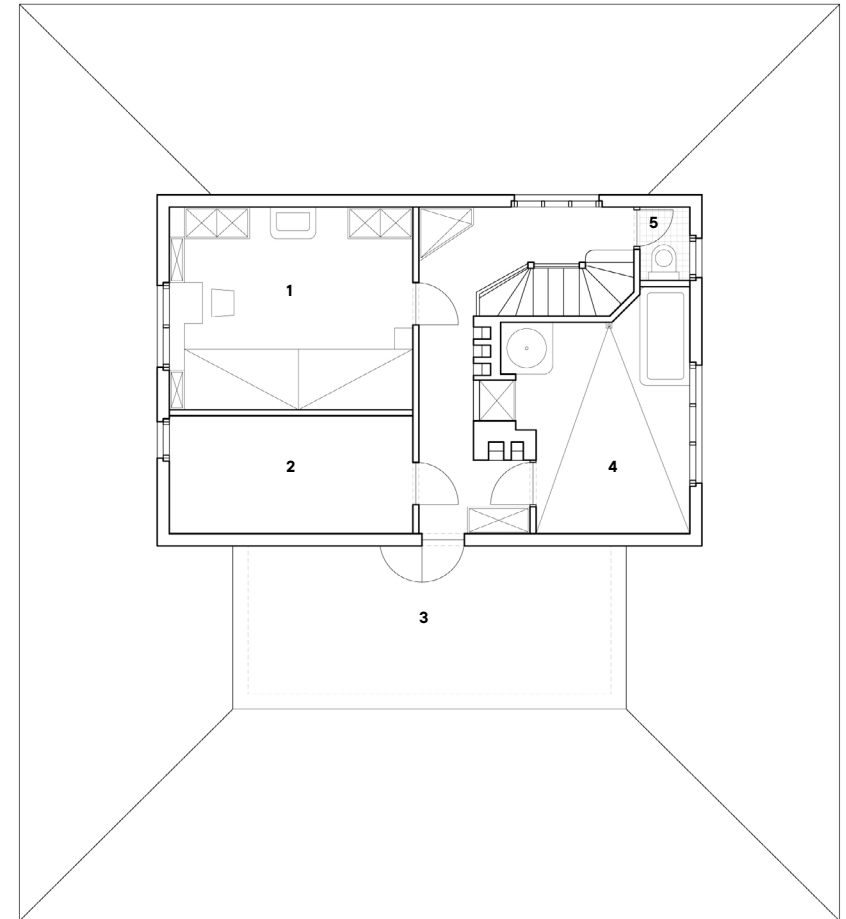


Figure 14. Attic Plan
 1. Guest Room
 2. Storage
 3. Outdoor Platform
 4. Laundry
 5. Toilet



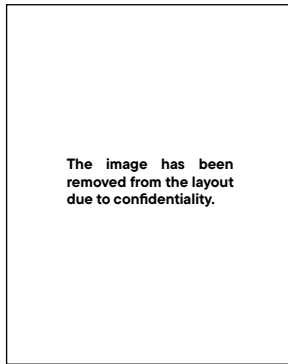


Figure 15. Detail drawing of internal central staircase.

Circulation and Spatial Hierarchy

Upon entering Villa Holzner through the travertine-clad entrance, visitors step into a compact vestibule before turning into the spacious reception hall with its high ceilings and large openings that flood the space with natural light. Fixed furniture is seamlessly integrated into the walls, optimizing space efficiency and allowing the central areas to remain open and flexible for various uses.²⁸ The strategic unification of cladding materials and the integration of built-in furniture with architectural surfaces exemplify the rejection of unnecessary ornamentation and in favor of a material-driven spatial expression.²⁹

A central staircase (see fig. 15) leads from the reception hall up to the main living area,³⁰ a key Raumplan space (see fig. 16).³¹ While the floor remains level throughout, subtle changes in ceiling height and built-in furnishings divide the space into distinct zones:

- A sitting area with a raised ceiling and an iconic built-in bench. Notably, the bench faces inward, directing attention toward the interior rather than the exterior view. The architect designed for the residents to focus only on interior, where the spatial complexity and material selection are carefully considered.³²
- A music area, distinguished by its extrusion out of the rigid cubic form, with built-in bookshelves in the walls and lower ceiling height.
- A niche (see fig. 17), featuring mirrored tiles that subtly reflect light without creating infinite reflective images.³³ Aside from mirror tiles and marble claddings, the lower ceiling is decorated with grid pattern, sitting one light bulb in each grid (see fig. 18).³⁴ With the illumination of the light bulbs, the texture of materials can be emphasized and the reflection on the mirror tiles can create a luxurious atmosphere.

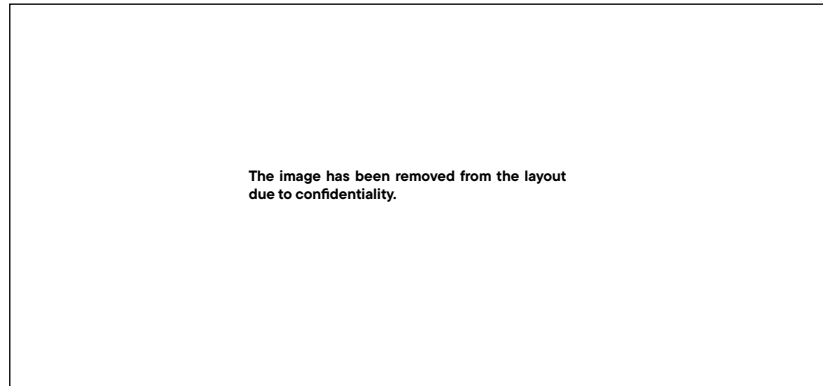


Figure 16. Sketch of the main living area in Villa Holzner, demonstrating typical Raumplan features.



Figure 17 & 18. Photos of the niche in Villa Holzner, including marble columns, mirror tiles, fireplace and the grid pattern on the ceiling.

The dining room, separated from the sitting area by a grand sliding door with marble framing (see fig. 17),³⁵ exhibits further spatial layering. The lower portion of the partition wall is clad in wood paneling, while the upper white section visually connects with the ceiling, creating the effect of greater height in perception. The east façade features a trapezoidal bay window extrusion, perhaps responding to the small bay windows appeared prominently in Looshaus am Michaelerplatz. Below this window, heating installations are fixed along the walls, showcasing the seamless fusion of function and form (see fig. 18).³⁶

Ascending six more steps from the main living area leads to the study, a semi-private workspace lined with built-in bookshelves, fixed bench and desk. The ceiling features an iconic decorative beam structure according to the original sketch by Kulka (see fig. 19).³⁷

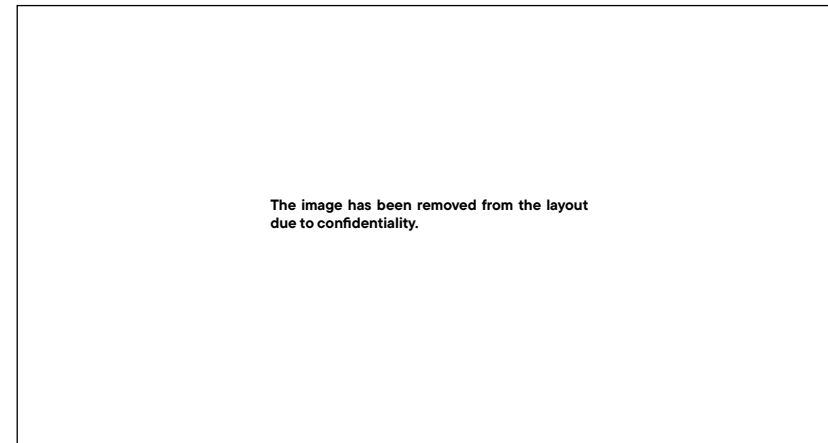


Figure 19. Sketch of the study in Villa Holzner, with iconic decorative beams on the ceiling.

The upper floors and attic, accessed only by the shortcut staircase core, contains mainly private bedrooms, which provided higher spatial efficiency and accessibility for the servants to reach to the different parts of the villa. Unlike the main living area's open circulation, these spaces rely on a more conventional hallway layout to provide privacy and clear separation between bedrooms.

In Villa Holzner, Kulka applied the Raumplan framework with clarity and discipline, organizing interlocking volumes through varied floor and ceiling heights. Interior complexity is hidden behind a restrained symmetrical façade, while fixed furniture and inward-looking benches express interior spatial hierarchy and controlled visibility. By arranging multiple entry points and considering circulation system carefully, Villa Holzner extends Raumplan framework beyond Loos's early implementation and achieves a more refined and integrated domestic environment. The interplay between geometric order and dynamic interior movement in Villa Holzner serves as a conclusion of his European designs and practice. The next chapter turns to the Sharp House in New Zealand, where different climatic, cultural, and construction contexts prompted Kulka to adapt and evolve the Raumplan approach in innovative ways.

