

THE USE OF COLOUR IN THE FUNCTIONALIST ARCHITECTURE OF ARNE KORSMO

"BRUK AV FARGE I ARNE KORSMOs
FUNKSJONALISTISKE ARKITEKTUR"

Trabajo de Fin de Grado ETSAB - UPC
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Trabajo de Fin de Grado (TFG)

Grado de Estudios en Arquitectura Superior (GArqETSAB)

Curso académico 2022-2023

"Are architects afraid of colour? If you look back at the last couple of centuries, it can seem as if the architects would prefer the world to be white, or, if necessary, naturally colored. But it has not always been this way, and there are many indications that it is about to change. But we need knowledge" - Mette L'Orange¹. (L'orange, 2019)

¹ L'orange, M. (2019). Frykten for fargene. *Arkitektur N*, 5, 65–77.

AGRADECIMIENTOS

A Jaime J. Ferrer, por su motivación y seguimiento de este trabajo y por transmitirme su entusiasmo y pasión por la arquitectura nórdica.

A Elisabeth Tostrup, Ingrid Lønningdal, Mads Øiern y Ole Marius por su ayuda en la búsqueda de información e interés en el tema.

A mi familia, pareja y amigos, que me han acompañado en este largo viaje durante estos años y a los cuales siempre estaré agradecida. Pero en especial a mi padre, por mostrarme una profesión tan apasionante como es la arquitectura, y a mi madre, por no dejar que me rindiera nunca.

Ane Kroemo

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- CHAPTER I -

RESUMEN

A diferencia de Alemania o Francia, donde la influencia arquitectónica de Le Corbusier y Mies van der Rohe era prominente, los arquitectos modernos en Noruega eran más pragmáticos y menos formalistas. Arne Korsmo fue uno de estos arquitectos que adoptó un enfoque moderno "duro" en la arquitectura doméstica, utilizando la policromía como elemento clave que lo diferenció de sus contemporáneos. Además, incorporó métodos innovadores de circulación en sus diseños, con formas de masa complejas que reflectaban su interés en las ideas funcionalistas que emergían en Europa. Korsmo introdujo estas ideas en Noruega, dando forma a la arquitectura moderna del país de manera única.

El uso de la policromía de Korsmo no solo fue funcional, sino que también sirvió como forma de arte, agregando profundidad e interés visual a sus edificios. Este uso fue cuidadosamente considerado y desempeñó un papel crucial en el diseño general, creando un carácter e identidad únicos para cada edificio. Por lo tanto, el uso del color en la arquitectura no es solo un aspecto funcional, sino también una **obra de arte en sí misma**.

Los hallazgos del proyecto contribuirán a una mejor comprensión del papel del color en la arquitectura y cómo se puede utilizar para mejorar la funcionalidad, simplicidad y armonía de los edificios con el entorno.

"Una serie de casualidades condujeron a la creación de este libro"

PALABRAS CLAVE: Colores, Noruega, Arne Korsmo, Grete Prytz Kittelsen, Funcionalismo, Modernidad, Bauhaus, Jørn Utzon, Sverre Fehn, Christian Norberg-Schulz.

ABSTRACT

In contrast to Germany or France, where the architectural influence of Le Corbusier and Mies van der Rohe was prominent, modernist architects in Norway were more pragmatic and less formality. Arne Korsmo was one such architect who adopted a "hard" modernist approach to domestic architecture, using polychromy as a key element that set him apart from his contemporaries. In addition, he incorporated innovative circulation methods into his designs, with complex massing forms reflecting his interest in the functionalist ideas emerging in Europe. Korsmo later introduced these ideas to Norway, shaping the country's modernist architecture in unique ways.

Korsmo's use of polychromy was not merely functional, but also served as an art form, adding depth and visual interest to his buildings. This use was carefully considered and played a crucial role in the overall design, creating a unique character and identity for each building. Thus, the use of colour in architecture is not only a functional aspect but also **a piece of art in itself**.

The findings of the project will contribute to a better understanding of the role of colour in architecture and how it can be used to enhance the functionality, simplicity and harmony of the buildings with the surroundings.

"A series of chance encounters led to the creation of this book"

KEY WORDS: Colours, Norway, Arne Korsmo, Grete Prytz Kittelsen, Functionalism, Modernism, Bauhaus, Jørn Utzon, Sverre Fehn, Christian Norberg-Schulz.

MOTIVACIÓN

Siempre he tenido un claro interés por la arquitectura, incluso me atrevería a decir que desde antes de empezar los estudios profesionales en arquitectura. Pero, desde que me fui a vivir a Oslo, este interés creció y me hizo cambiar completamente la perspectiva que tenía sobre el mundo y la sociedad en la que vivimos.

Me marché con una idea muy concreta de lo que para mí representaba la arquitectura nórdica; una visión recta y ordenada de la arquitectura, con una utilización intimidante de los colores fríos al igual que de los cálidos y un claro interés por la adaptación, cuidado de la naturaleza y, por supuesto, confort de las personas. Todas ellas, se veían reflejadas en el estilo de vida escandinavo, y no sólo en el arte de la arquitectura en sí, pero también en su diseño.

Un par de cursos anteriores a la estancia de movilidad, realicé la asignatura optativa de maestros nórdicos en la Escuela de Barcelona (ETSAB), y gracias a ella, perseguí mi interés por la arquitectura moderna de los países nórdicos hasta el punto de querer estudiarla en persona. Además, una de las optativas que realicé en la Escuela de Oslo (AHO) fue "Norwegian Architecture", con la que pudimos estudiar en profundidad muchos edificios y arquitectos noruegos, para mí desconocidos en ese momento, que han marcado la historia de la arquitectura moderna en todo el mundo. Una arquitectura moderna basada en los principios de la modernidad pero con una clara influencia de la arquitectura tradicional noruega, llevada a su máximo esplendor, y de la que destaca el uso del color como forma de expresión.

MOTIVATION

I have always had a clear interest in architecture, I would even dare to say that since before I started my professional studies in architecture. But, since I moved to Oslo, this interest grew dramatically and made me completely change my perspective on the world and the society in which we live.

I left with a very specific idea of what Nordic architecture represented for me; a straight and orderly vision of architecture, with an intimidating use of bold colours as well as warm ones and a clear interest in adaptation, care for nature and, of course, people's comfort. All of these concepts were reflected in the Scandinavian lifestyle, and not only in the art of architecture itself, but also in its design.

A couple of years before the mobility stay, I took the elective course of "Maestros Nórdicos" at the Barcelona School (ETSAB), and thanks to that, I pursued my interest in modern architecture in the Nordic countries to the point of wanting to study it in person. In addition, one of the electives I studied at the Oslo School (AHO) was "Norwegian Architecture", with which we were able to study in depth many Norwegian buildings and architects, unknown to me at the time, that have marked the history of modern architecture around the world. A modern architecture based on the principles of modernism but with a clear influence of traditional Norwegian architecture, taken to its maximum splendour, and of which the use of colour, as an expression method, stands out.

OBJETIVOS

La utilización del color, tanto en arte como en arquitectura, es una herramienta a tener en cuenta a la hora de proyectar. Ha marcado un antes y un después en la historia de la arquitectura moderna y, concretamente, en la arquitectura funcionalista.

El objetivo de esta investigación es explorar el uso del color en la arquitectura funcionalista del arquitecto noruego Arne Korsmo y en como este elemento se utilizó para mejorar la funcionalidad y la simplicidad de sus diseños, tan novedosos y criticados entre la década de 1930 y 1950, pero que hoy en día han pasado a ser una de las joyas arquitectónicas más importantes de Noruega. También examinará la relación entre el color y la luz en el trabajo de Korsmo, en los límites de las superficies que inciden en las espacialidad y el carácter de estos espacios, y cómo este vínculo ayudó a crear una sensación de conexión con el paisaje circundante y a mejorar la percepción espacial de su arquitectura.

OBJECTIVES

The use of colour, both in art and architecture, is a tool to be considered when designing. It has marked a before and after in the history of modern architecture, and specially, in the functionalist architecture.

The objective of this research is to explore the use of colour in the functionalist architecture of the Norwegian architect Arne Korsmo, and how this element was used to improve the functionality and simplicity of his designs, which were so innovative and criticized between the 1930s and 1950s, but which nowadays have become one of the most important architectural jewels in Norway. It will also examine the relationship between colour and light in Korsmo's work, at the limits of surfaces that impinge on the spatiality and character of these spaces, and how this link helped to create a sense of connection with the surrounding landscape and improved the spatial perception of his architecture.

METODOLOGIA

En primer lugar, será necesario comprender de donde nace el interés por la utilización del color en la arquitectura escandinava y el porque de su aparición.

La introducción presentará un contexto histórico y arquitectónico de la modernidad del siglo XX, en Noruega, mediante el cual podremos conocer la vida, obra y filosofía del arquitecto noruego Arne Korsmo y la diseñadora Grete Prytz Kittelsen. Esta investigación se realizará mediante el estudio de libros, revistas y artículos que tratarán sobre la arquitectura vernacular, moderna y funcionalista, así como de las influencias y contactos que tuvo el arquitecto gracias a sus viajes, donde conoció a otros grandes arquitectos modernos de la época, y de la paleta de colores que utilizará en sus obras y por la cual destacará del resto de proyectos convencionales puramente tradicionales.

En segundo lugar, se limitará el ámbito de investigación a tres casos de estudio.

Estos proyectos se analizarán de manera cronológica, siguiendo un mismo esquema basado en: la explicación del proceso de diseño y la relación entre el cliente y el arquitecto, la definición de la paleta de colores usada tanto en el exterior como en el interior de las casas, la aportación de imágenes tomadas, en gran medida, por la autora, y el redibujado de los planos de emplazamiento, plantas, secciones y alzados con sus pertinentes descripciones.

El trabajo terminará con la realización de una taxonomía de los casos de estudio, donde aparecerá el color real del proyecto en los planos presentados anteriormente, y una reflexión final sobre el papel que desarrolla el uso del color en la arquitectura y la forma que tenemos de concebirla a través

METHODOLOGY

First of all, it will be necessary to understand where the interest in the use of colour in Scandinavian architecture comes from and the reason for its appearance.

The introduction will present the historical and architectural context of the modernism in the 20th century in Norway, through which we will be able to learn about the life, work and philosophy of the Norwegian architect Arne Korsmo and the designer Grete Prytz Kittelsen. This research will be carried out through the study of books, magazines and articles that will deal with vernacular, modern and functionalist architecture, as well as the influences and contacts that the architect had thanks to his travels, where he met other great modern architects of the time, and the colour palette that he will use in his works and by which he will stand out from the rest of the purely traditional conventional projects.

Secondly, the research scope will be limited to three case studies.

These projects will be analysed chronologically, following the same scheme based on: the explanation of the design process and the relationship between the client and the architect, the definition of the colour palette used both outside and inside the houses, the contribution of images taken, to a large extent, by the author, and the redrawing of the site plans, plans, sections and elevations with their pertinent descriptions.

Finally, the work will end with the realization of a taxonomy of the case studies, where the real colour of the project will appear in the plans presented previously, and a final reflection on the role played by the use of colour in architecture and the way it we have to conceive it through this element.

- CHAPTER II -

THE BLANK CANVAS

Colour is an integral element of design, yet many architects find it challenging to incorporate it effectively into their projects and prefer to leave their designs in a "**blank canvas**".

Professor Mette l'Orange exposes in her article "Frykten for fargene" (The fear of the colours) that a persistent aversion to colour, called **chromophobia**, has characterized Norwegian contemporary architecture for several decades. But with the advent of new technologies, it is seen an awakening interest in polychromy in the international arena that will influence the modern architecture in Norway. There is also an emerging interest, which makes it timely to ask whether the fascination for the new is followed up by a deeper understanding of colour in our surroundings. She adds that, more than ever, we need an engaged debate about polychromy in the design arena and that we need a boost in knowledge (L'orange, 2019).¹

One of the main reasons why architects are afraid of colour is the lack of understanding the importance of the impact that colour produces. Some of them may be unsure on how to use this tool to create specific atmospheres in their designs and if this use will detract from the architectural form and functionality of the building.

It is known to many people that, architect and professor at the Architecture and Design School of Oslo (AHO) **Sverre Fehn** said in an interview with a student that he was no "a colour man". For him, the colour was in the building materials; wood, concrete, brick, etc... and that if he was going to work with colour, it had to be **raw** and **brutal**, not as a "thin film on the surface". In the same interview, Fehn spoke about the relationship between colour and time, about how material colours worked with time. And we know some examples about that: corten steel, teak wood, limestone, and many others.

Fehn represented a generation of Norwegian architects who largely rejected polychromy, in favour of the materials' own colours. It was as if the colours for them violated the ideal of honesty. Architecture should, as Mies van der Rohe had postulated during Modernism, be a neutral framework around human action and expression.

Another reason for this fear, is the lack of education and training in the field.

¹ L'orange, M. (2019). Frykten for fargene. *Arkitektur N*, 5, 65–77.



Fig. 1: Church of Klemensrud, Norway. Picture taken by the author.



Fig. 2: Jørpeland, Stavanger, Norway. Picture taken by the author.



Fig. 3: Grunnerlokka, Oslo, Norway. Picture taken by the author.

Many architecture programs do not place enough emphasis on the use of colour into a project and leaves the architects with the doubt on how to incorporate it into their designs. This doubt ends up with the apprehension of how people will react and if it will not be well-received by clients or the public. It can be seen as frivolous and unnecessary step, and that can negatively impact the success of their projects, but we know it is not like this anymore.

David Batchelor writes about this in the book *Chromophobia* from 2000: "Figuratively, colour has always meant the less-than-true and the not-quite-real" (Batchelor, 2007).¹ The colour represents, as he says, something **disobedient, eccentric**, something **subversive**. To be called "colourful", Batchelor believes, is to be flattered and insulted at the same time, it suggests that one is distinctive, but at the same time, undefined, perhaps even childish and primitive. The colour is **uncertainty, doubt** and **change**. This dual view of colour has resulted in attempts to purge polychromy from European culture, to devalue and diminish the meaning of colour and deny its complexity (L'orange, 2019).²

As we understand that life has no expression, in terms of reality, without colour, we cannot understand architecture and design without it either. **It is a way of living.**

So, the architect's work is to avoid this old ideas and create a new necessity on the addition of this element to show the positive impact that colour can have on the design's functionality, and the overall experience of a building.

¹ Batchelor, D. (2007). *Chromophobia*. London. Reaktion Books

² L'orange, M. (2019). Frykten for fargene. *Arkitektur N*, 5, 65–77.

THE AUTHENTICITY OF COLOUR IN SCANDINAVIA

The authenticity of colour in architecture is a complex and nuanced topic that has been the subject of much debate among architects, designers, and art historians. Some argue that colour is an **essential** element of architecture, adding depth, dimension, and emotions to a building, while others believe that colour is a superficial and unnecessary addition to architectural design.

One of the main arguments in favour of the authenticity of colour in architecture is that it can be used to enhance the visual and emotional impact of a building. For example, the use of warm colours like red, orange, and yellow can create a sense of warmth and comfort, while cool colours like blue and green can create a sense of calm and serenity. Colour can be used to create **visual interest** and **draw attention** to specific architectural features. This fact can be seen in its use in the facades of the buildings, where architects use colours accentuate certain elements of the design or to create a sense of movement through the building.

Moreover, colours can be used to create a sense of place and **identity**. Different cultures and regions have their own unique colour palettes, and the use of these can help to create a sense of belonging and connection to a specific place and **culture**. Steen Elier Rasmussen or Juhani Pallasmaa dedicated an article for the magazine *"Daylight and architecture"* explaining the phenomenology of the perception.

However, there are also arguments against the authenticity of colour in architecture. Some argue that it is a superficial addition to architectural design, and that a building's form and function should be the primary focus.

There is concern about its use in architecture because it can be used to mask design flaws or to create a sense of artificiality. This element can be influenced by trends and fashions, leading to buildings that lack of sense of timelessness. Architects should be mindful of this fact when making colour decisions and strive to create a **balance** between **contemporary** and **timeless** design.

Post-war visions of the future, with the industrialization of painting, no longer saw colour as something tangible, material and personal. Consumer-oriented methods such as Pantone, RGB and NCS became both abstract and unpredictable, providing both too much and too little information.

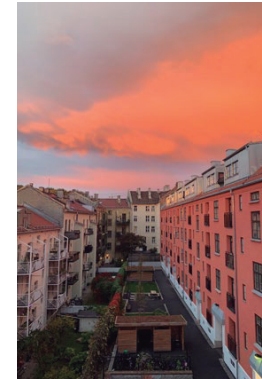


Fig 4: Kansleren Studenthus in Grunnerlokka, Oslo, Norway. Picture taken by the author.



Fig 5: Grunnerlokka, Oslo, Norway. Picture taken by the author.



Fig. 6: Schous Plass in Grunnerlokka, Oslo, Norway. Picture taken by the author.

This is another topic to take into account when designing because there are no longer natural colour pigments anymore.

"Colours in architecture are difficult". As long as there is no education for those who are supposed to guide, the paint industry will rule. Different degrees of whiteness are often promoted here, the polychrome is vulgarised, and we are in the process of losing the popular colourism. The white colour dominates, has a tendency to spread once it gets a hold, and can quickly weaken a place's distinctive colour identity (L'orange, 2019).

Concretely, the use of colour in Norwegian architecture has been a topic of debate for many years. Some argue that traditional Norwegian architecture should remain true to its roots and use natural, muted colours that blend in with the surrounding landscape. Others believe that the use of bold, bright colours can add a modern and **dynamic** element to the architecture.

As it happened with the case of *Grunnerlokka*, an old factory neighbourhood in Oslo which was revitalized in the early 2000s, the project aimed to **enhance the living conditions** in the area by creating more green spaces and improving the public realm. One of the key features of the project was the use of colour to create a vibrant and distinctive identity for the neighbourhood. A palette of modern colours was used to paint buildings, street furniture, and other elements, creating a colourful and **playful environment**. This use helped to break up the monotony of the urban environment and create a more **attractive** and **welcoming** atmosphere for residents and visitors.