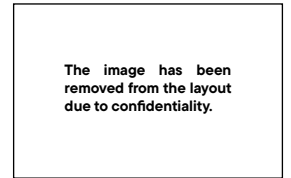


Figure 17. Sketch of the sliding door with marble framing.

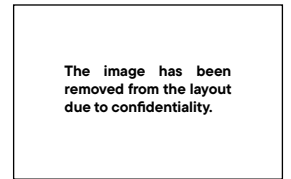


Figure 18. Sketch of the bay window in the dining room.

³⁵ Heinrich Kulka, *Sketch of Sliding Door with Marble Framing in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

³⁶ Heinrich Kulka, *Sketch of Window with Heating Installations in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

³⁷ Heinrich Kulka, *Sketch of Study in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

²⁸ Aina Macedo Coll, *Adolf Loos: his interior linings* (Barcelona, Spain: ETSAB, 2022).

²⁹ Loos, *Ornament and Crime: Thoughts on Design and Materials*.

³⁰ Heinrich Kulka, *Central Staircase of Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

³¹ Heinrich Kulka, *Sketch of Main Living Area of Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

³² Brian Andrews, "Ornament and Materiality in the Work of Adolf Loos," *ACSA*, 2011, <https://www.acsa-arch.org/proceedings/Annual%20Meeting%20Proceedings/ACSA.AM.98/ACSA.AM.98.53.pdf>.

³³ "Villa Rudolfa a Ilzy Holznerových, Královehradecký - SlavneVily.Cz."

³⁴ *Ibid.*

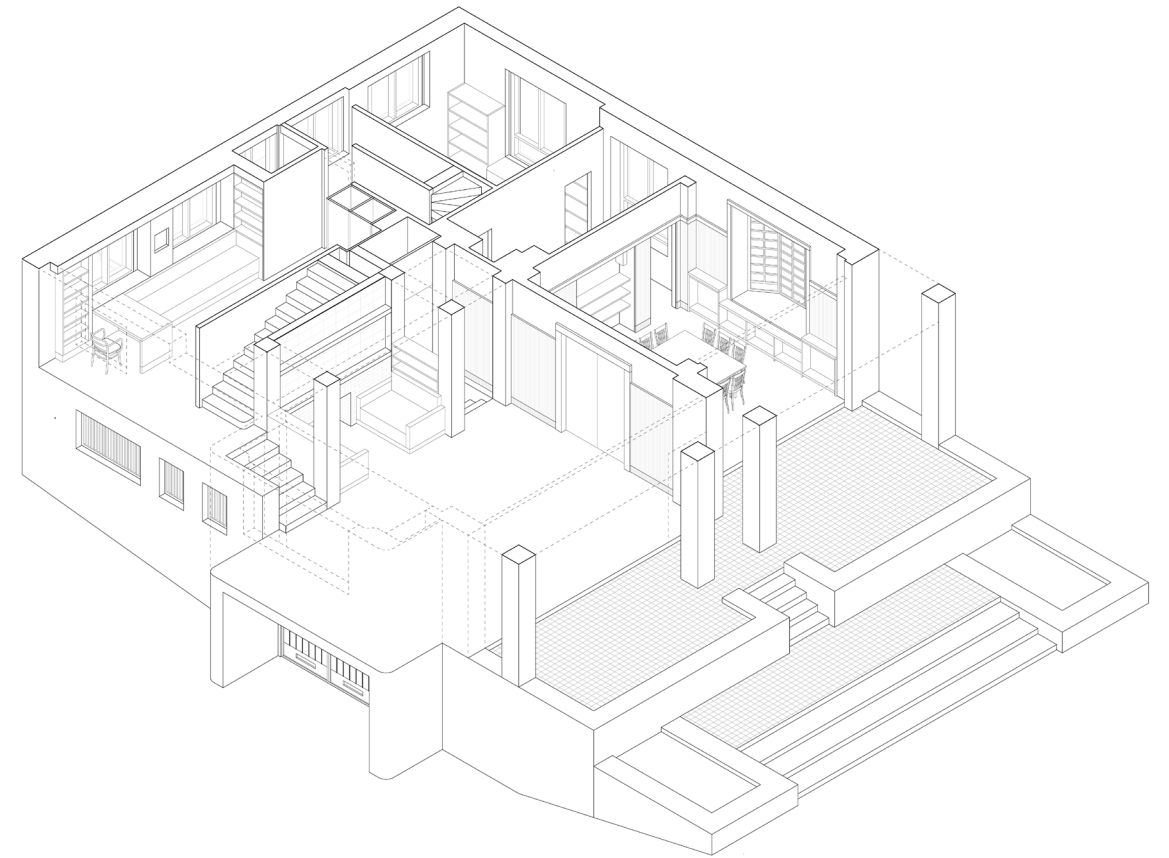


Figure 20. Isometric Drawing of Villa Holzner, demonstrating typical Raumplan spaces.

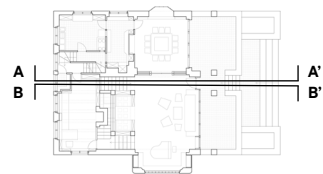


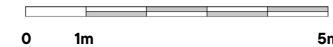
Figure 21. Section A-A'



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Figure 22. Section B-B'



From Heinrich to Henry Kulka

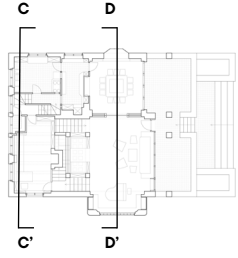


Figure 23. Section C-C'



Yue Guo



Figure 24. Section D-D'



From Heinrich to Henry Kulka

After emigrating to New Zealand in 1940, Heinrich Kulka had to rebuild his career in a totally different architectural and cultural environment. Unlike in Europe, modern architecture was still in its initial stage in New Zealand, introduced mainly by émigré architects from Central Europe and professionals with British training.³⁸ Kulka adapted to this new context, changing his name from Heinrich to Henry and navigating a way in the local context.

Between 1940 and 1960, Kulka worked for Fletcher Construction Company, where he eventually became Chief Architect. Unlike his earlier independent practice in Central Europe, he now had access to extensive technical support, allowing him to execute large-scale commercial and industrial projects. Many of these buildings reflected a Loosian classical basis in their symmetrical layout and implementation of natural stone. However, these works have so far received limited academic attention, as architectural attention in New Zealand largely focused on single-family houses rather than commercial and industrial projects.³⁹

Alongside his corporate career, Kulka also maintained a private practice in designing residential houses, gradually gaining commissions from both European émigrés and local clients. Unlike his earlier commissions for Central European acquaintances, such as the Halberstam House (Wellington, New Zealand, 1948), the Sharp House (Auckland, 1964) was a local commission, which he designed after retiring from Fletcher Construction Company. This project exemplifies Kulka's adaptation of Raumplan principles to a local context, blending European modernism with New Zealand's construction methods, materials, and climate.

Architectural Features

By the time of the Sharp House's construction, Kulka had established a distinct architectural style in New Zealand, designing modern houses with plywood interiors and weatherboarded exteriors. Sharp House has a more open and visually engaging façade, featuring white and light green vertical rusticated weatherboards with larger openings (see fig. 25).⁴⁰

The Sharp House is set on a steeply sloped site, and Kulka responded thoughtfully by integrating the building into the terrain (see fig. 26).⁴¹ Rather than resisting the natural topography, the design embraces it by allowing the structure to settle into the hillside as if anchored by the landscape. This grounded composition, combined with the uniformity of cladding and the fine detailing of window joinery, gives the house a modest and restrained appearance. When looking at the façade, the majority of it is made of glass instead of solid walls, making the house more connected to the nature. By designing windows from an interior perspective, Kulka oriented the residents toward desirable views while ensuring visual comfort and a sense of security, by setting the glass rise from the knee height (see fig. 27).⁴²

The roof is a shallow gable with an offset ridge, whose structure is hidden from exterior but selectively revealed its pitch inside. Unlike other post-war modern housing projects in New Zealand, Sharp House does not contain many typical elements in the façade, such as high-pitched roofs,



Figure 25. Photo of Sharp House.

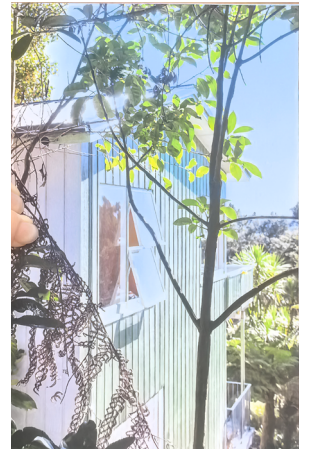


Figure 26. Photo of Sharp House from sloped side.