In this context, **"modern"** refers to the period from the mid-20th century to the present day.

THE SCANDINAVIAN ARCHITECTURAL FIELD

VERNACULAR ARCHITECTURE

Vernacular architecture can be defined as a type of local or regional construction, using traditional materials and resources from the area where the building is located. Consequently, this architecture is closely related to its context and is aware of the specific geographic features and cultural aspects of its surroundings, being strongly influenced by them. For this reason, they are unique to different places in the world, becoming even a means of reaffirming an identity (Ghisleni, C. & Duduch, T., 2020)¹.

In Norway, vernacular architecture has a rich history dating back centuries, with influences from the natural environment and historical events.

One of the most iconic forms is the **stave church**. These wooden churches, with their distinctive **sloping roofs** and **ornate carvings**, were built in the Middle Ages and are unique to Norway and a few other parts of Europe. The use of wood was a practical choice given the abundance of forests in Norway, but the intricate designs and skilled **craftsmanship** reflect a deep cultural and spiritual significance. These structures are typically **simple**, **functional**, and made from locally available materials, reflecting the cultural, economic, and environmental **context** in which they were built (Nair, n.d.).²

Another important type of vernacular architecture in Norway is the **turf house**. These homes, which were built using a combination of turf³, stone, and wood, were once common in rural areas of Norway, particularly in the northern regions. The turf provided insulation from the cold, while the stone and wood were used for structural support and decoration. These houses were often small and simple, but they were **well-suited** to the **harsh climatic conditions** of Norway.

In addition to these specific architectural styles, vernacular architecture in Norway is also characterized by its use of natural materials, such as wood and stone, and its **adaptability** to the rugged and often harsh landscape. This roof is a key element to connect the house with its natural environment and is used to regulate the climate conditions of the interior of the house, as a protective layer.

¹ Camilla Ghisleni, & Tarsila Duduch. (2020). What is Vernacular Architecture? *ArchDaily*.

² Nair, D. (n.d.). Past, Present and Future: Architecture of Norway. *Rethinking the Future*.

³ Turf: A surface layer of earth containing a dense growth of grass and its matted roots



Fig 7: Stave church, Dalen, Norway. Picture taken by the author.



Fig. 8: Turf house, Vallhal, Norway. Picture taken by the author.



Fig. 9: Red painted fisherman's house, Lofoten islands, Norway. Picture taken by the author

Many traditional Norwegian houses have steep roofs to shed snow, and they are often painted in bright colours to stand out against the snowy background.

Particularly the **red** colour is significant, as it is often chosen for its connection to the **past techniques** and **crafts**. This pigment was taken from the mixture of iron oxide, abundant in many areas of Norway, and linseed oil which produced a durable red paint capable to support extreme temperatures and weather conditions.

In addition to the **practical** and **symbolic** value, the red paint was also a reflection of the cultural identity of the people of Norway. The bright and vibrant colours of the houses serve as a way for Norwegians to express their **creativity** and **individuality**. The tradition of painting houses in bold colours has continued to this day and is an integral part of Norway's architectural **heritage**.

Despite the "new generation" of modern building materials and techniques, many people still choose to build and paint their houses in the traditional style. This reflects the strong connection that Norwegians have with their cultural and historical roots (Gundersen, 2020).¹

Today, visitors to Norway can marvel at the sight of picturesque villages and towns with rows of brightly coloured houses, each one a testament to the enduring beauty and practicality of the traditional Norwegian architecture and the cultural heritage of the **origins**.

¹ Gundersen, M. P., (2020). Architecture in Norway: *The Old & The New. Life in Norway*.

MODERN ARCHITECTURE

The Modern Movement, also known as Modernism, emerged in the early 20th century as a response to the industrialization and rapid urbanization of Western societies. It was a rejection of the ornate and decorative style of the past and embraced **simplicity**, **functionality**, and **rationality**. This movement had a profound impact on architecture and design, and its principles can be seen in buildings all over the world, including in Norway.

In architecture, the modern movement is characterized by a few key features. Foremost, is the emphasis on function over form. Modernist architects believed that a building's design should be dictated by its purpose, and that unnecessary decoration or ornamentation should be eliminated. This led to the use of **simple forms**, **clear shapes** and a focus on the use of the **new construction techniques and materials** (Montaner i Martorell, 2022).¹

Advances in steel and concrete construction allowed for the creation of large, **open spaces** which were leaded by the slogan "form follows function" and "less is more". Glass and other materials were used to create a sense of **transparency** and **lightness**, while new methods of heating and cooling made it possible to create buildings that were comfortable and energy-efficient.

In Norway, differently from other countries such as Germany or France, with the influence of Le Corbusier or Mies van der Rohe, modernist architects were both more practical and **less formalist**. Therefore, Arne Korsmo adopted, like some sources name, a "hard" modernist approach to domestic architecture based on the use of polychromy that stood out at those times, integrating also innovative ways of **circulation**. His complex massing forms defined his interests in those new functionalist European ideas that he brought to Norway (Benton, 2019).²

This ideas arrived in the 1930s and 1940s, as the country was rebuilding after World War II. Modernist architects, such as Arnstein Arneberg, Magnus Poulsson, Arne Korsmo, Christian Norberg-Schulz, Gunnar S Gundersen, and many others, saw an opportunity to create buildings that were not only functional but also reflected the values of a **new society** (Sennott, 2005).³

¹ Montaner i Martorell, J. M., (2022). *La modernidad superada: Ensayos sobre arquitectura contemporánea* (Gustavo Gili), GG.

² Benton, T. (2019). *Villa Stenersen* (asBUILT, Ed.). Nasjonalmuseet.

³ Sennott, R. S. (2005). *Encyclopedia of twentieth century architecture* (Vol. 2). Fitzroy Dearborn.

FUNCTIONALIST ARCHITECTURE

By functionalism, we understand that, in terms of architecture, is the doctrine that the form of a building should be determined by practical considerations such as use, material, and structure, as distinct from the attitude that plan and structure must conform to a preconceived picture in the designer's mind. It is a design philosophy or approach that empathizes the functionality, practicality, and **usefulness** of an object, space, or system, over its form or aesthetics. It prioritizes the purpose and utility of a design, often incorporating minimalist and streamlined elements to achieve efficiency and simplicity (The Editors of Encyclopaedia Britannica, 2013).¹

The functionalist style emerged in Europe in the early 20th century, in response to the rapid technological and social changes brought about the industrialization. Functionalist architects rejected the ornamental excesses of the past and instead embraced a new, **rational** approach to design that emphasized **functionality**, **efficiency**, and **simplicity**. Its style was characterized by simple shapes, geometric lines and the use of modern materials such as steel, glass and concrete (Modi, 2021).²

In Norway, functionalism emerged in the 1920s and 1930s, as the country underwent a period of modernization. Norwegian architects embraced the principle of this architectural style and adapted them to the local context, creating a distinctive Norwegian functionalist style that combined both functionality and efficiency with a **sensitivity** to the natural environment.

One of the leading Norwegian functionalist architects was Arne Korsmo, who was influenced by the ideas of the German Bauhaus movement and the *Congrès International d'Architecture Moderne* (CIAM) led by Le Corbusier and other architects of the new modern style. Korsmo's designs were characterized by a minimalist aesthetic and a focus on functionality and **adaptability**, seen as well throws its use of colour in his designs.

Another notable Norwegian architect influenced by the functionalism style was Erling Viksjø (Nasjonalmuseet, 2020)³, who designed several important buildings in Oslo, but differs from Arne's work, his designs were more "**brutal**" field of the functionalism style characterized by their use of concrete and their emphasis on **flexibility**.

¹ The Editors of Encyclopaedia Britannica. (2013, April 11). *Functionalism*. Encyclopaedia Britannica.

² Modi, K. (2021, February 19). Theory in Architecture: *Form follows function*.

³ Nasjonalmuseet. (2020). Concrete in Transition. *The architect Erling Viksjø and his artist collaborators*.

ARNE KORSMO



Fig. 10: Arne Korsmo, 1938. Picture taken from Nasjonalmuseet archive.

Arne Korsmo was a **Norwegian architect** who was active in the early to mid 20th century. He is considered one of the most important architects of his time in Norway, and his work has had a significant impact on the development of Norwegian architecture.

Korsmo was born in Kristiania, Norway in 1900. He studied civil engineer at the Norwegian Institute of Technology in Trondheim, and after that, he continued studying in the Architecture School, where he received his degree in 1926. After graduation, he practiced for a short time with the Norwegian architects, Arnstein Arneberg and Magnus Poulsson and, between the 1926 and 1928, he worked in the architectural office of Finn Bryn and Johan Ellefsen. It was there where he first came into contact with **modernism**.

In 1928, Korsmo established his own architectural practice in Oslo. His early work was heavily influenced by the "Modern" style he had encountered, and he quickly gained a reputation as an **innovative** architect and artist. He designed a number of buildings in the 1930s, most of them private houses.

One of his most important early projects was the design of the neighbourhoods of Frøen and Havna Allé, around the early 1930s in Oslo. Both projects were designed with Sverre Aasland, an architect with whom he shared the ideas of the modern style and started to apply the element of colour in their designs. In 1937, Arne and Sverre received the Houen Foundation Award as an honorable mention for the housing development of Havna Allé.

In the late 1930s, Korsmo's style started to evolve, and he began to incorporate elements of the "**Functionalism**" style into his work. This was a departure from the modern style, which had been his main influence up to that point after his uncountable trips to Europe and America. His most notable work during this period was the design of the Villa Dammann and Villa Stenersen. These projects, which were completed in 1932 and 1938, consecutively, were two of the most important examples of Functionalism" in Norway, and were widely praised for its innovative design and the use of bright colours in the façade of the villas.

From 1935, Korsmo lectured at the Norwegian National Academy of Craft and Art Industry in Oslo and was a professor at the Norwegian Institute of Technology and, at the same time, worked as an architect and designer. As a teacher, Arne was outstanding. He enjoyed being with young people and seeing them express themselves. Instead of restricting the students with his own proposals, he liked to challenge and stimulate their abilities and **imagination**, rejoicing in the **progress**. By the same token, with this question he was, of course, a demanding judge, and could often express his criticism in a single word (Norberg-Schulz, 1986).¹

One of his central missions was Norway's pavilion at the ***Exposition Internationale des Arts et Techniques dans la Vie Moderne*** in 1937. For this project, he was knighted with the French Legion of Honour in 1939, which he designed with the architects Knut Knutsen and Andreas Nygaard.

He got married, for the second time, in April of 1945 to one of the most famous Norwegian designers, **Grete Prytz Kittelsen**, and with whom he would end up working on their future house, and on some other furniture designs.

In the 1950s, Arne continued to develop his own style, and began to incorporate elements of the "**Japanese Architecture**" style and the concept of "**Home Meccano**" into his work. This was a particularly challenging period for Korsmo, as this new style was not well received, at the beginning, by many critics. Nevertheless, he persisted with this new direction, and he designed, by the hand of Christian Norberg-Schulz and his wife Grete Prytz Kittelsen, the three houses of Planetveien 8-10-12, which would be their own house and the other two for the family of Norberg-Schulz.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

By that time, Korsmo was asked by the art historian, Sigfried Giedion to lead the Norwegian group of **Congrès International d'Architecture Moderne**. The group, which was named **PAGON** (Progressive Architects Group Oslo Norway), had the goal to implement and promote modern architecture. Other central figures of the group included the architects Sverre Fehn, Geir Grung, Christian Norberg-Schulz, Jørn Utzon and Håkon Mjelva (Johnsen, 2023)¹.

Throughout his career, Korsmo was a highly respected figure in the Norwegian architectural community, and became one of the most important architects of the Norwegian functionalist style, which would influence the next generation of architects who preceded him.

In April 1985, **Jørn Utzon** dedicated to Arne, in the book "Arne Korsmo" written by Christian Norberg-Schulz, the following words:

He was extremely well-read and well-informed, and he lived on the crest of the rising wave of Modernism. Arne always thought aloud - in extremely condensed sentences - far too condensed for the uninitiated - but for those who had followed along for a time in Arne's world, it was precisely this that was so valuable, that his sentences were so full of meaning: we strode forward with lightning speed in the world of ideas, towards a destination that sometimes astonished us.

Arne was a master at turning things up-side down so that we saw them in quite a new light, getting a completely different angle on a problem. This ability to perceive a situation in quite a new way is precisely the most essential ability for an architect who does not want to fall into mannerism or stylization, but who wants to express a particular situation, a particular combination of a site, people and functions in a completely genuine way, without a "straitjacket".

Time and again Arne stressed: "It is the architecture who shapes man's surroundings. He cannot expect to have a finished plan presented to him by the client. The architect is to lead the way. He understands the needs of his fellow men. He cares for him, has compassion for him and understand what he needs from his surroundings.

Arne's quite special abilities made him an avant-gardist and a poet. Arne's abilities, which probably came from his father's desire and urge to uncover

¹ Johnsen, E. (2023) . *PAGON. Scandinavian Avant-Garde Architecture 1945-1956*. Bloomsbury Visual Arts.

new truths in his field, made him a true teacher and a source of inspiration. The architect bases his philosophy and with that his buildings, on his respect for man. All of Arne's undertakings, be it the many fine sketches which flowed unceasingly from his hand, or his projects, bore the stamp of his kindness and sense of poetry, which is what man rightfully needs most of all.

Arne and Grete were very widely travelled and had a circle of friends consisting of architects and artists all over the world - Charles Eames, James Prestini, Louis Kahn, Alvar Aalto, the people in the CIAM, and many more-who felt as if they were members of a great, international family of architects. Thanks to Arne, we were drawn into this brotherhood (Norberg-Schulz, 1986).¹

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

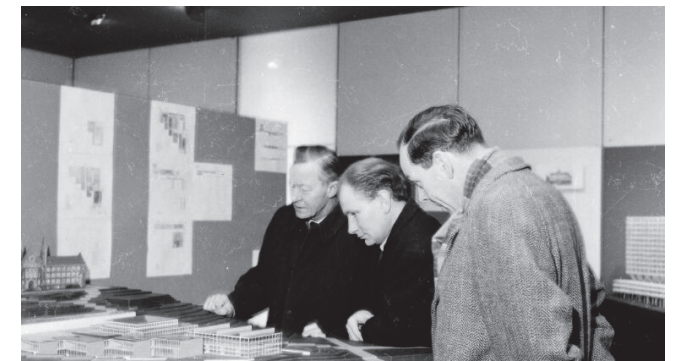


Fig. 11: Arne Korsmo in an exhibition.



Fig. 12: Arne Korsmo and Grete Prytz Kittelsen.

INFLUENCES

Arne Korsmo was a tireless architect with an enormous concern about the way of living of the society he lived in. His work was heavily influenced by a range of cultural and architectural movements, as well as by his travels and collaboration with other architects. He embraced the principles of modernism in his own work and converged this **"new ideas"** with the traditional **Scandinavian style**, using **natural materials** and focusing on the craftsmanship, with meticulous view on the **details**.

Modern architects from the call "third generation" - Louis I. Kahn, Jørn Utzon, Denys Lasdun, Aldo van Eyck, José Antonio Coderch, Luis Barragan, Fernando Távora, Carlos Raúl Villanueva, Lina Bo Bardi - declined the formalism and manierism from the international style and claimed a new gaze to the monuments, history, reality, user and vernacular architecture (Montaner i Martorell, 2022) (Own translated cite from spanish to english)¹.

He admired Le Corbusier's ability to define the programme and to identify the tasks that were most essential at the time; the tasks which architects ought to throw themselves into.

Arne and Grete's travel to the United States, in 1950, also influenced significantly their ideals of architecture. They incorporated aspects of the **"Modern house concept"**, such as a house that is closed off from public spaces but open to the garden, transparent glass façades, and modular separation of structure and enclosure.

Some of the inspiration for their work comes from

Mies van de Rohe, Le Corbusier's work, and **Jørn**

¹ Montaner i Martorell, J. M. (2022). *La modernidad superada: Ensayos sobre arquitectura contemporánea* (Gustavo Gili). GG.

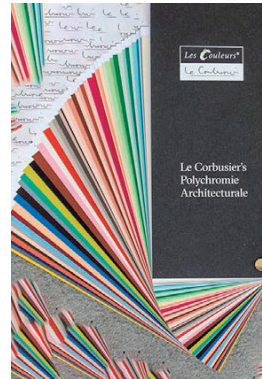


Fig 13: Le Corbusier's Polychromie Architectural - The colour palette. Collage created by the author.



Fig. 14: Taliesin West, Scottsdale, USA. Frank Lloyd Wright, 1937.



Fig. 15: Charles and Ray Eames' house in Pacific Palisades, Los Angeles, United States.

Utzon's, as well as from Frank Lloyd Wright and the work of Charles and Ray Eames, which they discovered during their trip to the United States.

The Korsmos visited **Frank Lloyd Wright** at Taliesin, his multifunctional school comprising a home, a farm, and an architecture office, in Wisconsin for a weekend. They were highly impressed not only by Wright's architectural works but also by the communal lifestyle followed by Frank, his staff and students, where professional practice and architectural studies were an integral part of their everyday life. This was in line with the Grete and Arne's vision for a **live-work home**. The use of glass walls, providing almost unlimited exposure to nature, left a lasting impact on the couple.

After the visit in Wisconsin, they travelled to L.A to visit **Charles and Ray Eames** at their home in Pacific Palisades. The Eames had a recognized studio and workshop in Santa Monica where they worked in photography, furniture production and exhibitions. Grete and Arne went to their house which was part of the **Case Study House** program.

Both couples shared a love for **simple, mass-produced architecture** and a **dialogue with nature** through design and believed that architects should anticipate the needs of the people. In addition to admiring their inspiring varied and extremely modern output, Grete shared a love for colour with the Eames'.