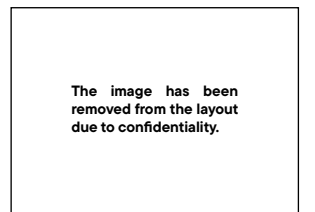


Figure 27. Diagram of the window in the living room.

Sharp House

Adapting Raumplan to New Zealand

³⁸ Peter Shaw, *A History of New Zealand Architecture*, 2003.

³⁹ Poppelreuter, "Before 1939: Refugee Architects to New Zealand."

⁴⁰ Reid and Gaudin, *Henry Kulka*, 380 - 381.

⁴¹ Reid and Gaudin, *Henry Kulka*, 344 - 345.

⁴² Ho, "Authentic Living: Case Studies of Two Late Timber Houses by Henry Kulka", 55.

cantilevered decks, pergolas, floor-to-ceiling glass and modularity.⁴³ Instead, Kulka employed subtle spatial articulations to define the features of the house.

Floor Plans and Layout

When looking into the simple plans, it seems hard to draw the conclusion that the Sharp House has any relationships with Raumplan theory. The two-story house has no artificial alternations in floor height except the two steps separating the entrance platform from the living room. Other floor height alternations happen on the basement level, following the topography of the site.

On the ground floor (see fig. 29), the main living spaces and bedrooms are placed on a single level, connected by expansive balconies. These outdoor spaces serve as transitional zones between the interior and exterior, a design element Kulka increasingly embraced in his New Zealand projects. In the Sharp House, two large balconies are incorporated. One connects a bedroom, the master bedroom, and the living room, while the other links the dining room with the living room. By connecting interior rooms with the outdoors, the balconies create a sense of seamless, free-flowing circulation across the house.

The basement level has a long plan and half areas than the ground floor (see fig. 30). It contains only a laundry, a big playing area and a bedroom on this floor, with a linear composition. To eliminate the height difference caused by the terrain, the play room is separated into two parts by three steps naturally. The laundry and the play room have separate entrances, which distinguish the function efficiently. The veranda sits on stone foundation with lifted wooden deck, forming the exterior terrace leading to the garden.

Circulation and Raumplan Elements

While the floor plan appears conventional, the interior unfolds Raumplan characteristics through its spatial organization. Visitors first encounter a white-painted glazed wall with timber framing, which conceals the bright yellow entrance door under a shed roof (see fig. 31).⁴⁴ The modest entrance follows the Raumplan principles of revealing interior richness gradually.⁴⁵ The foyer was painted entirely white, contrasting with the materiality of the plywood inside the house. From here, visitors could either descend to the lower-level playroom and laundry or take two steps up into the living room, where the rich warmth of the plywood interior was unveiled.

Upon ascending two steps and entering the door, one arrives directly into the living room, a space that immediately establishes the spatial logic of the Sharp House. The living area is visually anchored by a sofa positioned centrally and facing the entrance, flanked by large windows and two doors to the balconies (see fig. 32), which extend the interior outward and draw attention to the surrounding landscape.⁴⁶ Turning right, the round dining table can be noticed directly, since there are no partition walls or doors between the living and dining areas. Spatial continuity is maintained through a central display cabinet. Combining frosted glass panels with a



Figure 31. Photo of the entrance.



Figure 32. Photo of the sofa and one door to the balcony.

⁴³ Reid and Gaudin, *Henry Kulka*.

⁴⁴ Reid and Gaudin, *Henry Kulka*,

346.

⁴⁵ Andrews, "Ornament and Materiality in the Work of Adolf Loos."

⁴⁶ Reid and Gaudin, *Henry Kulka*,

353.

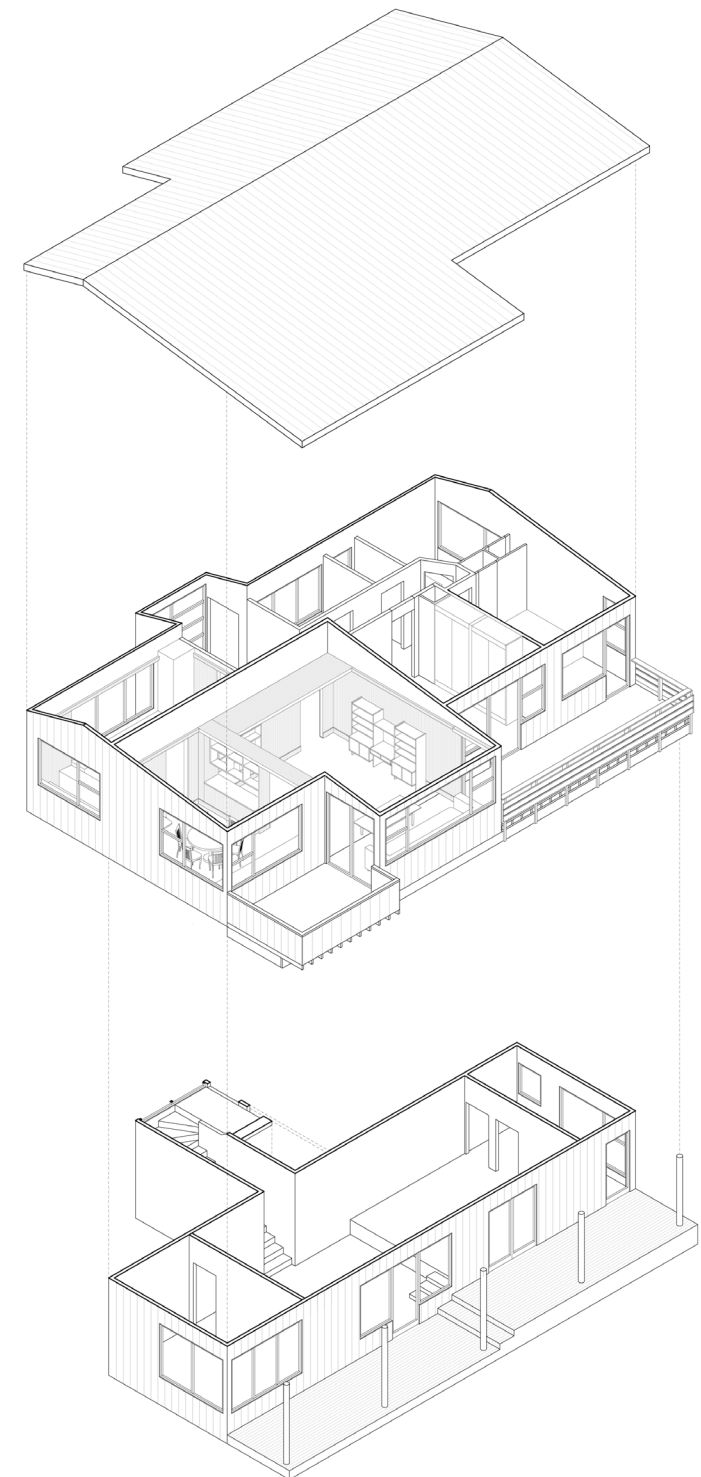


Figure 28. Exploded Isometric Drawing of Sharp House

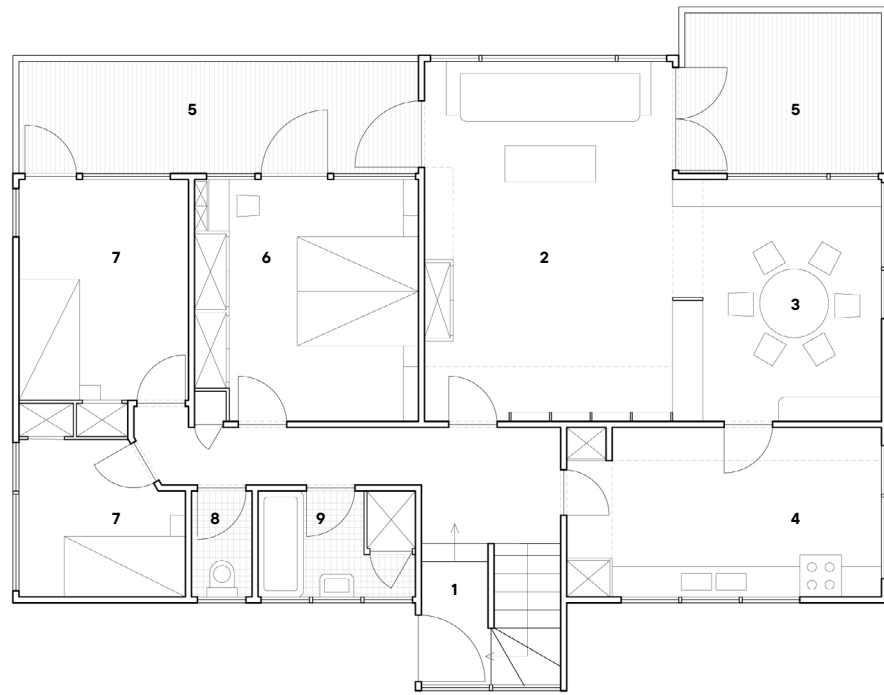


Figure 29. Ground Floor Plan
 1. Vestibule - Main Entrance
 2. Living Room
 3. Dining Room
 4. Kitchen
 5. Balcony
 6. Master Bedroom
 7. Bedroom
 8. Toilet
 9. Bathroom