While in America, The Korsmos met up with their Danish friends Jørn and Lis Utzon. The two couples set off along the newly opened Pan-American Highway from San Diego to Mexico City where they visited the ancient Zapotec in Oaxaca and the great Mayan cities of Chichen Itza and Uxmal. Huge earthworks, artificially levelled plateaux and pyramid structures with massive stone steps demonstrated how architecture had evolved out of nature as a distillation and refinement of natural forms (Tostrup, 2014).¹

Grete and Arne also met other notable architects, such as Finnish-American Eero Saarinen, Austrian-American Richard Neutra, and Spanish architect Josep Lluís Sert.

¹ Tostrup, E. (2014). Planetveien 12: The Korsmo House - A Scandinavian Icon. Artifice.

In contrast with all the influences that Arne had been through its career, it appears another architectural style that influenced, as well, other architects already mentioned which is the Japanese architecture.

Arne emphasized the importance of certain qualities of Japanese architecture, which he called his "deepest secret", and which also holds significance for modern Western architecture; **light-weight construction methods, temporality, and flexible use of space.**

It came from the Japanese tea room in the East Asian Department of the Museum of Arts and Industry in Hamburg in 1921. Additionally, Korsmo and Jørn Utzon visited the tea house in the Ethnographic Museum garden of Diurgarden in Stockholm on a spring day of 1945, a year after Arne arrived to Stockholm because of the war.

This visit was a significant experience for both of them and the Japanese architecture influenced in an indirect and complex way in their work.

The "tatami" mat, used as a modular unit to create the spatial structure and configuration of Japanese houses, in the same way that Arne used a **modular grid** to determine the overall of his designs. He was particularly drawn to the fact that the original name of the room where the tea ceremony is held, "sukiya", which means "House of the imagination". This architecture constitutes a reference point for the interaction between comfort and transparency.

And, all these concepts were mixed with Le Corbusier's post-war constructions to create the "Home Meccano" concept.



Fig. 16: Luis Barragan House and Studio, Mexico city. Luis Barragan, 1947.

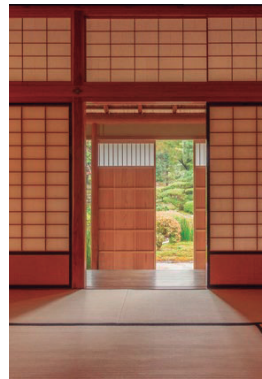


Fig. 17: Traditional tea house with the Roji (tea garden) behind, Japan

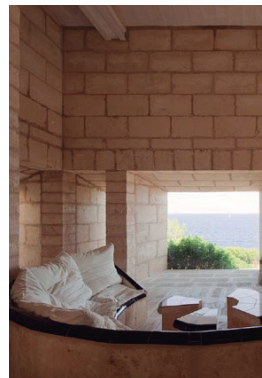


Fig. 18: Can Lis, Mallorca, Spain. Jørn Utzon, 1972.

Because when we called the registrar's office one morning and asked how we could get married, they said the most convenient would be if we could "come straight away!" During our lunch break on the same day, 30 April 30 1945, we cycled from our office to the registrar – and back to unsuspecting colleagues afterwards - Grete Prytz Kittelsen (Brokstad, n.d.)¹

¹ Brokstad, A. E. (n.d.). Grete Prytz + Arne Korsmo = <3. Retrieved April 27, 2023

GRETE PRYTZ KITTELSEN

Grete Prytz Kittelsen was a **Norwegian ceramist, designer**, and an enamel **artist** known for her work in the field of applied arts. She was one of the most influential figures in the Norwegian arts scene, and her work had a significant impact on the development of modern design in Norway in the post-war. Kittelsen's work contributed significantly to internationalisation, **innovation**, and scientific research, and she was recognized as the "**Queen of Scandinavian Design**".

Kittelsen was born in Vestre Aker in Oslo, Norway, in 1916. Her parents came from affluent families, and she enjoyed a life of luxury. Her father, Jacob Tostrup Prytz, was not only the head of the silverware department but also the rector of the National College of Applied Arts and the president of the Norwegian committee for the World's Fair at the Paris Exhibition, where he showcased a collection of enamel pieces.

She began her artistic career at the Norwegian National Academy of crafts and Art Industry and soon began experimenting with different forms and techniques. In the 1940s, she began working with the Norwegian ceramic factory Porsgrund Porselænsfabrik, where she developed her unique style and established herself as a leading figure in the field of ceramics. She graduated in 1941, presenting an elegant and **modern collection** of silver coffee sets with black plastic handles and legs as her final project.

In Paris, Arne Korsmo, the co-designer of the Norwegian pavilion for the World's Fair, and Grete met for the first time, with her being 17 years younger than him. When she returned to Oslo, Grete finished her **silverware** training and worked as her father's secretary in the family business. However, they had to flee to Stockholm as the war had reached Norway by then.

Arne arrived in Stockholm in 1944, where he reunited with Grete, and secured a job at Paul Hedqvist's architecture studio. On April 30, 1945, a few days before Germany surrendered and the war ended, Grete Prytz and Arne Korsmo got married in Stockholm. Their time in the city allowed them to have had many interesting experiences and made new friendships.

In 1950, they traveled to the United States and Mexico and had the chance to meet renowned architects like Frank Lloyd Wright, Ray and Charles Eames, etc. As a result of the connections made during the trip, a summer course



Fig. 19: Grete Prytz Kittelsen, in their apartment in Bygdøy.



Fig. 20: Grete Prytz and Arne Korsmo in their apartment in Bygdøy.

on Nordic industrial design was organized for teachers in 1952. This led to the emergence of this new discipline in Norway, and several participants were Arne's former students. The Korsmo's visit to America played a pivotal role in their careers as designers and educators. It was also significant in shaping the design of their residence at Planetveien 12 (Brokstad, n.d.)¹.

At that time, Kittelsen began to focus on the functional aspects of her ceramic designs, creating a range of everyday objects such as vases, bowls, and cups that were both aesthetically pleasing and functional.

After their return to Oslo, they leased a studio located at the Saint Olavs gate, which was on the same street as the National College of Applied Arts.

¹ Brokstad, A. E. (n.d.). Grete Prytz + Arne Korsmo = <3. Retrieved April 27, 2023

While Arne was employed as a teacher at the university, Grete worked at the nearby **J. Tostrup workshop**. Their partnership was more than just a personal relationship, as it extended into their professional lives. Throughout the first decade of the Second World War, they focused on the design field, working together and collaborating on projects for Grete's family silverware business (Tostrup, 2014).¹

Growing up in Norway and being exposed to the country's rich cultural heritage, Grete's design philosophy was swayed by her surroundings. She was particularly attracted to the traditional folk art and crafts of the region, which she incorporated into many of her designs. Additionally, the natural beauty of her homeland inspired her to use bright, bold colours in her work. Not just influenced by the **Norwegian heritage art**, her work, at this time, followed the Scandinavian functionalist style, characterized by its functionality, simplicity, and the use of **high-quality materials**.

Throughout her life, she continued to push the boundaries of ceramic and glass design, experimenting with new forms, materials, and techniques. In the 1960s and 1970s, she began to work with other designers and artists, collaborating on a series of projects that aimed to promote the Scandinavian design aesthetic and bring it to a wider audience. Her collaborations with other designers and artists helped to establish her as one of the most **influential** and **innovative designers** of her generation. Today, her pieces are considered **design icons** and are highly sought-after collectibles.

¹ Tostrup, E. (2014). Planetveien 12: The Korsmo House - A Scandinavian Icon. Artifice.



Fig. 21: Grete Prytz working on her designs in the "atelier" of the house Planetveien 12.

NASJONALMUSEET COLLECTION ¹

¹ Nasjonalmuseet. (n.d.). *Grete Prytz*. Retrieved May 2, 2023.



Fig. 22: "Japan" Bolle, 1958

Fig. 23: Hårbørste, 1948 with J. Tostrup

Fig. 24: Brosje, 1953 with J. Tostrup

Fig. 25: Halskjede, 1960 with J. Tostrup

Fig. 26: Bolle, 1958

Fig. 27: Serveringsbestikk, 1958 with Cathrineholm

Fig. 28: Stekekar, 1962-1965 with Cathrineholm

Fig. 29: Sukkerkopp, 1955 with Arne Korsmo and Cathrineholm

Fig. 30: Tallerken, 1958 with Cathrineholm

Fig. 31: Pingviner, 1955 with Arne Korsmo and J. Tostrup

Fig. 32: Kjole, 1960

Fig. 33: Strykejernet, 1948 with Arne Korsmo and J. Tostrup

Fig. 34: Tallerken, 1958 with Cathrineholm

Fig. 35: Flotesett, 1955 with Arne Korsmo and Cathrineholm

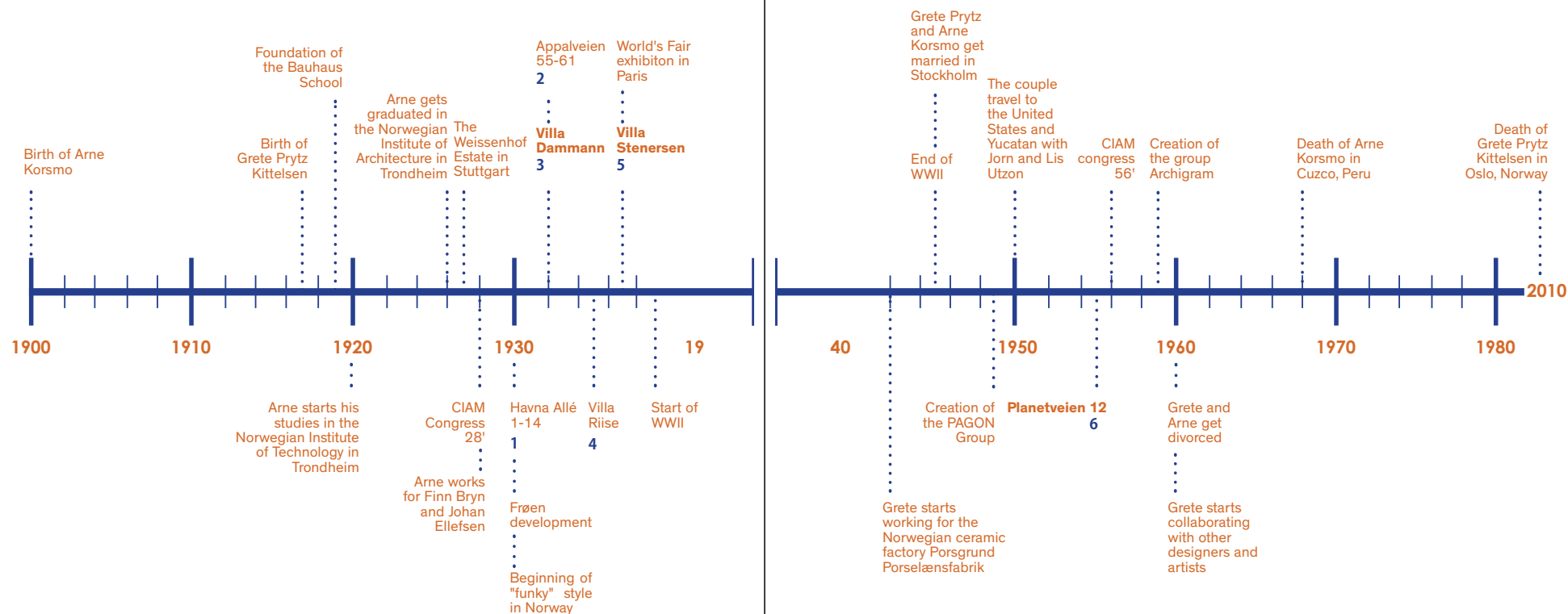
Fig. 36: Stetekekar, 1962

Fig. 37: Armbind, 1946 with J. Tostrup

Fig. 38: Brosje, 1946 with J. Tostrup

Fig. 39: Mugge, 1955 with Arne Korsmo and Cathrineholm

LIFE CRONOLOGY



- Visited projects -



1 Fig 40: Havna Allé 1, Oslo, Norway. Picture taken by the author.



2 Fig 41: Appalveien 55, Oslo, Norway. Picture taken by the author.



3 Fig 42: Villa Dammann in Havna Allé 14, Oslo, Norway. Picture taken by the author.



4 Fig 43: Villa Riise, Hamar, Norway. Picture taken by the author.



5 Fig 44: Villa Stenersen, Oslo, Norway. Picture taken by the author.



6 Fig 45: Planetveien 12, Oslo, Norway. Picture taken by the author.

WORK CRONOLOGY

- 1925** BIRKELUNDEN PARK,
Oslo
Project
- 1926** RAILWAY STATION,
Oslo
Diploma project Norwegian Institute of Technology
- 1927** ART GALLERY,
Trondheim
Competition Project
- 1929-30** FRØEN HOUSING DEVELOPMENT,
Lille Frøens vei 10-16, Apalveien 16-18, Oslo
- with Sverre Aasland
Sundt's architectural prize 1933
- OWN HOME,
Lille Frøens vei 14, Oslo
Interior design
- Shops, the Restaurant Bagatelle,
Bygdøy allé 3-7, Oslo
- with Sverre Aasland
Facade and interior design
- 1930** BLOCK OF FLATS,
Pavels gate 6, Oslo
- with Sverre Aasland
- FURNITURE,
Exhibited in Oslo 1931
- SHOP FOR L. BENJAMIN,
Drammensveien 4, Oslo
Interior design
- 1930-32** HAVNA HOUSING DEVELOPMENT,
Havna allé 1-14, Oslo
- with Sverre Aasland
14 one family houses, including the Villa Dammann
Houen's Architectural Prize 1937
- 1931** ATIC APARTMENT,
Holmboes gate 1, Oslo
Interior design



Fig 46: Interior perspective sketch of Villa Damman in Havna Allé 14, Oslo, Norway.



Fig 47: Exterior perspective sketch of an Archipelago cottage (cabin), Borøya, Norway.

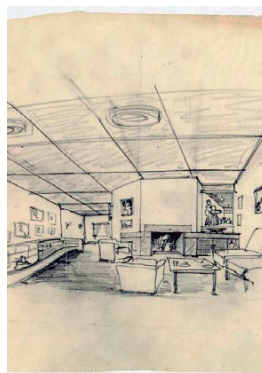


Fig 48: Interior perspective sketch of Villa Riise, Hamar, Norway.

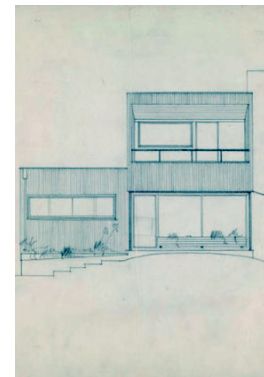


Fig 49: Elevation plan of Villa Hansen in Tuegen allé 6b, Oslo, Norway.



Fig 50: Exterior perspective sketch for the Vi Kan Exhibition building, Oslo, Norway.



Fig 51: Interior perspective sketch of Villa Benjamin, Oslo, Norway.

- 1932** FOUR HOUSES,
Apalveien 55-61, Oslo
- with Sverre Aasland
One-family dwellings
- URBAN DISTRICT. BLINDERN,
Blindern, Oslo
- with Sverre Aasland
Urban planning project
- URBAN DISTRICT. BAKKEHAUGEN,
Bakkehaugen, Oslo
- with Sverre Aasland
Prize-winning planning project
- HOUSE,
Arnebråteveien 30b, Oslo
- with Sverre Aasland
One-family dwelling
- 1933-34** ERIKSEN HOUSE,
Kristiansand
- with Sverre Aasland
One-family dwelling
- 1933-36** GRAIN STORE. CHRISTIANSAND MØLLER,
Kristiansand
- with Sverre Aasland
Houen's Architectural Prize 1939
- 1934-35** VILLA RIISE,
Hamar
- with Sverre Aasland
One-family dwelling
- 1935** HANSEN HOUSE,
Tuegen allé 6b, Oslo
One-family dwelling
- BALANCE "EXACT",
Weighing-machine for standard production
- VI KAN EXHIBITION,
Competition Oslo
1st Prize project
- BENJAMIN HOUSE,
Slemdalsveien 33a, Oslo
One-family dwelling

- 1935-36** HEYERDAHL HOUSE,
Slemdalsveien 33c, Oslo
- with Sverre Aasland
One-family house
- 1936** HITTEN HOUSE,
Slemdalsveien 33b, Oslo
One-family house
- RYNNING HOUSE,
Lønnhaugen, Oslo
One-family house
- MANNAL HOUSE,
Bærumveien 12, Oslo
One-family dwelling
- HALDEN EXHIBITION,
Halden
- with F. Reppen
- OSLO GYMNASIUM,
Oslo
Upper secondary project
Competition Project
- 1937** HOUSE,
Hoffsjef Løvenskiolds vei 9, Oslo
One-family house
- MOSS EXHIBITION,
Moss
- NORWEGIAN PAVILION,
World's Fair, Paris
- with Knut Knutsen and O. L. Schibstad
- STAGE DECORATIONS,
Det Nye Teater, Oslo
- 1937-39** VILLA STENERSEN,
Tuengen allé 10c, Oslo
One-family house
- 1938** VI KAN EXHIBITION,
Frognerstranden, Oslo
- with Knut Knutsen and A. Nygaard
- NORWEGIAN PAVILION,
World's Fair, New York
Competition Project

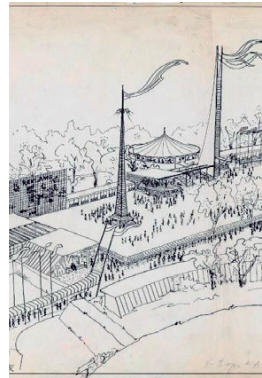


Fig. 52: Exterior perspective sketch of the Halden Exhibition, Halden, Norway.



Fig. 53: Exterior perspective sketch of the Norwegian Pavilion for the World's Fair Building, Paris, France.



Fig. 54: Exterior perspective sketch of the Norwegian Pavilion for the World's Fair Building, Paris, France.

- THE USE OF COLOUR IN THE FUNCTIONALIST ARCHITECTURE OF ARNE KORSMO - Cristina Mayench Palau - TFG - GArqEtsab - UPC -



Fig. 55: Exterior perspective sketch of Villa Stenersen, Oslo, Norway.



Fig. 56: Elevation plan of the Norwegian Pavilion for the World's Fair Building, New York, United States.



Fig. 57: Chair draft, MoMA's contemporary furniture design competition with Jørn Utzon, New York, United States.

ROW-HOUSE,
Apalveien 46-50, Oslo

HOUSE,
Halden

SCHOOL,
Kristiansand
Competition Project

GAUSTADHAUGEN HOUSING,
Gaustadhaugen, Oslo
Competition 3rd prize project

1939 BLOCK OF FLATS,
Lilleberg, Oslo
Project

BACKE BUILDING,
Grensen, Oslo
Project

OFFICE BUILDING,
Vika, Oslo
Project

HOUSE,
Gulleråsen, Oslo
Project for "Sålingseksperter"

1940 HEYERDAHL SUMMER HOUSE,
Risør

1940-41 CHURCH,
Kristiansund
Project

1946 CHAIRS,
Museum of Modern Arts, New York
- with Jørn Utzon
Competition design

1947 VAN DER FEHN SUMMER HOUSE,
Larkollen
Project

ROW-HOUSE,
Ulvøya, Oslo
Project

OFFICE BUILDING,
Måløy
Project

CENTRAL RAILWAY STATION,
Oslo
- with Jørn Utzon
Competition Project

1947-60 SILVER DESIGNS,
A/S Tostrup, Oslo
- with Grete Prytz Kittelsen

1948 HIGHSCHOOL OF BUSINESS AND
ADMINISTRATION,
"Handelshögskolan"
Gothenburg, Sweden
- with Jørn Utzon
Competition Project

VESTRE VIK, A,
Oslo
- with F. Reppen

1948-52 MOUNTAIN SCHOOL,
East of Tretten, Gudbrandsdal
Project for a small School of Design in the mountains

1948-52 TOSTRUP BUILDING,
Karl Johans gate 25, Oslo
Project

1949 CIVIC CENTRE,
Falköping, Sweden
- with Jørn Utzon and F. Bjørk
Competition Project

1950 OWN HOME,
Løkenveien 12, Bygdøy, Oslo
Interior Design

ZAITZOW SUMMER HOUSE,
Project

GLASS DESIGN,
Project for Riihimäki, Finland
2nd prize-winning competition

1951 "ERECTOR-SET", METHODS

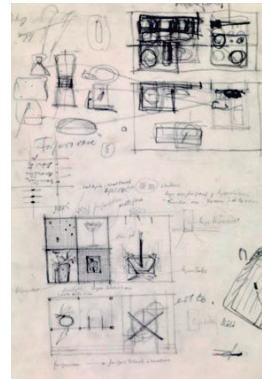


Fig. 58: Design study sketches with Grete Prytz Kittelsen.

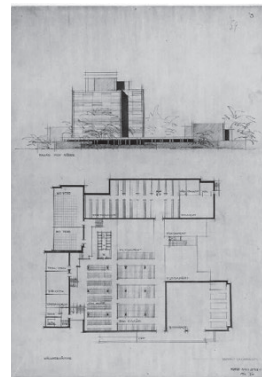


Fig. 59: Floor plan and Elevation plan of Handelshögskolan, Gothenburg, Sweden.

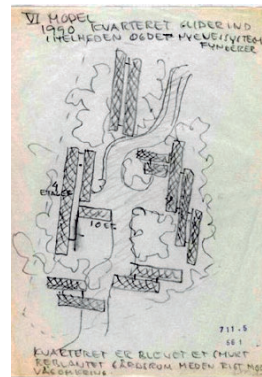


Fig. 60: Site Plan of Vestre Vika, Oslo, Norway.

- THE USE OF COLOUR IN THE FUNCTIONALIST ARCHITECTURE OF ARNE KORSMO - Cristina Mayench Palau - TFG - GArqEtsab - UPC -

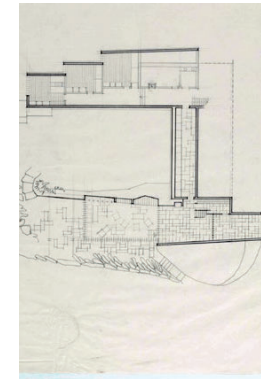


Fig. 61: Floor plan and Elevation plan of the Mountain School in East of Tretten, Gudbrandsdal, Norway.

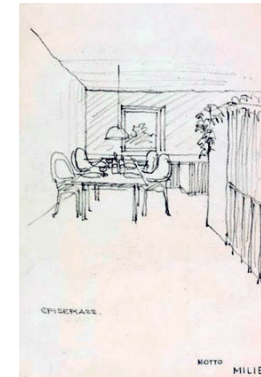


Fig. 62: Interior perspective sketch of Skøyen-Opsal housing development, Oslo, Norway.



Fig. 63: Exterior perspective sketch of Planetveien 10-14 row-houses, Oslo, Norway.

HOT DOG STAND,
Bislett, Oslo

ATRIUM HOUSES,
Nils Lauritzøns Vei, Oslo
- with Christian Norberg-Schulz
Project

NORWAY DESIGNS FOR LIVING,
Chicago, USA
- with B. Dahl
Permanent Exhibition

FLAT,
Tostrup terrasse 9, Oslo
Interior Design

1951-52 ALFREDHEIM,
Nils Lauritzøns vei 39, Oslo
- with Christian Norberg-Schulz
Home for young girls

1952 TWO EXHIBITION APARTMENTS,
Norwegian College of Art, Craft and Design (SHKS)
- with PAGON Group
Interior Design

SKØYEN-OPSAL HOUSING DEVELOPMENT,
Oslo
- with Jørn Utzon
Competition Project

AQUARIUM,
Bergen
- with Christian Norberg-Schulz
Competition Project

1952-55 ROW-HOUSE including KORSMO HOUSE,
Planetveien 10-14, Oslo
Three one-family dwellings
- with Christian Norberg-Schulz

1953 EXHIBITION,
Artek, Helsinki

ARKESHUS AREA,
Oslo
- with Christian Norberg-Schulz
Competition Project

SCHOOL OF ARCHITECTURE AND DESIGN,
Oslo
Project

OWN HOME,
"Arbeidshjem"
Project

CREMATORIUM,
- with G. S. Gundersen
Project

1954 TINGTERRASSEN CAFÉ,
Stortings plass, Oslo
Outdoor summer café

SUSPENDED BRIDGE,
- with Jørn Utzon
Project

TRIENNALE DI MILANO,
Milano
Norwegian design exhibition
Grand Prix

MUNCH MUSEUM,
Oslo
Competition Project

1954-55 OSLO DOWNTOWN AREA,
- with Christian Norberg-Schulz, J. Broome and O. Østbye
Project

1955 T. PRYTZ HOUSE,
Holmen, Oslo
Project

1956 HOUSES,
Planetveien, Oslo
Project

OAF ANNIVERSARY EXHIBITION,
Frogner Manor, Oslo
Project

PAVILION AT THE WORLD EXHIBITION,
Brussels
Competition Project

1957 TRIENNALE DI MILANO,
Milano
Norwegian stand

1958 INFORMATION STAND,
UNESCO-Building, Paris



Fig. 64: Elevation plan sketch of his own home in Arbeidshjem, Norway.

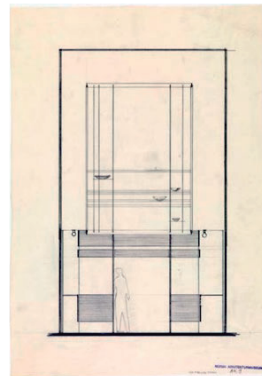


Fig. 65: Section plan of the Triennale di Milano, Milano, Italy.



Fig. 66: Elevation plan of the OAF Anniversary Exhibition building, Oslo, Norway.

- THE USE OF COLOUR IN THE FUNCTIONALIST ARCHITECTURE OF ARNE KORSMO - Cristina Mayench Palau - TFG - GArqEtsab - UPC -



Fig. 67: Exterior perspective sketch of the Pavilion at the World Exhibition, Brussels, Belgium.

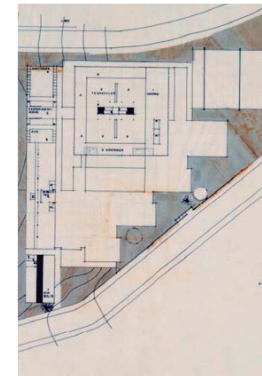


Fig. 68: Floor plan of the Miljøsenster, Norwegian Institute of Technology, Trondheim, Norway.

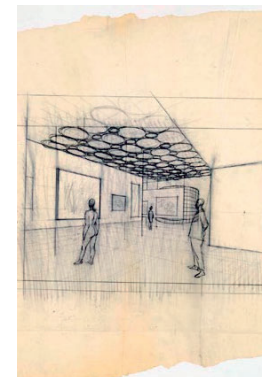


Fig. 69: Interior perspective sketch of Henie-onstad museum, Høvikodden, Oslo.

SCHOOL OF DESIGN,
"Miljøsenster"
Norwegian Institute of Technology, Trondheim
Project

ALUMINIUM AND ENAMEL DESIGNS,
Cathrineholm Factory, Halden
- with Grete Prytz Kittelsen

1960 KLEIN HOUSE,
Halden
- with T. Moe
One-family house

STENERSEN HOUSE,
Mallorca, Spain
Project

1961-63 HOTEL BRITANNIA,
Trondheim
- with T. Moe
Interior remodelling

1963 VILLA STENERSEN,
Tuegen allé 10c, Oslo
Addition to Stenersen house from 1937-39
Project

1966 HENIE-ONSTAD MUSEUM,
Høvikodden, Oslo
Competition Project

THE KEYBOARD COLOUR



Villa Stenersen
Stue (vinduslister og detaljer):
NCS S 1050-R90B



Planetveien 12
Stue (modulært sofapute):
NCS S 1560-R90B



Planetveien 12
Stue (modulært sofapute):
NCS S 1060-B



Villa Dammann
Fasade (sør-vest fasade):
NCS S 1550-R80B



Villa Stenersen
Biblioteket (tak, vegg O):
NCS S 2030-B



Villa Riise
Fasade (vinduskarm):
NCS S 2030-R90B



Villa Stenersen
Tjenesteilighet (dorer, dorgerikter, fotlister, trappetrinn):
NCS S 4030-R90B



Planetveien 12
Stue (peis):
NCS S 4040-R80B



Villa Stenersen
Vindfang, foajé, bardisk og vegg i havestue:
NCS S 1050-Y



Planetveien 12
Stue (modulært sofapute):
NCS S 1040-Y10R



Planetveien 12
Kjøkken (hydraulisk fortau):
NCS S 1515-Y40R



Villa Stenersen
Biblioteket (vegg N, V, S):
NCS S 1010-Y50R



Villa Stenersen
Bad (veggfliser):
NCS S 1030-G20



Villa Riise
Gardin (hvileområde):
NCS S 2010-G20Y



Villa Stenersen
Havestue (ventiler):
NCS S 2030-G



Villa Stenersen
Stue, trapperom:
NCS S 1510-Y20R



Villa Dammann
Fasade (sør-vest fasade):
NCS S 3040-R80B



Villa Stenersen
Fasade (sør-vest fasade):
NCS S 3050-R70B



Planetveien 12
Stue (innvending trapp):
NCS S 4050-R80B



Planetveien 12
Inngang (vest fasade):
NCS S 6030-R70B



Havna Allé
Fasade (inngang fasade):
NCS S 4020-R80B



Planetveien 12
Stue (modulært sofapute):
NCS S 2502-B



Planetveien 12
Stue og Sovesal (teppegulv):
NCS S 3500-N



Planetveien 12
Badstue (keramisk belegg):
NCS S 8502-Y



Villa Riise
Fasade (belegg):
NCS S 2030-Y60R



Villa Stenersen
Havestue (dekorert, baerende soyle):
NCS S 3030-Y60R



Villa Stenersen
Fasade (fabrik solbeskyttelse):
NCS S 3050-Y40R



Planetveien 12
Stue (modulært sofapute):
NCS S 1070-Y80R



Planetveien 12
Sovesal (sengegavl i tre):
NCS S 3010-Y40R



Planetveien 12
Stue (tømmertak):
NCS S 4020-Y30R



Villa Dammann
Fasade (inngang portikoer):
NCS S 6020-Y20R



Planetveien 12
Fasade (vindusrammer i tre):
NCS S 6020-Y20R

- CHAPTER III -

STUDY CASES

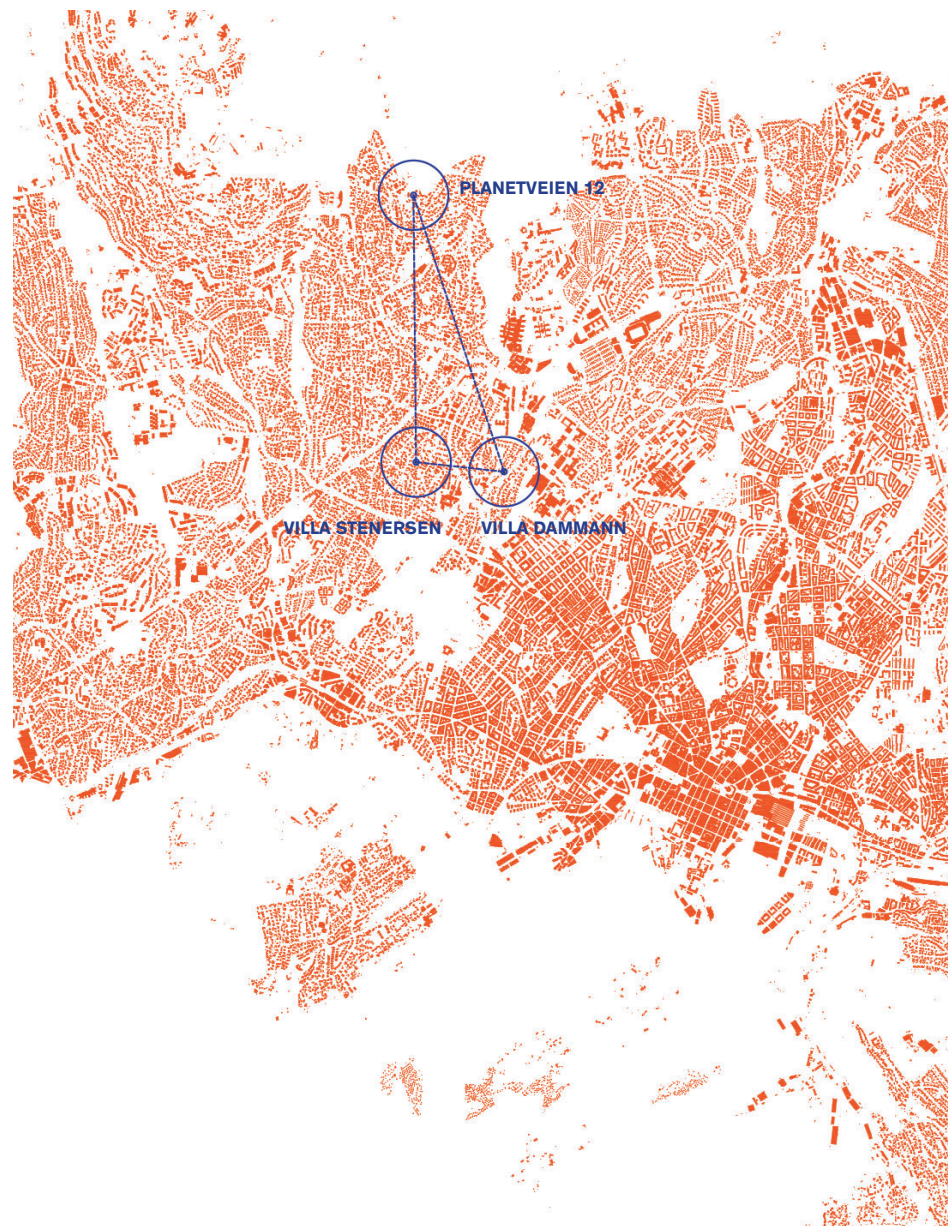


Fig 70: Oslo Site Plan 1 - 45.000, drawn by the author



STUDY CASES

VILLA DAMMANN, Oslo - 1932

VILLA STENERSEN, Oslo - 1938

PLANETVEIEN 12, Oslo - 1955

VILLA DAMMANN

Oslo, Norway

Architect: Arne Korsmo and Sverre Aasland

Project: Villa Dammann

Address: Havna Allé 15, Oslo

Area: 217 m²

Number of floors: 3, including garage

Type of project: Single family house

Heritage: Protected house

Actual use: Private house

Built: 1932

Client: Ulla and Axel Dammann; Sverre Fehn



Fig 71: Frontal view of the main façade of Villa Dammann. Picture taken by the author

"Despite Arne Korsmo's strong international orientation, which led many in his own country to describe him as 'Korsmo-politan' or 'Norway's Le Corbusier', he remains largely unknown abroad" - Astrid Skjerven (Skjerven & Burton Sheffield, 1999)¹

¹ Skjerven, A., & Burton Sheffield, C. (1999). "Like a Sculptural Painting": Arne Korsmo's Interior Architecture in Norway after World War II. *Studies in the Decorative Arts*, 6(1), 2-31.

AXEL DAMMANN AND THE DESIGN PROCESS

In 1932, the architects Arne Korsmo and Sverre Aasland designed the modern and innovative Havna Allé neighbourhood in the western side of Oslo, which included the design and construction of 14 single-family detached houses. The top end of the street was occupied by Villa Dammann, a house designed for Axel Dammann and his family.