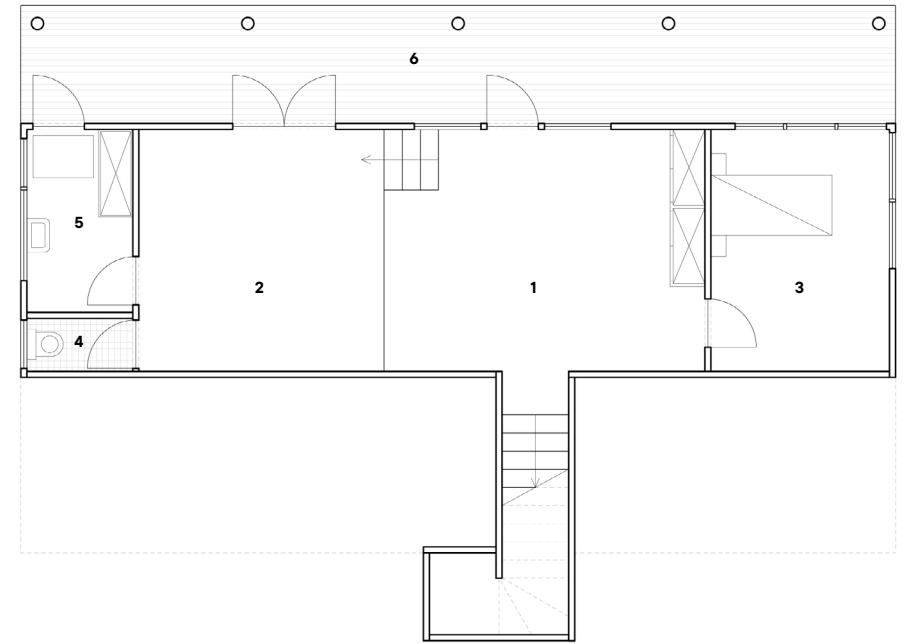
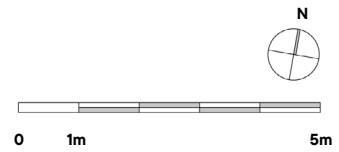


Figure 30. Basement Plan
 1. Living Room
 2. Rumpus Room
 3. Bedroom
 4. Toilet
 5. Laundry
 6. Veranda

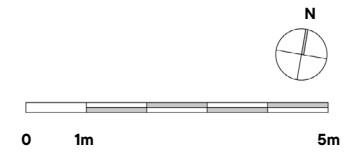




Figure 33. Photo of the cupboard with translucent glass panels in Sharp House.



Figure 34. Photo of the cabinet connects to the ceiling.



Figure 35. Photo of the corridor, facing to the kitchen.

⁴⁷ Reid and Gaudin, *Henry Kulka*, 362 - 363.

⁴⁸ Ho, "Authentic Living: Case Studies of Two Late Timber Houses by Henry Kulka."

⁴⁹ Reid and Gaudin, *Henry Kulka*, 360 - 361.

⁵⁰ Reid and Gaudin, *Henry Kulka*, 372.

solid timber cupboard, the unit functioned both as furniture and a defining architectural element(see fig. 33).⁴⁷ The translucent glass softened the separation, allowing light to pass through while maintaining privacy, reminiscent of Japanese shoji screens.⁴⁸

The cabinet connects directly to the plywood ceiling framework, reinforcing a cohesive material and spatial language. The ceiling subtly defines each zone: in the living room, it follows the pitch of the roof, beginning low above the bay window and gradually rising toward the opposite end of the room, enhancing the sensation of openness. The white ceiling planes are outlined by exposed plywood framing, which continues uninterrupted into the dining area, forming a lightweight soffit that helps reinforce spatial continuity.

Connected with the plywood ceiling framework, the cabinet reinforced a cohesive material and spatial language (see fig. 34).⁴⁹ Fixed plywood furniture further supports the spatial arrangement. Storage units are attached to the walls and project slightly into the rooms, shaping boundaries without enclosing them, and reinforcing Kulka's intent to preserve openness while organizing function.

Moving beyond the dining area, the kitchen is tucked into the corner and visually connected, though more enclosed. It also links back to the entrance vestibule, allowing circulation to loop intuitively (see fig. 35).⁵⁰ To the left of the vestibule, a hallway leads to the private zone, where bedrooms and bathrooms are distributed along a linear corridor.

Descending the stairs to the basement level, one enters directly into the playroom. The lower level feels more compressed, a result of both the hillside terrain and the recessed façade design. Structural columns support the elevated upper volume, forming a sheltered veranda with wooden decks at the front. This half-covered outdoor space serves as a transitional terrace, visually and functionally mediating between the house and the garden. At either end of the basement are a toilet and a bedroom, marking this level as a secondary zone, since it is less convenient and more private compared to the upper floor.

Despite its seemingly simple and elementary plan, the Sharp House demonstrates key Raumplan principles: an interplay between modest exteriors and dynamic interiors, an emphasis on materiality, and a careful organization of spatial relationships. As Adolf Loos once noted, the true essence of architecture is not fully captured in two-dimensional drawings or photographs, Sharp House exemplifies this notion through its immersive interior experience, demonstrating Kulka's adaptation of Raumplan theory to the cultural and climatic conditions of New Zealand. With both Villa Holzner and Sharp House introduced, the next chapter turns to a direct comparison between the two houses, tend to reveal Kulka's engagement with the Raumplan framework evolved across continents and contexts.

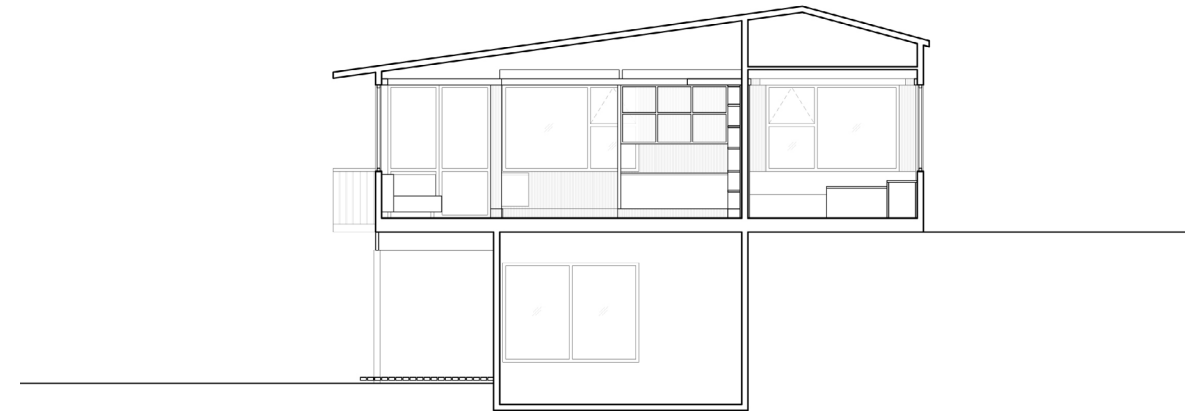
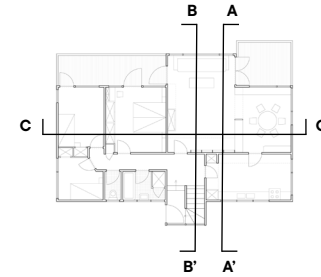


Figure 36. Section A-A'



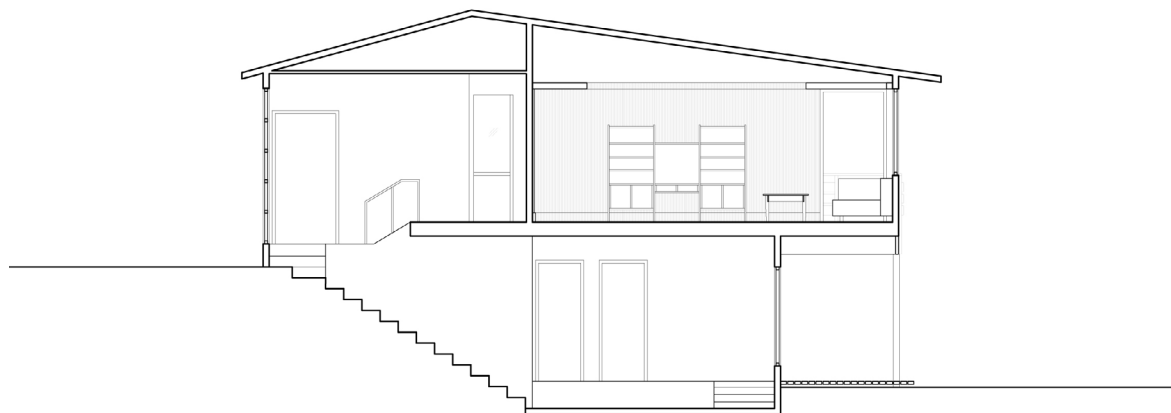


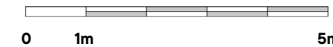
Figure 37. Section B-B'



Yue Guo



Figure 38. Section C-C'



From Heinrich to Henry Kulka

After examining Villa Holzner and Sharp House, this chapter will conduct a comparative analysis between these two houses to examine how Kulka transformed Raumplan framework across different cultural and environmental contexts. The analysis will focus on tracing both the consistencies and adaptations in his spatial strategies, material choices, and design responses to shifting constructional and social conditions. By comparing these two houses, the chapter tries to reveal the evolution of Kulka's architectural language from his Central European foundations to his practice in New Zealand.

1. Modernism in Transition: Contrasting Architectural Landscapes in Czechoslovakia and New Zealand

During the interwar period, Czechoslovakia emerged as a hub for modernist architecture, fueled by its political and cultural progressivism. The First Czechoslovak Republic provided a fertile ground for experimentation in architecture, supported by economic growth, industrialization, and a forward-thinking intellectual climate. The influence of the Bauhaus, De Stijl, and Russian Constructivism was evident in many Czech projects, promoting the principles of functionalism while rejecting historical ornamentation in favor of clean lines, open spaces, and innovative materials.⁵¹ Adolf Loos, who had Czech roots and maintained professional connections in the country, played a crucial role in introducing Raumplan concepts, which were further developed by Heinrich Kulka. By the time Kulka designed Villa Holzner, he was working within a culture that valued architectural modernism as a means of expressing social and technological progress. Modernist principles were not only widely accepted but also encouraged by clients and professional organizations.⁵² This allowed for a seamless application of Raumplan concepts, integrating dynamic spatial arrangements with high-quality materials such as travertine and marble, which were readily available in Central Europe.

In contrast, the principles of modernism, which had rapidly gained traction in Europe, were slow to be adopted in New Zealand. The country lacked the strong industrial base and intellectual climate that had propelled modernist architecture in Czechoslovakia. When Kulka arrived, New Zealand was the barren of modern architecture. As discussed earlier, the architectural scene in New Zealand at that time was shaped by both local and émigré influences, creating a fertile ground for the integration of modernist principles. Within this setting, Kulka's background in Central European modernism positioned him uniquely to reinterpret Raumplan framework for a new environment. Despite these efforts, modernism faced resistance from local architects and clients who were hesitant to move away from familiar styles. Architectural historians Mitchell and Chaplin observed that this reluctance stemmed from a "self-consciously nationalistic" attitude among New Zealand architects, who felt a need to develop their own architectural identity rather than simply adopting European modernism.⁵³

Comparison Between Villa Holzner and Sharp House

⁵¹ Christopher Long, "Ornament, Crime, Myth, and Meaning," *ACSA*, 2008, <https://www.acsa-arch.org/proceedings/Annual%20Meeting%20Proceedings/ACSA.AM.85/ACSA.AM.85.107.pdf>.

⁵² Andrews, "Ornament and Materiality in the Work of Adolf Loos."

⁵³ David Mitchell and Gillian Chaplin, *The Elegant Shed: New Zealand Architecture Since 1945* (Oxford University Press, USA, 1984).



Figure 39. North facade and entrance of Villa Holzner.



Figure 40. Photo of the entrance of Sharp House.



Figure 41. Photo of the vestibule of Sharp House, after entering the house.

2. Material Adaptation and Modest Entrances: A Contrast in Façade Treatments

Villa Holzner is a simple white cube with several small extrusions. The entrance façade is a restrained yet carefully composed manifestation of Raumplan principles. The strictly symmetrical elevation, disrupted only by a single asymmetrical opening on the bottom left, establishes a sense of order and control.

Unlike Villa Holzner, the Sharp House presents a lighter and more open facade by implementing white and pale green vertical weatherboards and larger window openings. Kulka adopted bevel-backed weatherboards with scalloped rebates, a detail that became characteristic of many of his New Zealand houses, to form the modest qualities with moderate modernity. Moving from the plaster finishes typical in Central Europe, Kulka had to adapt to weatherboard and timber-based construction methods in New Zealand, which were more economical and widely used.⁵⁴ Although he had some prior experience with timber at Landhaus Khuner, using it not just as cladding but as a structural material marked a significant shift in his design process.⁵⁵ The milder climate further allowed for thinner walls and larger glazing, transforming the façade into a more open, light-filled composition. The compact, symmetrical European aesthetic turned to a horizontally oriented design that prioritized openness and engagement with the surrounding landscape.

Although Villa Holzner and the Sharp House differ significantly in material expression and visual language, both adhere to the principle of modest entrances that conceal the spatial richness within. Each façade follows a nearly symmetrical layout, subtly disrupted by singular elements to avoid rigid formality. In Villa Holzner, symmetry is slightly broken by a small window at the lower left corner of the north façade, while the central entrance remains formally aligned and accentuated by a protruding portal with travertine cladding, which subtly distinguishes it from the white cubic volume without overwhelming the composition (see fig. 39).⁵⁶

In contrast, the Sharp House introduces asymmetry more directly by placing the entrance door itself off-center. Hidden under a shed roof at the side of the house and shielded by a white-painted glazed wall, the vibrant yellow door stays away from immediate view (see fig. 40).⁵⁷ After entering the houses, the modest vestibule and foyer serve as transitional spaces in both cases (see fig. 41),⁵⁸ deliberately heightening the contrast with the richly detailed interiors that unfold beyond.⁵⁹

3. Spatial Volume Formation: From Floor Height Variation to Ceiling Articulation

In Villa Holzner, the spatial organization is defined by distinct floor levels, creating a dynamic interplay of height variations throughout the house. In contrast, the floor plans of Sharp House remain largely uniform in height, aside from two small steps leading from the entrance platform to the living

room. This fundamental difference reflects the varying economic and construction priorities between Central Europe and New Zealand.

In Europe, economic housing traditionally emphasized spatial efficiency, organizing functions within a compact footprint and relying on solid, heavy external walls. To achieve a sense of openness and spatial richness within these constraints, complex construction techniques and skilled craftsmanship were essential. However, in New Zealand, a more temperate climate and different labor practices shaped a new definition of economic housing.⁶⁰ Thinner external walls reduced the need for internal partitions and allowed for larger openings, enhancing the connection to outdoor spaces. Additionally, New Zealand builders were less accustomed to handling split-level constructions, making floor height variations costly and impractical.⁶¹ As a result, Kulka adjusted his approach, shifting from multi-level Raumplan configurations to single-story suburban layouts where private and public spaces coexisted on the same level.

Instead of manipulating floor heights, Kulka began using ceiling variations to define spatial experiences. In Sharp House, the sloping roof is expressed internally, with the ceiling starting low at the bay window and rising toward the entrance (see fig. 42).⁶² A plywood framework establishes a visual baseline, organizing the ceiling into distinct planes. The plywood extends from the entrance soffit to the dining area, subtly shaping transitions between spaces while maintaining the clarity of the structural form of the roof. Through this shift, Kulka transformed ceiling articulation into a key spatial tool, achieving a sense of openness and fluidity within the constraints of New Zealand's construction culture.

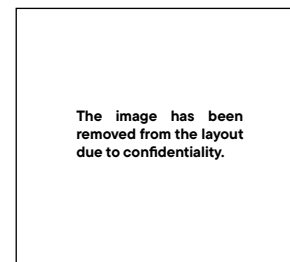


Figure 42. Diagram of the sloped roof of Sharp House.

⁶⁰ Porsolt, "Henry Kulka, Architect 1900-1971."

⁶¹ Ibid.

⁶² Ho, "Authentic Living: Case Studies of Two Late Timber Houses by Henry Kulka", 120.