Axel Dammann was a successful businessman with a deep passion for the wine production. This enthusiasm led him to spend his youth studying the craft in the Mediterranean countries. When functionalism was introduced in Norway, he recognized and appreciated the simplicity of the design, which he had encountered, earlier, in southern Europe.

Being a competent businessman, Dammann rarely left anything to chance and, when it came to the design of his personal house, he was closely involved in the process.

The initial draft for Havna Allé 15 was quite different from the final constructed house, and in many points, resembled Villa Stenersen, which was built some years later on Tuengen Avenue. However, Dammann was not satisfied with the result and a new proposal had to be designed and built.

Korsmo and Aasland approached this project with a holistic perspective, where various elements such as dimension, light, colours and details had to be seamlessly integrated. They believed that spaces should be used in a certain way, and for that to happen, the architects needed to choose the furniture themselves. This resulted into the incorporation of steel furniture with pink and brown silk covers, wallpaper resembling brown paper, and some "bizarre¹ decorations" painted by Arne Korsmo himself in the hall (Fernandes, n.d.)².

However, this decision ignited a passionate discussion about the ownership of the house, raising questions about whether it was the architect's house of Mr. Dammann's house. Despite the debates about the ownership, Korsmo's and Aasland's approach ultimately created a unique and coherent atmosphere within the villa.

¹ According to the dictionary, the word "bizarre" refers to something that is markedly unusual or strange, often to the point of being striking or shocking. It may also imply a degree of peculiarity or unpredictability, with elements difficult to explain.

² Fernandes, H. S. (n.d.). *Fra balkongen: Villa Dammann - Arne Korsmo*. 2011. Retrieved April 19, 2023

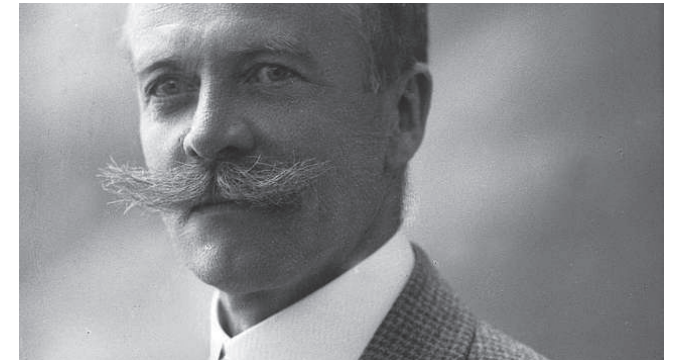


Fig. 72: Picture of Axel Dammann, 1910. Picture taken by the norwegian photographer Gustav Borgen

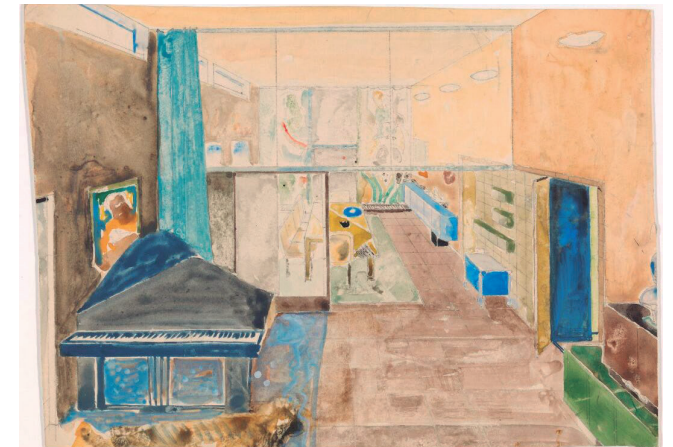


Fig. 73: General sketch of Villa Dammann drawn by the architect, 1936.

THE COLOUR PALETTE STUDY



Utvendig fasade (sør-vest fasade):
NCS S 1550-R80B



Utvendig fasade (sør-vest fasade):
NCS S 3040-R80B



Innvendig treverk
(sørvest fasade):
NCS S 6020-Y20R



Utvendig fasade (be-
legg):
NCS S 2030-Y60R

With its simple geometric forms, clean lines, and innovative use of colour and light, emphasizing the functionality and efficiency of the design, the Villa Dammann stands out as an exceptional example of modernist architecture.

A significant aspect of the Villa is the way in which colour is used. Korsmo, known for his creative use of palettes in his projects, employed two prominent colours in the exterior of the house: a deep orange in the entrance "porticos" and blue panels in the main façade to create a sense of depth and texture, both in contrast to the warmth and intimate atmosphere wood tones on the interior spaces.

The original use of colour and light is a recurring theme throughout the Havna Housing Development, where the architects applied their approach to all of the houses. Each house features unique colour schemes resulting in beautiful and functional living spaces within the neighbourhood.

One of the most striking features of Villa Dammann is the way it blends seamlessly into its natural surroundings. The house is nestled into the sloping terrain, and its low profile and flat roof make it look like a natural extension of the landscape. A sequence of large windows in the façade provides stunning views of the surrounding landscape and creates a connection with the nature on the overall of the house.

The villa showcases a diverse range of techniques and materials, some of which were new during its construction. Korsmo employed local materials like Norwegian granite and slate to achieve this effect, which helped to integrate the building into its surroundings. The house was built in reinforced concrete, with bold colours and shapes that caused an intense debate at the time.

By the time the house was built, articles in architecture magazines and newspapers discussed the functional organization of the house, the materials, and the furniture, which were carefully chosen by the architects, instead of by the owners. Now there was no doubt it was a right decision to make.

In 1937, Havna Allé's project, including Villa Dammann, was awarded with the Houen Foundation prize for architecture, and it has been a protected building since 1997 under the Cultural Heritage Management Office.

SITE PLAN

In 1930 Aasland and Korsmo were given another large commission, after the Frøen development: the development of "Havne", the estate in Vestre Aker belong to the wholesaler Axel Dammann. Rows of one-family houses were planned along either side of Havna allé, at the end of which Dammann's own house was placed, looking out over the Oslo harbour basin (Norberg-Schulz, 1986).¹

The masterplan of the Havna Housing Development, located in the north-western area of Oslo, Norway, is an example of modernist architecture, a movement that emerged in the early 20th century in response to the changing social and economic conditions of the time. The project designed by 1932, was completed in late 1935.

The development's modern architecture, which was a departure from the traditional Norwegian architecture, represented a new direction in the architectural field. Even today, its influence can be observed in contemporary architecture. Korsmo was part of a new generation of architects who were challenging the traditional modes of architectural design and pushing the boundaries of what was possible. His approach to architecture was characterized by a desire to create buildings that were not only aesthetically pleasing but also functional and that explored the connection between architecture and nature.

Havna Allé was created as a unified community, where each of the fourteen houses have a shared architectural language and design philosophy. The houses were built using simple geometric shapes, with flat roofs and clean lines that highlighted their modernist aesthetic. Although various approaches were explored, ranging from conventional wooden houses for the bold and innovative use of contemporary forms of the Dammann house, the result is a cohesive and harmonious whole rather than a collection of contrasting styles.

This aesthetic was influenced by the Bauhaus School, known for its functionality, simplicity, and the use of modern materials such as steel and glass. The school aimed to integrate art, craft, and technology into a "whole", giving life to the "form follows function" principles. The architects adopted these principles and applied them to the Norwegian context, creating a pioneering modernist masterpiece.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

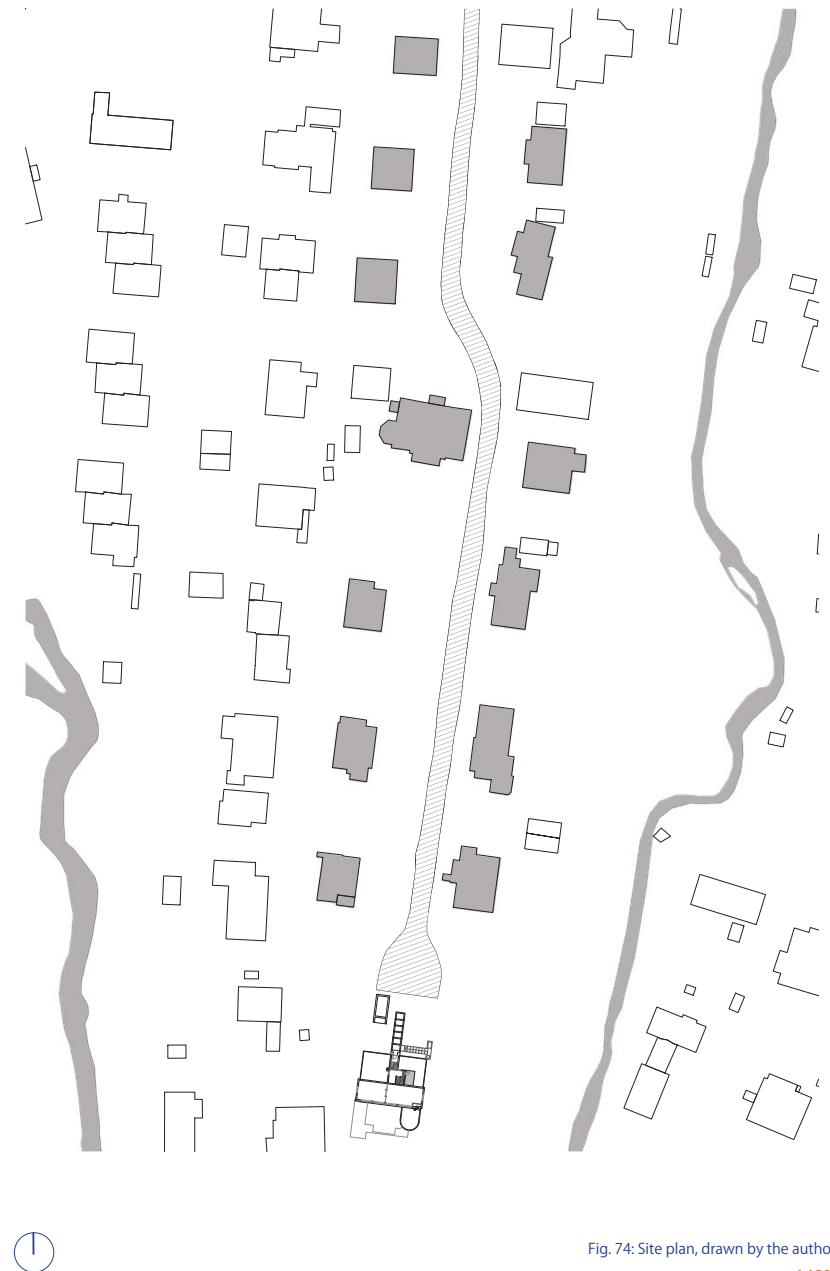


Fig. 74: Site plan, drawn by the author.

1:1200

UNDERGROUND FLOOR PLAN

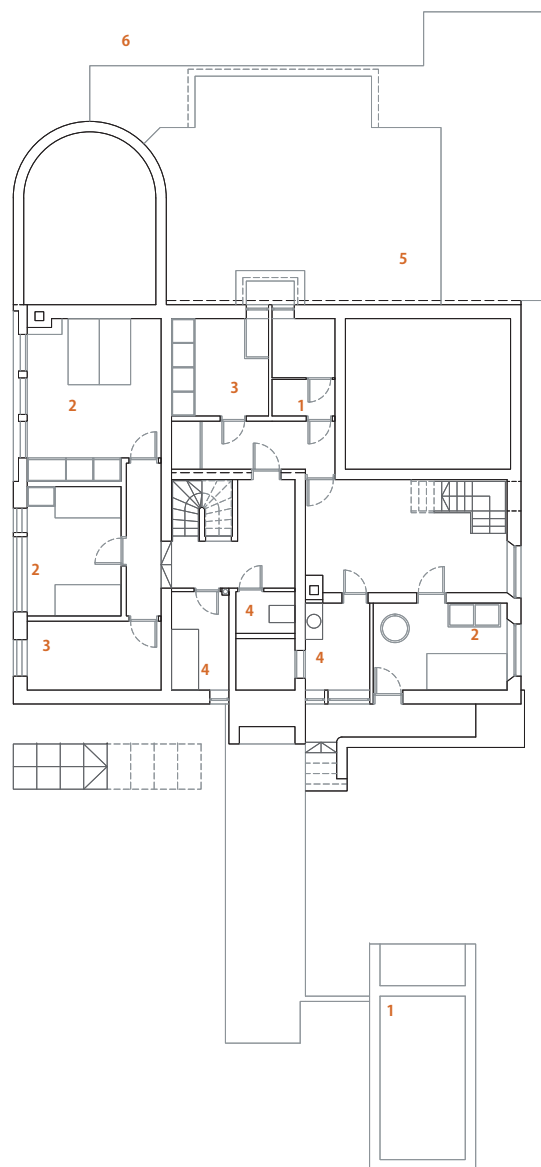


Fig. 88: Underground Floor plan, drawn by the author.

1:150

The building's body was intended to be transformed into a composition of planes, as evidenced by the desire expressed. A characteristic colour, later to become known as "Korsmo blue", was also introduced in the house. The house is clearly inspired by Le Corbusier in its cubic main form, with freely placed windows and an outdoor staircase leading up to the roof terrace (Fondation Le Corbusier, n.d.).¹ The exterior of the house appeared surprisingly conventional, although there was a certain inclination to break down the main form, which was evident.

The project provided Korsmo with an opportunity to execute his ideas without being bound by financial considerations. Indeed, the client himself went to the Mediterranean while Korsmo worked on the project, saying: Do as you please, as long as the house is finished by the time I bet back. Dammann had made a considerable fortune as a wine merchant, but he gave up the business when the Norwegian Wine and Spirit Monopoly established in 1922. The most important requirement for his home was sufficient room for his vast painting collection.

In a 1932 issue of *Byggekunst*, Korsmo described his approach as: "The site forms at the end of a long range of hills running north-south. It was natural to place the house towards the back of the site, with the garden in front. At the request of the owner, as many of the rooms as possible were placed on one floor. The slope of the terrain made it possible, however, to use part of a lower level for guest rooms".

In this villa, a rich selection of techniques and materials have been used, many of which were new at the time, and their performance had not yet passed the test of time. As a result, some subsequent damages occurred, and certain features needed to be changed, as well as restoration campaigns to maintain this house in living conditions.

The garden was also treated very seriously, following the functionalists and hygienic principles of the time, where sun, air, and unobstructed views were a necessity. Both the architects and the owners worked together to create a pleasant outdoor space for the family. Villa Dammann, including the garden, received the Houen Foundation prize for architecture in 1937 and has been a protected building since 1997 with Cultural Heritage Management Office (Fernandes, n.d.).²

¹ Fondation Le Corbusier. (n.d.). *Le Corbusier - une personnalité unique*. Retrieved April 28, 2023.

² Fernandes, H. S. (n.d.). *Fra balkongen: Villa Dammann - Arne Korsmo*. 2011. Retrieved April 19, 2023



Fig 76: Entrance of Villa Dammann.



Fig 77: View of the semi-underground's staircase.



Fig 78: North-East façade of Villa Damann.



Fig 82: South-East façade from the garden of Villa Dammann.



Fig 83: South-East façade from the garden of Villa Dammann.

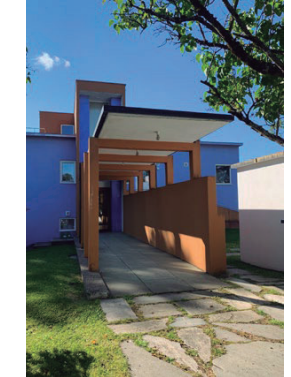


Fig 84: Front façade of Villa Dammann. Picture taken by the author.



Fig 79: Entrance "porticos" of Villa Dammann.



Fig 80: North-West façade of Villa Dammann.



Fig 81: Porticated entrance passage of Villa Dammann.



Fig 85: South-East façade from the garden of Villa Dammann.



Fig 86: Entrance of Villa Dammann.

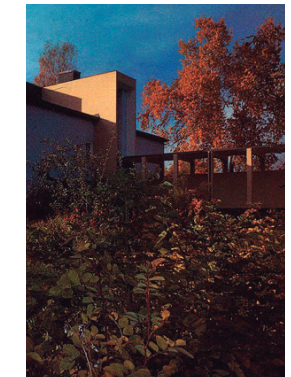
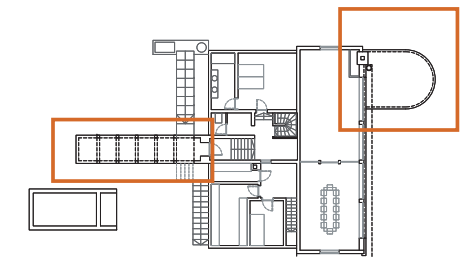
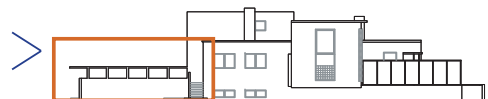


Fig 87: North-East façade of Villa Dammann.



FIRST FLOOR PLAN

The interior of Villa Dammann is just as impressive as its exterior, with its open plan layout and an emphasis on light and space. The ground floor of the villa is divided into three main areas: the living room, the dining room, and the kitchen. These areas are separated by sliding glass doors, which can be opened to create a seamless flow between the spaces (Norberg-Schulz, 1986)¹.

In this connection we must admire Mr and Mrs Dammann for their daring undertaking the effort which undoubtedly forced them to discard so many of their possessions and to design their entire home in accordance with modern-day standards.

With its convincing plan and radical style, the Dammann house is one of Arne Korsmo's most significant works. Although it appears exotic at first glance, it is largely a response to the Norwegian context, characterized by Dutch features. The house is Korsmo's first completed, convincing expression of his intentions and reflects his early interest in Mendelsohn and Dudok (Fernandes, n.d.)².

Dammann's house remains, therefore, the first completed, convincing expression of Korsmo's intentions. At first glance it may seem new and strange, but on closer acquaintance it reveals its deep connection with the site and the life of man. Furthermore, it reveals that it is really not so "new" after all, but rather a new interpretation of the archetypes of architecture. For what is more genuinely archetypal than the quasi symmetrical entrance façade, in which the movement towards the entrance is guided by a pergola and emphasized by a pergola?