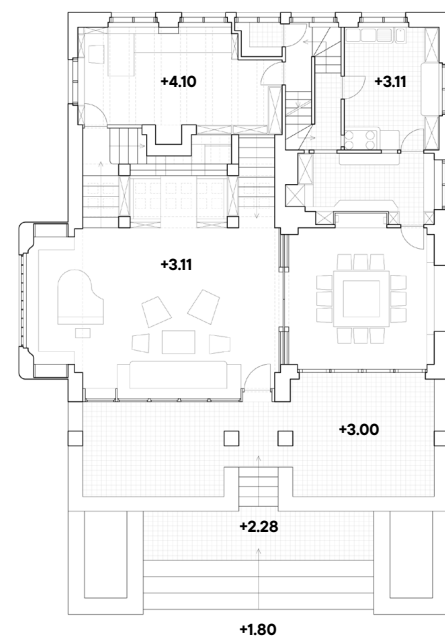


Figure 43. Floor Height in Villa Holzner (Ground Floor Plan)

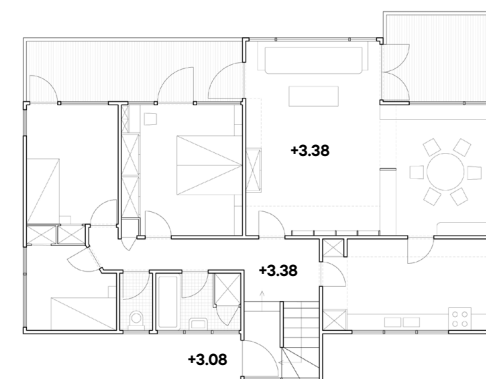


Figure 44. Floor Height in Sharp House (Ground Floor Plan)

⁵⁴ Imric V. Porsolt, "Henry Kulka, Architect 1900-1971," *Landfall* 99 (September 1971): 289-94.

⁵⁵ Reid and Gaudin, *Henry Kulka*.
⁵⁶ Image previously published as fig. 9; see note 26.

⁵⁷ Image previously published as fig. 31; see note 44.

⁵⁸ Reid and Gaudin, *Henry Kulka*, 349.

⁵⁹ Andrews, "Ornament and Materiality in the Work of Adolf Loos."

4. Interior Materiality: From Rich Material Diversity to Plywood Harmony

Villa Holzner showcases a refined material selection of European modernism, where spatial richness is achieved through a careful combination of materials. Marble, mirror tiles, and timber veneers coexist harmoniously, exemplifying the Raumplan principle of material diversity within a structured composition (see fig. 45).⁶³ A grand marble-framing sliding door separates the sitting and dining areas, while the niche is defined by four marble-clad columns and mirror inserts, enhances the sense of depth and luxury. The intricate detailing, bespoke metal joinery, and high-quality finishes demonstrate Kulka's meticulous attention to craftsmanship, which is deeply rooted in the skilled fabrication techniques of Austria and Czechia.⁶⁴

In contrast, Sharp House reflects a material shift due to New Zealand's construction industry, which relied primarily on locally sourced and fabricated timber. Unlike the European preference for masonry and reinforced concrete, New Zealand's architectural landscape was shaped by skepticism toward stark modernist aesthetics and a tradition of integrating modern elements with vernacular forms.⁶⁵ In Kulka's private housing designs in New Zealand, plywood became the dominant interior material, replacing the variety of high-end materials seen in Villa Holzner. In the Sharp House, all wainscots are crafted from native timbers like rimu and kauri, achieving a natural sense of warmth and cohesion rather than contrasting material interplay.⁶⁶

Furthermore, with limited access to fine craftsmanship and a restrained budget, Kulka adapted by refining his use of plywood as both a structural and decorative element. Unlike the solid, enclosed ceiling forms in Villa Holzner, which emphasize compression and spatial delineation, the plywood ceiling in Sharp House creates an illusion of lightness. Open junctions between white-painted surfaces and plywood details enhance the perception of floating elements, integrating seamlessly with the overall composition (see fig. 46).⁶⁷

Aside from general furnishing style, the details in New Zealand also differentiate a lot from Kulka's European projects. In his early works, the interiors were distinguished by custom-designed fixtures, hinges, and bespoke metalworks (see fig. 47),⁶⁸ but in New Zealand, he relied on readily available shop-bought components.⁶⁹ While some of his earlier projects, such as Halberstam House, retained some traces to his European detailing, the Sharp House illustrates a more complete adaptation to construction realities in New Zealand. With fewer material choices and limited fabrication skills, Kulka redirected attention toward the expressive qualities of plywood linings, elevating their presence as a defining interior feature (see fig. 48).⁷⁰

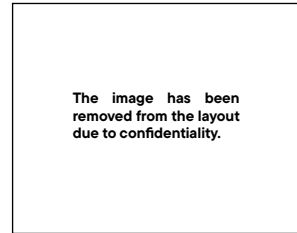


Figure 47. Detail drawings of the metal doors of the garage in Villa Holzner.



Figure 48. Photo of the living room of Sharp House, facing to the door.

⁶³ Image previously published as fig. 17; see note 33.

⁶⁴ Reid and Gaudin, *Henry Kulka*.

⁶⁵ Mitchell and Chaplin, *The Elegant Shed: New Zealand Architecture Since 1945*.

⁶⁶ Ho, "Authentic Living: Case Studies of Two Late Timber Houses by Henry Kulka."

⁶⁷ Image previously published as fig. 34; see note 49.

⁶⁸ Heinrich Kulka, *Detail Drawings of Garage Metal Doors in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

⁶⁹ Reid and Gaudin, *Henry Kulka*.

⁷⁰ Reid and Gaudin, *Henry Kulka*, 350 - 351.



Figure 45. Interior Photo of Villa Holzner, demonstrating the niche.



Figure 46. Interior Photo of Sharp House, demonstrating the wooden cabinet between the living room and the dining area.

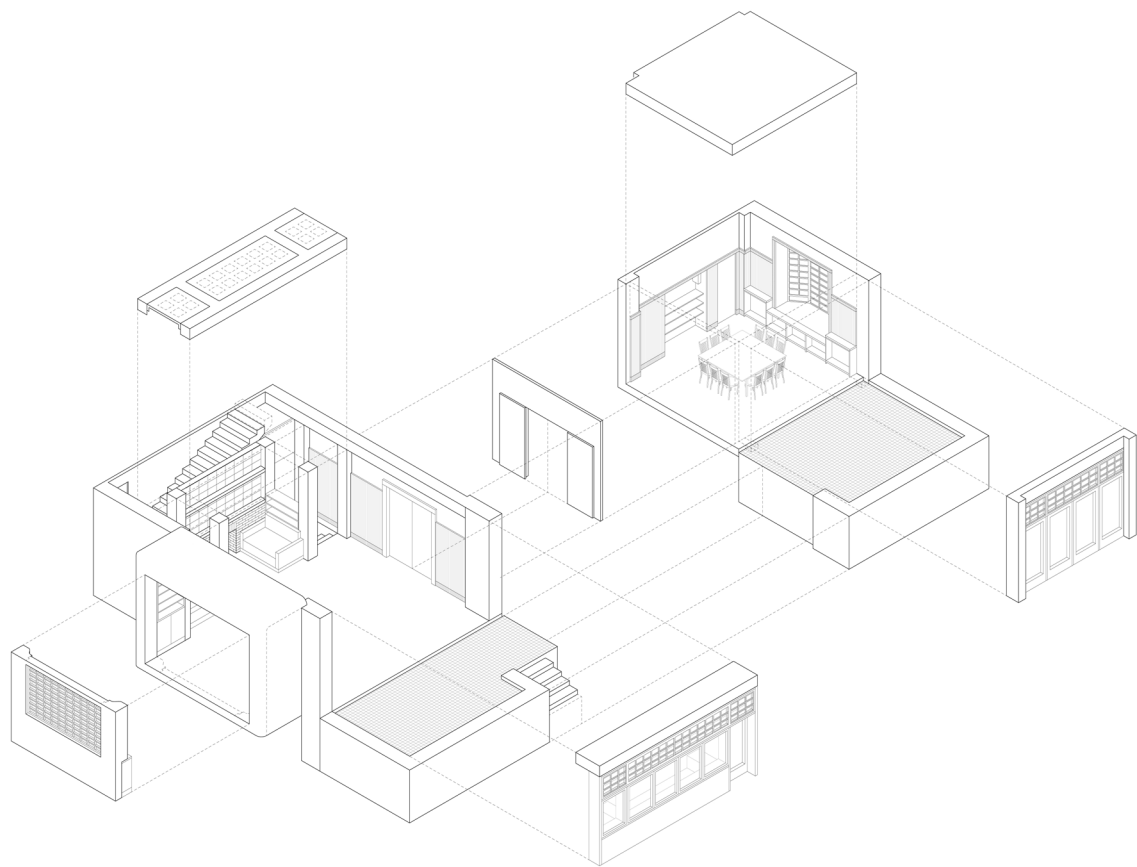


Figure 49. Exploded isometric drawing of the living area in Villa Holzner.