The entire house is based on archetypes of form and space, employed in harmony with the surroundings and the inner functions. Dammann's house is designed "from the inside out" as well as "from the outside in". For example, the large living room is placed at right angles to the axis of the site to reflect "the span from hill to hill" and has a vertical glass slit at either end. At the same time the small semicircular study opens axially towards the view.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

² Fernandes, H. S. (n.d.). *Fra balkongen: Villa Dammann - Arne Korsmo*. 2011. Retrieved April 19, 2023

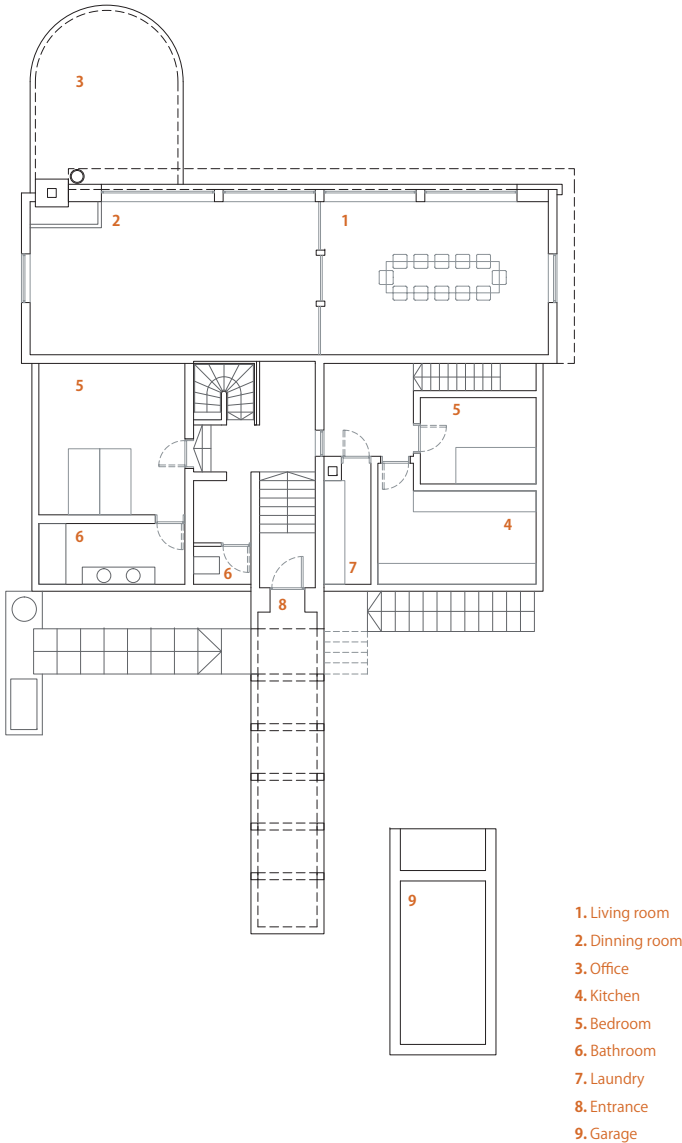


Fig. 75: First floor, drawn by the author.

1:150

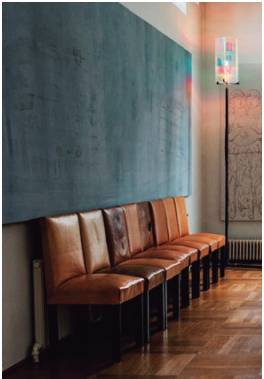


Fig 89: Dining room with the window facing the garden.

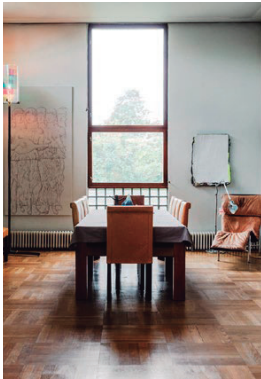


Fig 90: Dining room with the window facing the garden.

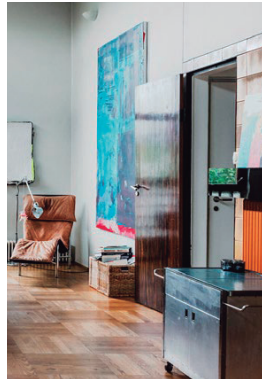


Fig 91: Dining room with the window facing the garden.



Fig 92: Living room area and fireplace.



Fig 93: Living room area and fireplace.



Fig 94: Living room area and fireplace.

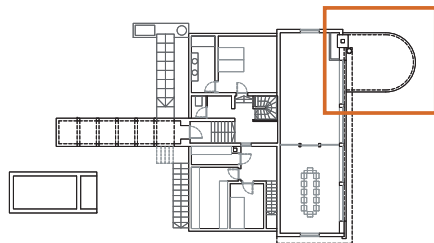


Fig 95: Semi-circular office room.

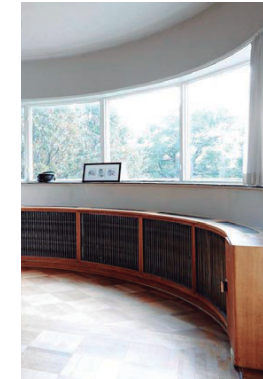


Fig 96: Semi-circular office room.

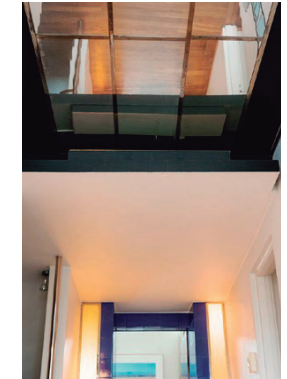


Fig. 97: Skylight of corridor space connecting the two plans.

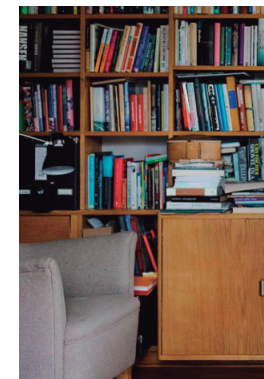


Fig 98: Semi-circular office room.

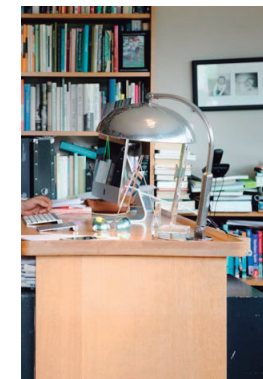


Fig 99: Semi-circular office room.

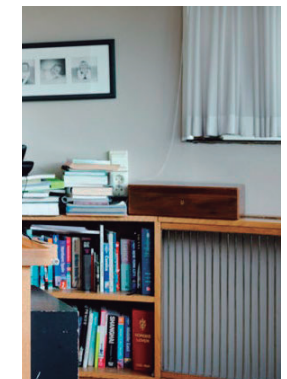
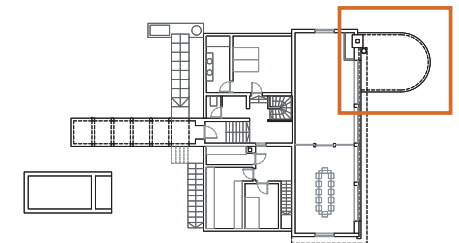


Fig. 100: Semi-circular office room.



ELEVATION PLAN

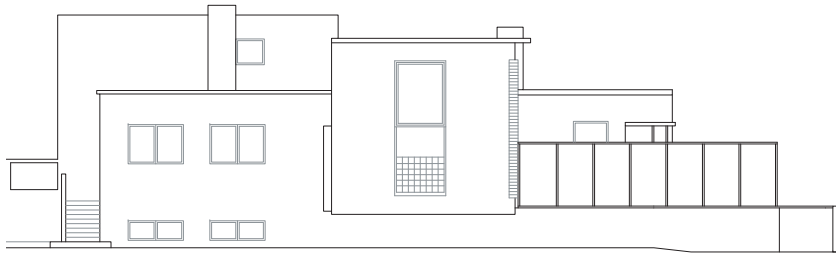


Fig. 101: Elevation plan, drawn by the author.

1:150



Fig. 102: Section plan, drawn by the author.

1:150

The strategic placement of the openings in the semicircular study gives the spatial composition a lively quality when illuminated. According to the architect and present owner, Sverre Fehn, it functions as a large sundial. On the exterior, the spatial composition is a dynamic interplay of horizontal and vertical elements. In some instances, they converge to form a unified body, while the others, they diverge, resulting in a playful interplay of tensions.

It offers an original and convincing interpretation of the free plan of modern architecture, with its dynamic composition of the fireplace serving as a focal point in the interior. This aligns with Frank Lloyd Wright's belief that the fireplace represents the symbolic core of a dwelling. The Dammann house stands out as a prime example of the potential of modern architecture, with few homes from the 1930s demonstrating its revitalizing power as effectively.

While Le Corbusier's *Ville Savoye* and Mies van der Rohe's *Tugendhat* house were still under construction and could not have influenced Kormo's approach, the architect utilized Mendelsohn and Dudok's impressions to create a personal and masterful design. Although luxurious, the principles employed in the Dammann house are universal and can be applied to simpler projects, as Arne Korsmo and Sverre Aasland demonstrated in their small flats from 1931 (Norberg-Schulz, 1986)¹.

The completed version of the house differed significantly from its original design and included striking colours and shapes that generated a considerable buzz at the time. The architect's use of reinforced concrete marked a pioneering construction technique that resulted in an elegant and practical dwelling. The architects meticulously considered every aspect of the house, from the materials used to the furniture selected. They advocated for specific uses of the spaces and believed that the furniture should be handpicked by the architects to guarantee a coherent design.

All the intentions of the project are reflected in the façade, and not only focusing on its colours but in the way it suggests to grow from the terrain and elevates its volume in different levels.

In the 1982, the Norwegian architect Sverre Fehn moved into the house, the one his mentor Arne Korsmo designed, and lived there for almost 20 years.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

Fehn graduated in the second cohort from the new architecture school in Oslo in 1949, tutored by Knut Knutsen and Arne Korsmo. He first came into contact with CIAM through Jørn Utzon, Aldo Van Eyck and Alison and Peter Smithson, but could not afford the expense of travelling to the meetings. He was, however, awarded a scholarship to study in Paris under the guidance of Jean Prouvé, where he would go and watch Le Corbusier working in his studio when it was opened up to students in the evening (Anderson, 2023)¹.

The origins of Fehn's architecture are clear also from where he chose to live. He bought and lived for the rest of his life in Villa Damman, constructed just after the Stockholm Exhibition of 1930 by his old tutor Arne Korsmo, a typical example of a Modernist house of that era. In 1952, he married Ingrid Loberg Pettersen, and together with close friends Norberg-Schulz, Grung, Vesterlid and Jørn Utzon, founded PAGON (Progressive Architects Group Oslo Norway), the Norwegian branch of CIAM (Lawrence, 2009)².

When Fehn bought Korsmo's Villa Damman, he would have liked to have restored the blue colour with real cobalt, in line with Korsmo's intention, but it was too expensive. He did, however, manage to utilize indigo plants found on the site as elements of colour in another house he designed in Denmark. Fehn expressed a clear frustration that we have lost this direct contact with the dyes from the soil or the environment (L'orange, 2019)³.

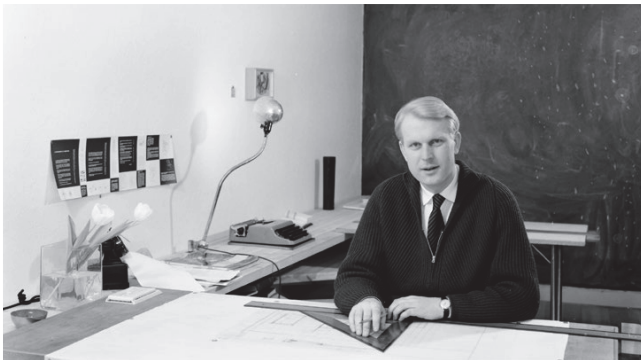


Fig. 103: Sverre Fehn working in his architecture studio, 1954.

¹ Anderson, S. M. (2023). *Sverre Fehn and the City: Rethinking Architecture's Urban Premises* (1st ed.). Routledge.

² Lawrence, R. (2009). *Sverre Fehn: the architect who built on the horizon*. Architectural Research Quarterly, 13(1), 11–15.

³ L'orange, M. (2019). Frykten for fargene. *Arkitektur N*, 5, 65–77.

Before his death, Sverre Fehn dedicated this words to Arne in the book "Arne Korsmo" written by Christian Norberg Schulz.

I first met profesor and architect Arne Korsmo when he became my teacher in the form and design class at the "drawing school". That was in 1946. Four years before, Arne Korsmo had left a capital city. He came back to a provincial town where the painters had determined that Ludwig Karsten suffered from colour blindness.

"I don't have the faintest idea about form and design. If it turns out well, it turns out well, if it doesn't..." were his first words. And he added: "You can build a wall for people to see something of beauty, but also to conceal ugliness." Then he vanished.

We were propelled hither and thither in the history of art with a ruthless subjectivis. No dates. No plan. The road to Africa went via the notes of Leo Frobenius, the ethnographer. The journey from Egypt to neoclassicism was never made. Thirty years after Arne Korsmo's great lecture on Sumerian sculpture, I stand before a showcase in the Altes Museum in East Berlin. Suddenly, all these figures from Persia belong to me.

We were both present in 1955 at the opening of Le Corbusier's apartment block in Nantes. Sitting in the train on the way back to Paris, he spoke of Charles Eames and about his own house in Planet Road. Looking out on the flat, French landscape passing by our train window, it was as if Le Corbusier had never existed.

The last time I saw him was on the plane on a flight from Oslo to Stockholm. He had misplaced his glasses somewhere, so it was vital to get some new ones in Stockholm. A few weeks later I received word that he died in Peru.

PS. I'm sitting here in the year 2000 with a book recently published in Japan. It's about the world's most celebrated houses: Visions of the Real Modern Houses in the 20th Century. I discover in this volume Damman House, one of Arne Korsmo's most momentous achievements. I hope he can see me from his heavenly above as I thumb through this beautiful book. I dont live there any more, and am left with the memories of the twenty years spent surrounded by his architecture (Norberg-Schulz, 1986)¹.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

VILLA STENERSEN

Oslo, Norway

Architect: Arne Korsmo

Project: Villa Stenersen

Address: Tuegen allé 10C, Oslo

Area: 518 m²

Number of floors: 4, including garage

Type of project: Single family house

Heritage: Protected house

Actual use: House-museum, Nasjonalmuseet

Built: 1937-1938

Client: Rolf and Annie Stenersen



Fig. 103: Frontal view of the main façade of Villa Stenersen. Picture taken by the author.

*"Villa Stenersen is regarded as one of the foremost examples of Norwegian functionalism (or modernism) and is one of Arne Korsmo's most well-known works.- Nasjonalmuseet (Nasjonalmuseet, n.d.)"*¹

¹ Nasjonalmuseet. (n.d.). *The history of Villa Stenersen*. Retrieved April 28, 2023

ROLF STENERSEN AND THE DESIGN PROCESS

Like many influential proponents of functionalist architecture, Arne Korsmo was also an artist. Le Corbusier and Juan O'Gorman, to cite two very different architects, were painters as well as architects and designers. It is appropriate, therefore, that the Villa Stenersen was commissioned by an art lover (Benton, 2019)¹.

The client was Rolf Stenersen, the owner of the most important private collection of paintings created by the Norwegian artist Edvard Munch, specially his graphical ones, but not just exclusively his work. He also owned lots of other Norwegian and foreign modern artists' work, such as Paul Klee, Picasso, Cezanne or Kandinsky, and he needed a place to show the art pieces.

The proposal of this unique house was to display the art collections as a permanent exhibition in a space where he could be surrounded by friends and, also, potential art sellers willing to negotiate. For this reason, the house had to be influenced by the modern architecture of the time, and who better than Korsmo to project it?

Villa Stenersen was built during a period of significant change in Norwegian architecture. In the 1930s, Norway was transitioning from a traditional, rural society to a modern, urbanized society. This shift was reflected in the architecture of the time, which began to incorporate new materials, technologies, and design concepts. Arne Korsmo was at the forefront of this movement, and his work on Stenersen's house was a reflection of the changing attitudes towards architecture and design in Norway.

Following the steps of Axel Dammann, Rolf Stenersen assigned the project to Korsmo. But, unlike Dammann, Stenersen had his own ideas on how he wanted to live and where he wanted to exhibit his collection, things that the architect had to deal with in the organization of spaces, and even with the furniture of each room.

According to records, Stenersen encountered Korsmo in 1936, and by March 1937, plans for the house were already in progress. While the fundamental concept of the house was finalized during the summer of 1937, refining details continued until the spring of 1938. At the end, Stenersen moved in late in 1938 (Munchmuseet, n.d.)².

¹ Benton, T. (2019) *Villa Stenersen*. Nasjonalmuseet. asBUILT. ISBN: 978-82-530-4144-5
² Munchmuseet. (n.d.). *The art collector Rolf Stenersen*. Retrieved April 28, 2023.



Fig. 104: Picture of Rolf Stenersen in front of the Villa Stenersen, 1938.

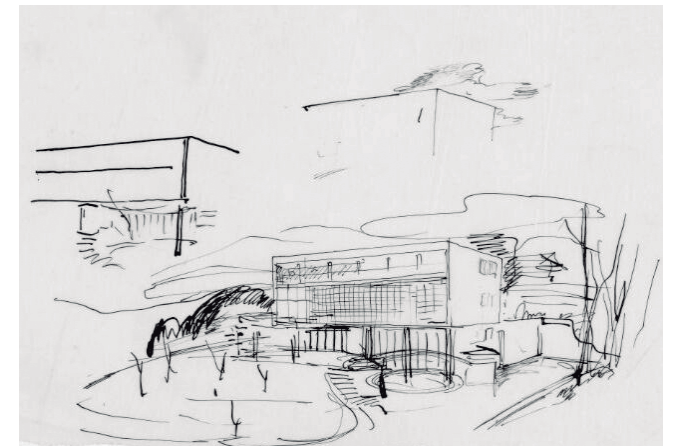


Fig. 105: General sketch of Villa Stenersen drawn by the architect, 1936.