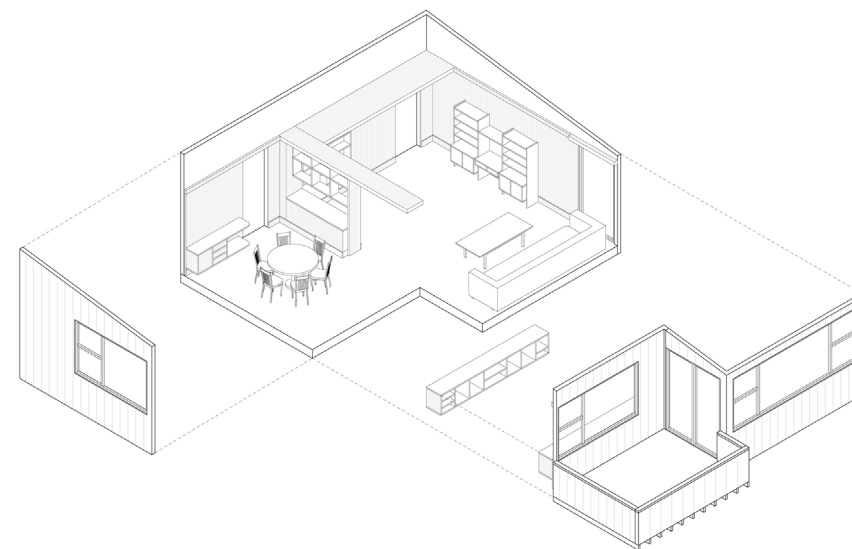


Figure 50. Exploded isometric drawing of the living area in Sharp House.

5. Reinterpreting the Central Focus: From Defined Niche to Spatial Fluidity

A key concept in Raumplan architecture is the notion of a central focus within the living space, which is usually a visually and spatially distinct area that serves as the heart of the home.⁷¹ Traditionally, this was achieved by a fireplace, but as modern living evolved, architects began using niches, windows, or columns to define an inviting and cohesive gathering space (see fig. 51).⁷²

In Villa Holzner, this focal space takes the form of a niche in the main living area, featured by two fixed sofas facing with each other, a pseudo-brick fireplace, and mirror tiles framed by the same marble cladding that defines the room's four main columns (see fig. 52).⁷³ The mirror tiles, a characteristic element of Raumplan interiors, do not serve a purely decorative purpose. Instead, their fragmented reflections manipulate light and perception, intentionally breaking the completeness of reflective illusions and enhancing the sense of depth, rather than merely amplifying visual effects.⁷⁴

Material composition further reinforces the niche as a central element. The grid motif, evident in the windows, flooring, and ceiling, unifies the space, while integrated light bulbs within the ceiling grid emphasize the texture and materiality of the surrounding surfaces. The result is an intimate yet dynamic core within the living space, where materiality, lighting, and spatial layering work together to establish a carefully curated focal point.

The image has been removed from the layout due to confidentiality.

Figure 52. Sketch of the focal space in Villa Holzner.

In contrast, the Sharp House lacks a traditional focal point in the living room, marking a notable departure from classic Raumplan conventions. There is no fireplace, niche, or singular architectural element that immediately commands attention. However, despite the absence of a defined focal space, the living room naturally emerges as the central hub of the house due to its spatial arrangement and interior furnishing. The emphasis on fluidity, openness, and seamless integration of spaces reinforces its role as the heart of the home. Rather than relying on a singular architectural feature to create focus, Kulka achieves a sense of cohesion through material continuity and spatial relationships, reflecting his adaptation of Raumplan principles to the context of New Zealand's domestic architecture.

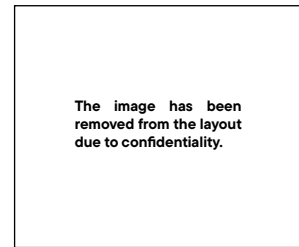


Figure 51. Drawing of the fireplace in Villa Holzner.

⁷¹ Adolf Loos, Dietrich Worbs, and Akademie Der Künste, *Adolf Loos, 1870-1933: Raumplan, Wohnungsbau: Ausstellung der Akademie der Künste, 4. Dezember 1983 bis 15. Januar 1984* (Akademie, 1983).

⁷² Heinrich Kulka, *Detail Drawings of Fireplace in Villa Holzner, c. 1937*, pencil on paper, private collection of Kulka Estate. Used with permission.

⁷³ Image previously published as fig. 16; see note 31.

⁷⁴ Coll, *Adolf Loos: His Interior Linings*.

6. Shaping Interior Space: From Fixed Furniture to Attached Furniture

In Villa Holzner, fixed furniture plays an integral role in spatial organization, reinforcing the Raumplan principle of embedding furniture into the architectural framework. With sketches and detailed drawings, typical Raumplan features can be identified in the plan: wall-embedded drawings, fixed benches integrated with heating installations beneath windowsills (see fig. 53),⁷⁵ and cabinets inserted into walls to serve as partitions. Both Loos and Kulka viewed fixed furniture as an essential part of architectural design, shaping spatial experience by seamlessly integrating furnishings with the surrounding structure. By embedding furniture into walls, the efficiency of spatial organizations is increased, leaving most of the central space in a room vacant and free for the residents to arrange.⁷⁶

The key methodology behind this approach was material continuity and a rejection of unnecessary ornamentation, in favor of a unified material language that defines spatial composition. For instance, in the reception hall, it is likely that wood paneling extends from the walls to integrate with the built-in bench, reinforcing a sense of cohesion between internal surfaces and furnishings (see fig. 54).⁷⁷

In contrast, Sharp House marks a transition from fixed furniture to attached furniture, reflecting a shift in both construction methods and economic considerations. Instead of embedding cabinets within partition walls, Kulka attached them to walls, allowing them to project outward and define spatial zones. This shift was largely influenced by the construction context in New Zealand, where the mild climate reduced the necessity for thick walls.⁷⁸ With thinner walls, embedding storage and seating into the structure became impractical, prompting Kulka to adopt a new approach.

Rather than prioritizing open central spaces, as seen in Villa Holzner, Kulka used attached furniture to actively shape the interior layout. The partition cabinet in Sharp House, for example, extends from the plywood ceiling frame, maintaining material consistency while contributing to the spatial organization of the room (see fig. 55).⁷⁹ Unlike the fixed furniture in Villa Holzner, which worked to free up space, the attached furniture in Sharp House played a more active role in defining interior volumes, creating more flexible layout in the house and generating a more dynamic domestic environment.

This evolution from fixed to attached furniture reflects a pragmatic response to fabrication constraints and changing domestic needs in New Zealand. Kulka transformed his design focus from a rigidly structured spatial hierarchy to a more fluid and responsive living environment.

The image has been removed from the layout due to confidentiality.

Figure 53. Dimensions of the fixed bench in the main living area in Villa Holzner.

The image has been removed from the layout due to confidentiality.

Figure 54. Section of the fixed bench in the reception hall of Villa Holzner.



Figure 55. Photo of the wooden shelf in the living room of Sharp House.

⁷⁵ Heinrich Kulka, *Dimensions of a Fixed Bench in Villa Holzner, c. 1937*, pencil on paper, private collection of Kulka Estate. Used with permission.

⁷⁶ Kulka, *Adolf Loos, Das Werk Des Architekten*.

⁷⁷ Heinrich Kulka, *Section of a Fixed Bench in Villa Holzner, c. 1937*, pencil on paper, private collection of Kulka Estate. Used with permission.

⁷⁸ Porsoit, "Henry Kulka, Architect 1900-1971."

⁷⁹ Reid and Gaudin, *Henry Kulka, 354 - 355*.

7. Inward-Looking Seatings: Spatial Hierarchy and Domestic Experience

The image has been removed from the layout due to confidentiality.

Figure 56. Sketch of the fixed bench in the main living area of Villa Holzner.



Figure 57. Photo of the sofa in the living room of Sharp House.



Figure 58. Photo of the fixed bench in the kitchen of Sharp House.

The seating arrangements in Villa Holzner and Sharp House implement similar Raumplan principles, reflecting spatial hierarchy, controlled visibility, and domestic experiences. In Villa Holzner, the fixed benches in the reception hall and main living area are positioned to face inward rather than outward, deliberately prioritizing interior complexity over exterior openness (see fig. 56).⁸⁰ This controlled spatial framing aligns with Raumplan's emphasis on selective visibility, ensuring that the focus remains on the interior's carefully crafted materiality and spatial layering.⁸¹ The windows behind the benches function primarily as light sources rather than as viewpoints, reinforcing the idea that the interior, not the exterior, defines the living experience.⁸²

A similar spatial strategy is evident in Sharp House, where the living room sofa is placed between two doors leading to the balconies, set against large windows, and once again facing inward. By designing eating to focus on the interior spaces, Kulka engages with the psychological and voyeuristic dimensions of modern domesticity, which creates a structured relationship between the observer and the observed within the home.⁸³ The inward-facing seating arrangements in both houses reinforce the idea that the primary experience of the home is shaped from within, in contrast to their relatively modest façades.

However, a crucial difference emerges upon closer examination. Unlike the fixed benches of Villa Holzner, which are integrated into the walls, combined with heating installations, and custom-designed as part of the architectural scheme, the sofa in Sharp House remains a movable piece of furniture (see fig. 57).⁸⁴ Rather than being specifically designed, it is a basic piece bought from the shop, reflecting shifts from custom-designed fabric patterns to basic covers, and from fixed spatial elements to more adaptable furnishings.

Interestingly, while the living room seating is movable, Sharp House does contain one fixed bench—in the kitchen. Positioned against a window and facing the operational counter and cooktop, this built-in element transforms the kitchen into a more communal and livable space, marking a significant departure from the servant-oriented kitchen layout of Villa Holzner (see fig. 58).⁸⁵ This shift highlights how Kulka adapted Raumplan principles in New Zealand, moving toward a more open and family-centered domestic environment while still maintaining controlled spatial interactions through thoughtful interior design.

⁸⁰ Heinrich Kulka, *Sketch of a Fixed Bench in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

⁸¹ Loos, *Ornament and Crime: Thoughts on Design and Materials*.

⁸² Coll, *Adolf Loos: His Interior Linings*.

⁸³ Beatriz Colomina and Jennifer Bloomer, *Sexuality & Space* (Princeton Architectural Press, 1992).

⁸⁴ Reid and Gaudin, *Henry Kulka*, 356 - 357.

⁸⁵ Reid and Gaudin, *Henry Kulka*, 370 - 371.

8. Transitional Spaces Differences

Villa Holzner and the Sharp House offer contrasting approaches to transitional spaces, particularly in how they mediate the relationship between interior and exterior environments. In Villa Holzner, connections with outdoor spaces are carefully controlled and deliberately restrained. Instead of fully exposed balconies, the villa features a series of half-covered spaces, including a tile-paved terrace on the ground floor, a veranda on the upper floor, and a private loggia attached to the master bedroom. These elements remain spatially integrated within the cubic form of the villa, never projecting beyond its volume. At the same time, special openness is achieved through volumetric extrusions with grid windows, such as the music area, which protrudes from the main volume with a 350mm lower ceiling inside (see fig. 59).⁸⁶ While it has a large opening, the grid-patterned glazing covers the opening and significantly limits the view, creating a controlled visual connection with the outdoors. A similar treatment is seen in the dining room, where a trapezoidal bay window extends out a little bit with grid pattern glazing (see fig. 60).⁸⁷ These design strategies reflect a Raumplan logic that privileges spatial layering, selective visibility, and interior focus over direct exposure to the outside.

Despite the variety of transitional spaces, Villa Holzner deliberately avoids fully exposed balconies. Every outdoor extension remains at least partially sheltered, reinforcing the house's introspective character and controlled relationship with its surroundings. In contrast, the Sharp House adopts a more relaxed and open strategy suited to New Zealand's milder climate and evolving architectural values. While it includes a half-covered veranda with a raised wooden floor at basement level, its main living floor incorporates two fully exposed balconies. One connects the living room, dining room, and master bedroom, bridging both public and private zones (see fig. 61),⁸⁸ while the other is shared between the living and dining areas, functioning as an extension of communal space. These balconies enhance openness, offering expansive views and strengthening the connection with the garden, in turn contributing to a more fluid relationship between indoor and outdoor space (see fig. 62).⁸⁹

The shift in design language reflects Kulka's evolving understanding of outdoor spaces in response to architectural and climatic context in New Zealand. In Central Europe, the preference for minimalist, cubic volumes often limited the inclusion of balconies. Early in his New Zealand career, as seen in the Halberstam House, Kulka continued this tradition by omitting balconies and maintaining elevated entrances similar to his European works.⁹⁰ However, post-war architectural demands and the warmer climate increasingly aspired and required to communicate interior and exterior by transitional spaces.⁹¹ In response, Kulka began integrating balconies as active elements in the spatial organization of his designs. Their inclusion in the Sharp House marks a significant evolution, demonstrating how he reinterpreted Raumplan principles to suit a more open, climate-responsive, and contextually attuned architectural approach.

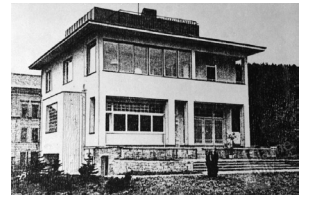


Figure 59. Photo of Villa Holzner, showing half-covered terraces, veranda, loggia and the volumetric extrusion.

The image has been removed from the layout due to confidentiality.

Figure 60. Drawing of the grid window in the dining room of Villa Holzner.

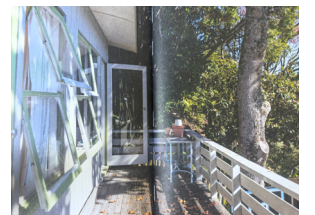


Figure 61. Photo of the balcony connects the living room with bedrooms.

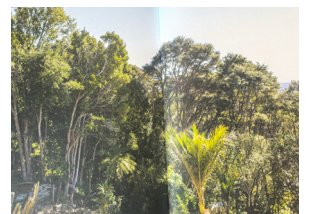


Figure 62. The views outside the balconies of Sharp House.

⁸⁶ Image previously published as fig. 3; see note 17.

⁸⁷ Heinrich Kulka, *Sketch of a Fixed Bench in Villa Holzner*, c. 1937, pencil on paper, private collection of Kulka Estate. Used with permission.

⁸⁸ Reid and Gaudin, *Henry Kulka*, 374 - 375.

⁸⁹ Reid and Gaudin, *Henry Kulka*, 382 - 383.

⁹⁰ Jacobson, "Ruffled by the Number of Windows": The 1948 Halberstam House by Henry Kulka."

⁹¹ Reid and Gaudin, *Henry Kulka*.

This thesis has demonstrated that Heinrich Kulka played a crucial and underestimated role in both preserving and transforming the Raumplan framework, extending far beyond his position as a disciple of Adolf Loos. Through a comparative analysis of Villa Holzner in Czechia and the Sharp House in New Zealand, it becomes clear that Kulka not only preserved the Raumplan principles, but also developed and reinterpreted them to meet new cultural, climatic, and constructional contexts.

Villa Holzner stands as a clear continuation of Raumplan convention in Central Europe. With its interlocking volumetric organization and internal spatial hierarchy, the villa exemplifies free spatial composition and spatial efficiency. The restrained façade, the interior material complexity and carefully controlled visual connections with the outside view create a compacted, inward-focused domestic environment. These elements reflect the disciplined execution of Raumplan in its original Central European setting, where material richness, interior privacy, and form formality are integral to domestic space.

By contrast, Sharp House presents a shift in both constructional logic and spatial strategy. In adapting to New Zealand's climate, timber-based construction methods, and relaxed domestic lifestyle, Kulka applied Raumplan principles with greater flexibility. The house opens itself to the surrounding landscape through uncovered balconies and a half-covered veranda, creating transitional spaces that contrast with the more enclosed nature of Villa Holzner. The use of plywood linings and the manipulation of ceiling instead of floor heights demonstrate how spatial hierarchy could be maintained even within a more modest material and economic setting. Rather than inserting fixed furniture into thick masonry walls, as in European projects, Kulka attached plywood cabinetry on the thin walls, transforming furniture into spatial devices within lighter timber frames.

This transformation reflects a critical evolution: Raumplan is no longer a fixed European model but a flexible spatial system. Kulka retained the core tenets of Raumplan, such as free spatial composition, spatial efficiency and hierarchy, and interior material richness, making them responsive to a different social and environmental setting. His projects bridge geographic and ideological distances, integrating Loosian principles with local sensibility.

Unlike many modernist architectural masterpieces that have been transformed into museums, much of Kulka's works remain in use as private residences today, a testament to the livability and enduring functionality of his designs. In carrying Raumplan framework from Central Europe to the South Pacific, Kulka proved its enduring relevance and illustrated that it was not a static theory but a dynamic framework capable of adaptation and innovation. In doing so, he affirmed his position not only as a custodian of the Loosian legacy, but also as a critical innovator who expanded the possibilities of Raumplan framework, helping to shape the modern architecture context across continents.

Conclusion

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