THE COLOUR PALETTE STUDY



Biblioteket (vegg N, V, S):
NCS S 1010-Y50R



Biblioteket (tak, vegg O):
NCS S 2030-B



Vindfang, foajé, bardisk
og vegg i havestue:
NCS S 1050-Y



Stue, trapperom:
NCS S 1510-Y20R



Stue (vinduslister og
detaljer):
NCS S 1050-R90B



Bad (veggfliser):
NCS S 1030-G20



Havestue (dekorert, bæ-
rende soyle): terracotta
NCS S 3030-Y60R



Tjenesteleilighet (dorer,
dørgerikter, fotlister,
trappetrinn):
NCS S 4030-R90B



Havestue (ventiler):
NCS S 2030-G



Utvending fasade (mark-
ise):
NCS S 3050-Y40R



Utvending fasade
(vegg):
NCS S 3050-R70B



Soverom (vegg):
NCS S 2030-G

Chromatic and colour schemes were of great importance to Korsmo in his houses. Two prominent colours motifs are showcased in Villa Stenersen; The interplay between orange and blue in the main façade, and the varying shades of blues, greens and beige found in the interior walls and furniture of the house. It is worth noting that, despite common assumptions, hardly any of the interiors were ever painted in white.

Surveys of construction history and colour analysis have been undertaken in almost every room at Villa Stenersen. This provides detailed knowledge of the original colours, materials and decoration, and hence a solid basis for a correct restoration back to the original design. A sample of the paints thus uncovered have been coded using the so-called Natural Colour System (NCS) as a means of notating what the colours looked like, in the view of the paintings conservator, when they were new.

The main principle of the original colour scheme for the interiors of Villa Stenersen was white ceilings and pale beige-white walls, with similarly coloured doors and mouldings. The impression is of small colour contrasts, with variations between smooth and matt surfaces and between textures. In addition, some rooms stand out for their use of mustard yellow, pale yellow, green or blue. Typical wallpapers of the era from foreign suppliers have also been found in all the bedrooms. The master bedroom's en suite bathroom originally had blue-green tiles on the floor. The living room and library have been restored and can now be appreciated in the condition as designed by the architect itself.

Since 2012, the house and garden have been protected by order of the Directorate for Cultural Heritage. The National Museum wishes to restore the villa to reflect Korsmo's original designs and what we know about its appearance in the first few years after its completion. Startsbbygg, the Norwegian government's real estate agency, is currently restoring the painted surfaces back to the original design. The villa is a "house museum" and is a member of Iconic Houses, an international network of architecturally significant homes that are open to the public. Villa Stenersen is the only Norwegian modern private modernist residence open to the public¹.

¹ Informational triptych from the house museum Villa Stenersen, pertaining to the Nasjonalmuseet foundation

SITE PLAN

The location of Villa Stenersen is like of many other houses situated on the slopes surrounding Oslo, but it is particularly noteworthy. The house is situated in the residential area of Vinderen, located in the northwestern part of the city, close to the natural parks of Vettakollen and the lakes of Sognsvann.

In contrast to the surrounding traditional houses, Stenersen's Villa stands out due to its functionalist design, characterized by a projected linear volume and the use of bright colours. This design approach is a testament to Kormo's expertise. Its construction had such a dramatic impact on the neighbourhood that, as it is said, even one of the neighbours had to sell his house to avoid seeing the villa every day.

The rectangular plot of the Villa spans less than 40×50 meters (0.17 hectares) and is situated on a steeply inclined slope with a buttress¹ projecting towards the southwest. The access road, Tuegen allé, runs along the southern border of the site and connects the entrance of the house by a secondary private road. From this higher ground, a beautiful view of the south and the inner Oslo fjord, unobstructed by neighbouring houses, is visible and creates a sense of openness and spaciousness that, meticulously, integrates the house to the surrounding area.

Conceptually, the views are a key aspect of the Villa's design, and this concept is directly reflected by the opening of large windows integrated into the façade which provide ample natural light and offer stunning views of the surrounding landscape.

The building aims to grow on top of the terrain, elevating itself four floors from the floor level to emphasize the views of the house to the "fjords".

In spite of its size and simple form, Stenersen's house seems inviting and alive. It illustrates Korsmo's ability to take advantage of a situation, and to make "dwelling" into an exciting, enriching experience. Thus, the Stenersen house crowns Kormo's production of the second half of the 1930s, demonstrating that Norway at that time fully participated in the development of the "new dwellings" (Norberg-Schulz, 1986)².

¹ Butress: A support that sticks out from the wall of a building to keep it steady or a retaining wall

² Norberg-Schulz, C. (1986) *The functionalist Arne Korsmo*. Universitetsforlaget. ISBN: 978-82-150-0008-8

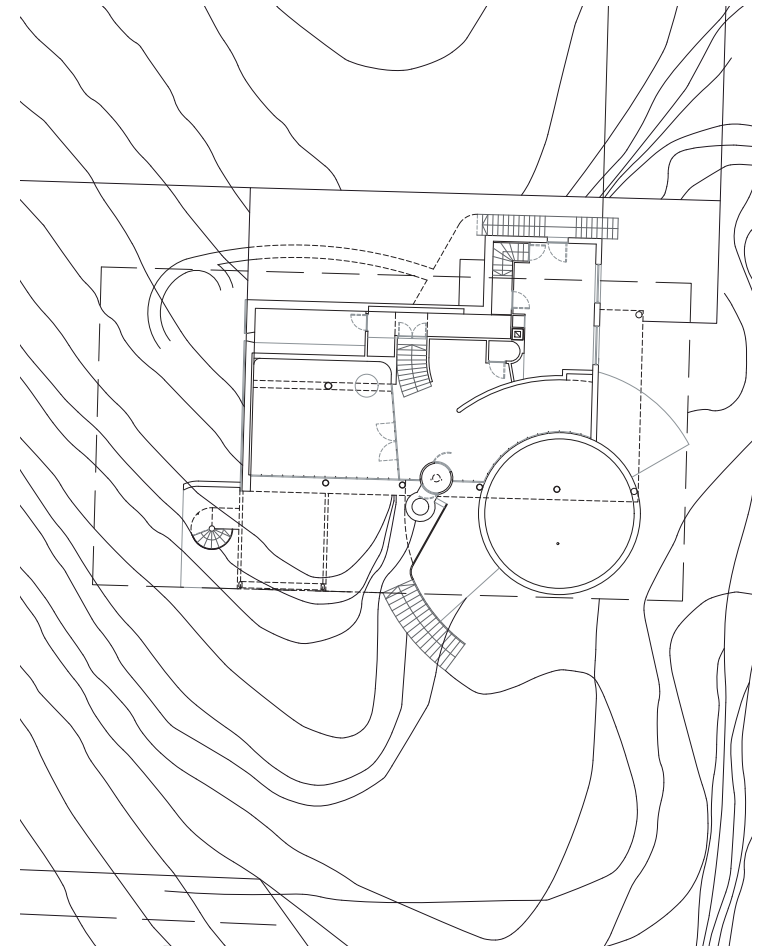
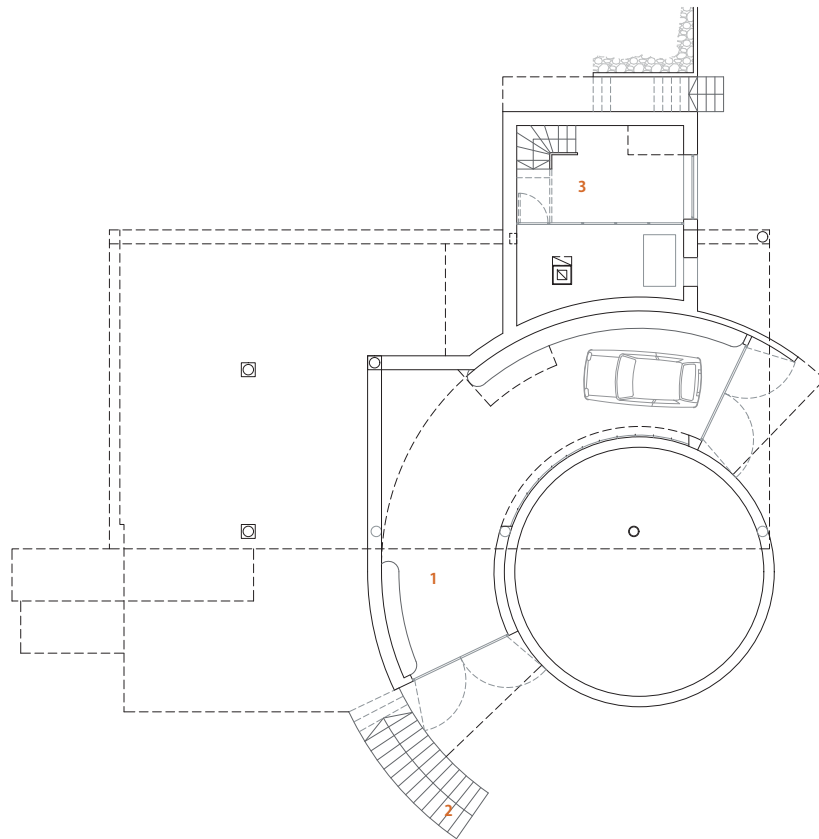


Fig. 106: Site plan, drawn by the author.

1:250

UNDERGROUND GARAGE PLAN



1. Garage
2. Exterior staircase
3. Interior staircase
Fig. 107: Garage plan, drawn by the author.
1:150

One of the most distinctive and interesting features of the house is the garage. Arne Korsmo aimed to soften the house's firmly cubist appearance and utilized circular shapes to achieve this, as it can be seen in the *Ville Savoye* designed by Le Corbusier. An example of it is the unique semi-circular garage, specially designed for the homeowner Rolf Stenersen. The garage's circularity was intended to facilitate a smoother flow of circulation and create a more comfortable entrance and exit experience (Arne Korsmo (Villa Stenersen, 2016))¹.

Two functions are served by the garage: it softens the building's stringent style, even as it meets the needs of the owner – thus embodying the interaction between form and function. The car was a potent symbol of the success of industry in the 1920s and 1930s, and letting it play an independent role in Villa Stenersen was entirely in the spirit of the age (Nasjonalmuseet, n.d.)².

Norwegian architects have always had a deep respect for the natural environment, and their designs often reflect this connection. Architecture that is closely tied to nature enhances the well-being of the occupants by promoting a sense of harmony and balance with the surroundings. In modern architecture, this concept appears as a result of the creation of the "open space" and highlights this idea throughout the façades.

The house's design, conceptually, places great importance on connecting with nature, which is apparent throughout the entirety of the house. This idea is emphasized by the windows, openings, and the glass block façade, which all serve to enhance the relationship between the interior and exterior spaces. The garage floor's façade features a sequence of large windows that are arranged in a semi-circular pattern and set into the concrete wall. This design element allows natural light and ventilation to flow into the garage, further promoting a connection with the surrounding environment.

Two staircases are situated on the semi-subterranean floor, one exterior that follows the semi-circular shape of the garage, connecting to the principal entrance to the next level and another interior one, facing the north, leading directly to a distributor space on the main floor that serves as a connection to all four levels of the house.

¹ Arne Korsmo, *Villa Stenersen*, (2016, November 24), Divisare.

² Nasjonalmuseet. (n.d.). *The history of Villa Stenersen*. Retrieved April 28, 2023.



Fig 108: South-West façade, main entrance. Picture taken by the author



Fig 109: South-West façade, statue in front of the garage. Picture taken by the author



Fig 110: South-West façade, first floor view. Picture taken by the author



Fig 114: Main entrance, exterior view. Picture taken by the author



Fig 115: Main entrance, interior view. Picture taken by the author

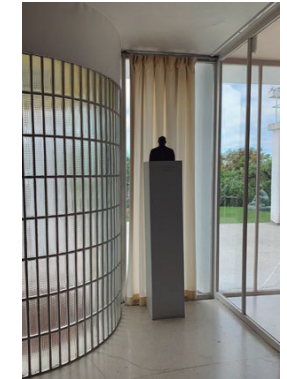


Fig 116: Main entrance, Rolf Stenersen statue. Picture taken by the author



Fig 111: South-West façade, main entrance staircase. Picture taken by the author

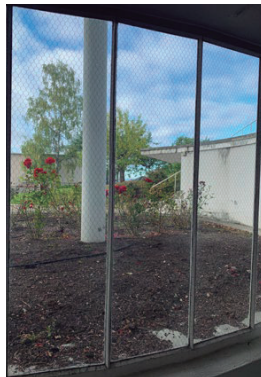


Fig 112: Garage, interior view. Picture taken by the author

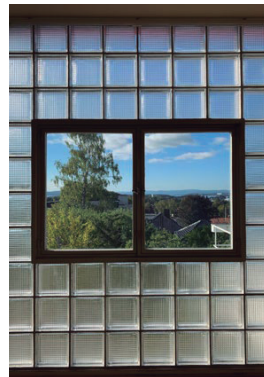


Fig. 113: Modulation of the Insulux glass block façade, interior view. Picture taken by the author



Fig 117: Music room, exterior view. Picture taken by the author



Fig 118: Distributor space, exterior view. Picture taken by the author

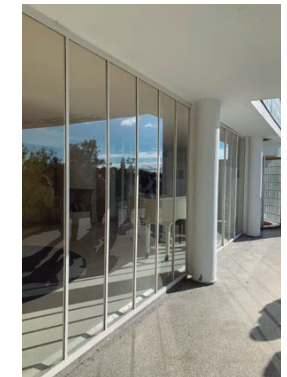
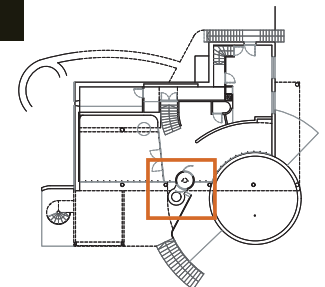
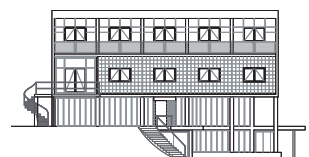


Fig 119: Music room, exterior view. Picture taken by the author



FIRST FLOOR PLAN

When Arne Korsmo started his work on Villa Stenersen, functionalism had already become an established style at the school of architecture. Nevertheless, due to the architect's fascination with groundbreaking and unexplored approaches, his villas introduce a completely new concept. Villa Stenersen, renowned for its immense global design, is regarded as a significant accomplishment both in Korsmo's career and within the realm of Norwegian functionalism.

Following the principles of the modern architecture about simplicity, functionality and rationality, the building has a regular geometric shape, broken by the terrace. Thus, the plan remains clear and functional, although varied openings and projections in the main façade disrupt any static balance.

In this circular shape, disrupting the aesthetics of the clean and plain lines, it is noticeable that Arne Korsmo used this figure as a circulation element. The main entrance space, embracing the first appearance of colour into the interior of the building, opens up to the main distributor area, where a mirror is placed strategically to create a deepness of the room. From there, to the most interesting room of the house, the music room.

Two elements are imperative to understand the importance of the space when it comes to remark Rolf Stenersen's personality. These are the circular concrete fireplace and the circular pillar in the middle of the space, both shown as a part of the owner's art collection. The design of the room is brought to its maximum simplicity. Just two armchairs, a coffee table, a bar table with two stools and a white piano appear in the space, giving a complete vision from the inside to the outside area. Other design decisions, in terms of colour, are the waved shape panelled wall painted in bright yellow and the green ventilation grid present as well in other rooms of the house. The election and treatment of the pavement composition express the thorough intentions of the architect regarding the attention to detail.

The various spatial spaces of Stenersen's house are not defined as separate volumes, as in Damman's house, but as movements within and in relation to a comprehensive, prismatic block. Naturally, the dynamics are specially pronounced on the entrance level, where the curved wall in the drive through garage is repeated in the vestibule, while a circular porch marks the transition between the exterior and the interior (Norberg-Schulz, 1986)¹.

¹ Norberg-Schulz, C. (1986). *The Functionalist Arne Korsmo*. Oxford University Press.

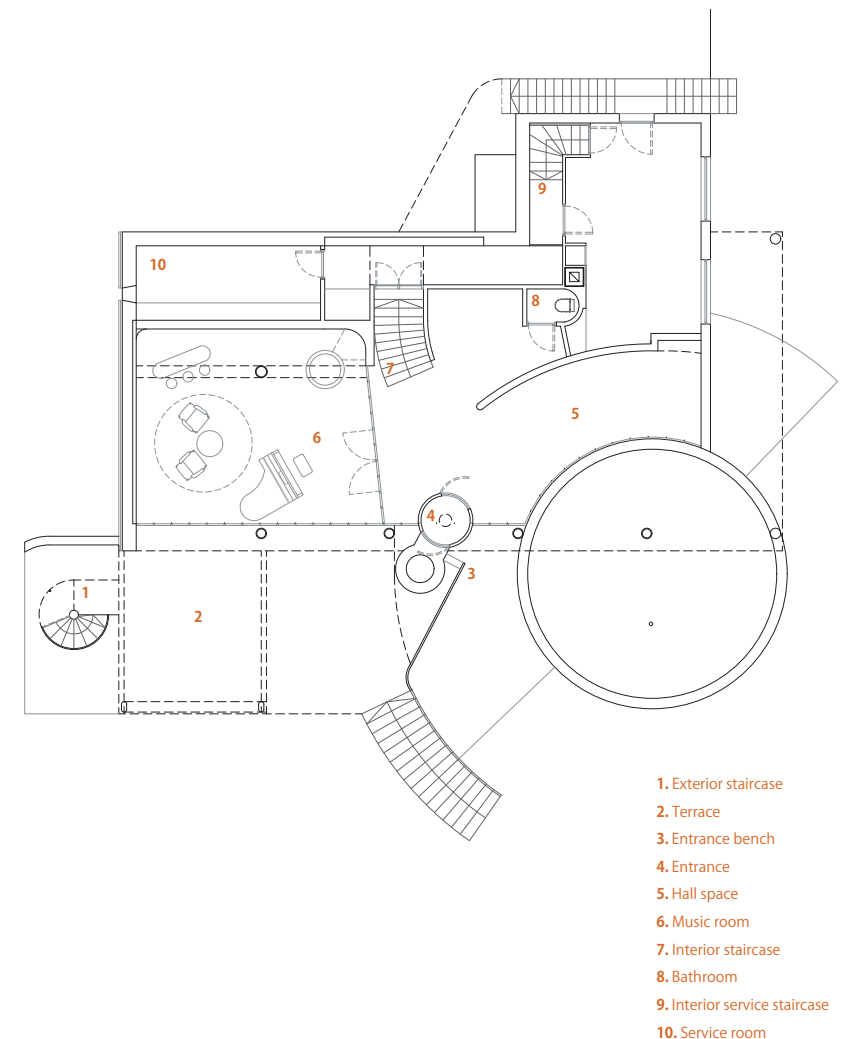


Fig. 120: First Floor Plan, drawn by the author.

1:150



Fig 121: Circular fireplace, music room.
Picture taken by the author

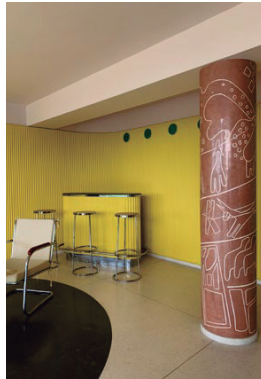


Fig 122: Bar area, music room. Picture
taken by the author



Fig 123: Piano piece, music room.
Picture taken by the author

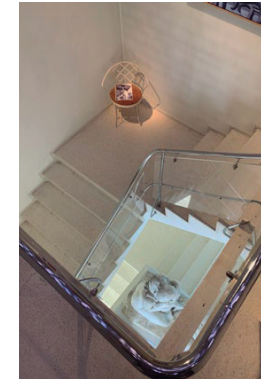


Fig 127: Interior view of the staircase.
Picture taken by the author



Fig 128: Skylight of the staircase.
Picture taken by the author

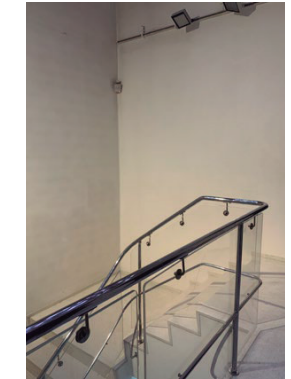


Fig. 129: Interior view of the staircase.
Picture taken by the author



Fig 124: Resting area, music room.
Picture taken by the author



Fig 125: Art piece pillar, music room.
Picture taken by the author



Fig. 126: Piano piece, music room.
Picture taken by the author



Fig 130: Chair in the stair landing.
Picture taken by the author

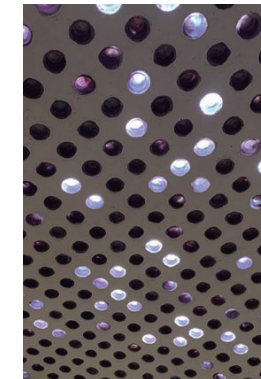


Fig 131: Skylight of the staircase.
Picture taken by the author

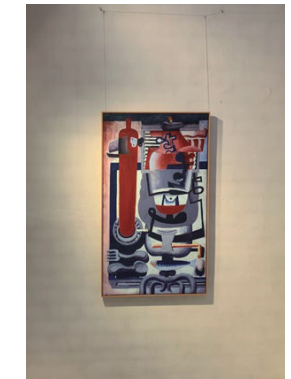
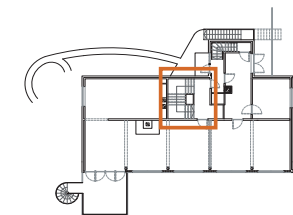
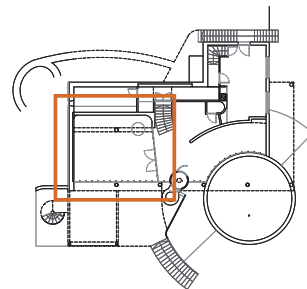
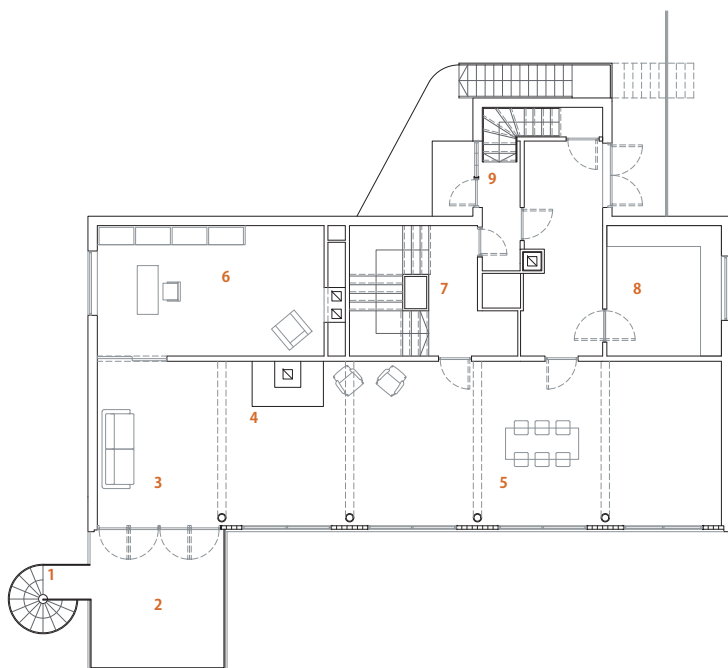


Fig. 132: Art piece in the staircase wall.
Picture taken by the author



SECOND FLOOR PLAN



1. Exterior staircase
2. Terrace
3. Living room
4. Fireplace
5. Dinning room
6. Library and Office
7. Interior staircase
8. Kitchen
9. Interior service staircase

Fig. 133: Second Floor, drawn by the author.

1:150

To prevent the free plan's flowing space from descending into chaos, an overall structure was necessary. In the late 1920s, both Le Corbusier and Mies van der Rohe explored the idea of using a repetitive skeletal construction to achieve this goal. This "clear" construction serves as a sort of "figured bass", providing the room's movement and rhythm with substance throughout. Korsmo found inspiration in international sources such as Le Corbusier's Villa Savoye, located outside Paris, and Mies Van der Rohe's Villa Tugendhat in Brno.

Villa Stenersen, unlike many of Korsmo's earlier houses, was designed around a freestanding reinforced concrete skeleton, with a particular respect for the site and nature to seek to detach the house for the soil. This skeleton is revealed most dramatically in the exposed pilotis on the south-West and North-West corners and the set-back of the second floor. The other pilotis are usually aligned inside or outside the line of the windows or buried in internal partition walls (Benton, 2019)¹.

The "open space" is further developed on the first floor, where the living room and dining room are integrated into a single space considered, at the same time, as an art gallery. Colours and textures appear expressed in both architectural field and interior design. Standstone painted walls and roof are shown in contrast with the pale green colour of the window frames and the treatment of the natural wood in the parquet pavement. The deep dark blue fabric of the sofa centres, perfectly, the vision of the piece in the middle of the room, but, there is no doubt on which are the elements that give significance to the space and those are the paintings hanging on the walls. There is no documentation about the kitchen, so it cannot be assumed how the interior treatment of the space was designed, but following the ideas of the moment, it was probably treated as the minimum kitchen or "kitchenette"².

Crossing a sliding door, at the end of the living room, there is placed the library, a small and cozy space that features a range of warm colours. The space boasts a palette of warm and cold colours, with soft pastel pink, bright blue and dark blue tones covering the walls and roof, creating a pleasant atmosphere. Untreated wooden floors add a natural element to the design, as well as the chair and a desk, providing warmth and comfort. Upholstered in deep terracotta fabric, the armchair subtly contrast the warm pastel pink walls and centers, again, the vision to the corner of the room.

¹ Benton, T. (2019). Villa Stenersen (asBUILT, Ed.). Nasjonalmuseet.

² The rational kitchen solution based on a 1x1m grid



Fig 134: Living room in the second floor. Picture taken by the author



Fig 135: Dinning room converted into an exhibiton space in the first floor. Picture taken by the author

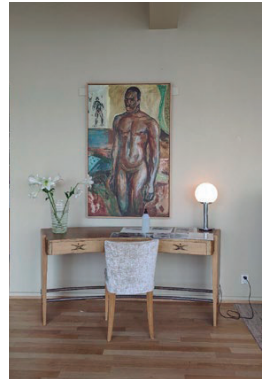


Fig. 136: Living room in the first floor. Picture taken by the author



Fig 140: Library in the office room. Picture taken by the author

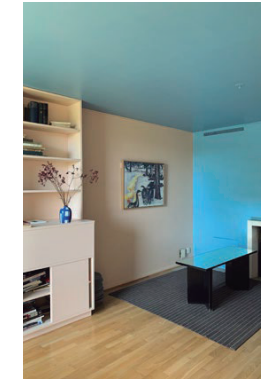


Fig 141: Office room. Picture taken by the author

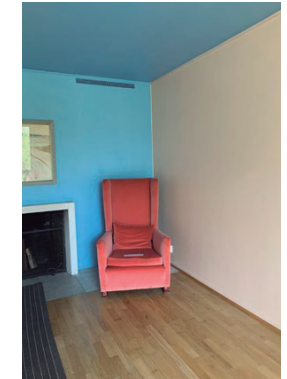


Fig. 142: Fireplace in the office room. Picture taken by the author



Fig 137: Art piece in the living room wall. Picture taken by the author

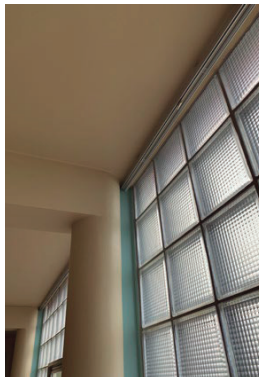


Fig 138: Glass block façade from the living room. Picture taken by the author



Fig. 139: Decorative light in the living room. Picture taken by the author



Fig 143: Entrance door to the office room. Picture taken by the author

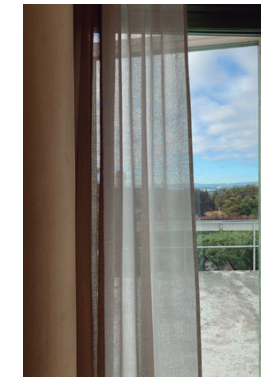


Fig 144: Exterior view from the office room. Picture taken by the author

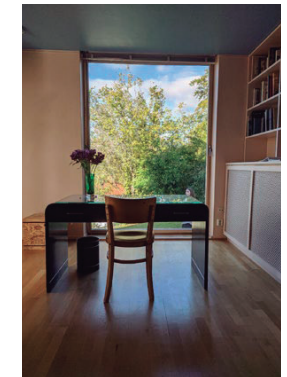
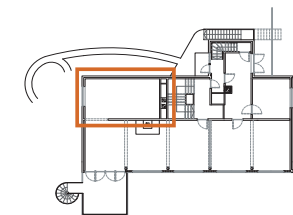
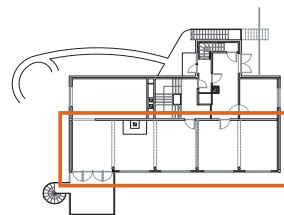


Fig. 145: View from the interior of the office room. Picture taken by the author



THIRD FLOOR PLAN

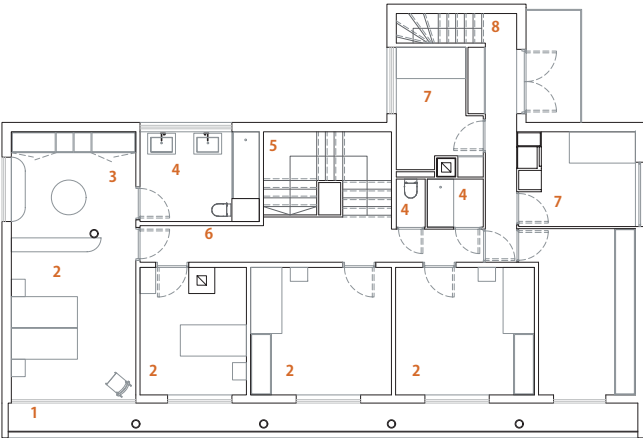
Korsmo made a design effort in the master "suite" bedroom, but with only moderate success. The North wall's fitted cupboards are a particular focus of attention, with compartments for dresses, shoes, even tennis equipment, as well as cupboard doors with drawers for cufflinks and tie racks. The colour scheme of the space is based on a light grey palette, covering walls and ceiling, while wooden floors provide a sense of warmth and comfort, creating a simple and tranquil atmosphere that matches perfectly with the room's function.

In 1920s, designers were preoccupied with studying built-in fitted cupboards made from man-made veneered boards, instead of the traditional frame and panel construction. This was due to the material's ability to provide a more consistent finish and better resistance to warping and splitting which allows the design to be more flexible and innovate.

One unique feature of the bedroom is a low fitment covered with a green vitrolite glass top, which divide the room into a dressing area and sleeping area, and separates at the same time the bedroom from the bathroom. Another feature is a column labelled "Luftkanal", which distributed warm air through a series of holes on top of this functionalist element.

Equally fascinating as the other rooms, the bathroom features various shades of green and blue colours and materials. Walls and floors are finished with deep green ceramic tiles that provide a sense of texture to the room's design. The bathtub, sink and toilet are made of porcelain with a touch of pale yellow finish to create a contrast between the deep green and blue elements to the bright and light yellow elements. Another interesting element, added to Kormo's imaginative way of thinking the details, is the foldable mirror. Two pivoting panels, faced on both sides with mirror glass form an "all-round vision" of the room and are thought to be adapted according to the needs of the users. Another masterpiece of the house that discerns from the "modern architecture" focus.

The furniture in Villa Stenersen, much of it designed by the architect, is a crucial design element, but there is an essential element that cannot be left unmentioned, the "skylight". The ceiling above the staircase is made of concrete with 625 circular glass openings allowing natural light to flood into the space and create an impression of walking through an art installation.



- 1. Balcony
- 2. Bedroom
- 3. Dressing room
- 4. Bathroom
- 5. Interior staircase
- 6. Corridor
- 7. Service room
- 8. Interior service staircase

Fig. 146: Third Floor, drawn by the author.

1:150



Fig 147: Master bedroom in the second floor. Picture taken by the author



Fig 148: Chair in the bedroom in the second floor. Picture taken by the author

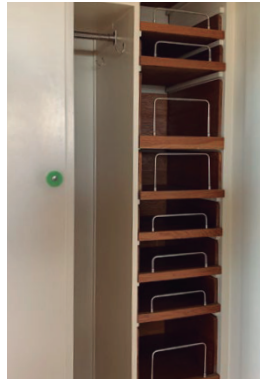


Fig. 149: Built-in custom wardrobe in the doble bedroom. Picture taken by the author



Fig 153: Dressing room in the master bedroom. Picture taken by the author



Fig 154: Heating system in the master bedroom. Picture taken by the author



Fig 155: Green glass panel in the furniture of the master bedroom. Picture taken by the author



Fig 150: Wooden flooring in the master bedroom. Picture taken by the author



Fig 151: Curtain rail detail in the master bedroom. Picture taken by the author



Fig. 152: Dressing room in the master bedroom. Picture taken by the author

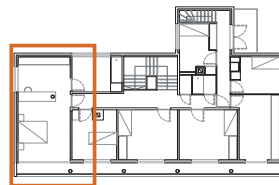


Fig 156: Bathroom. Picture taken by the author



Fig 157: Bathroom. Picture taken by the author

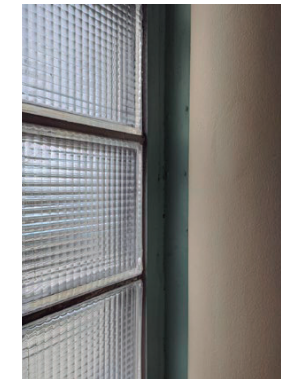
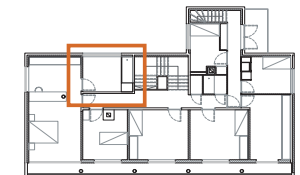


Fig. 158: Bathroom. Picture taken by the author



SOUTH-WEST FAÇADE PLAN

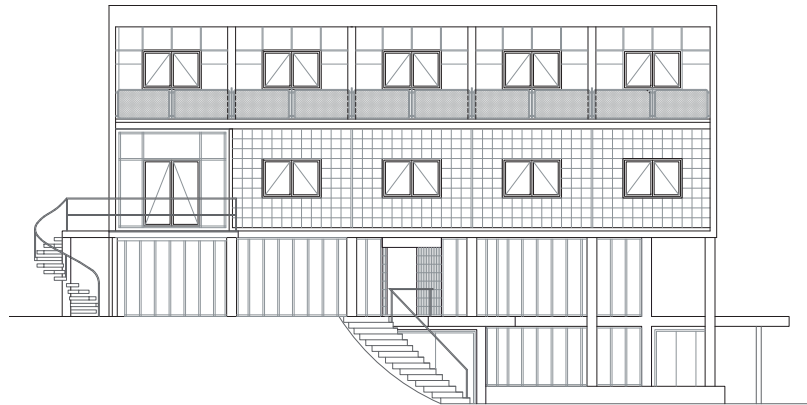


Fig. 159: South-West Elevation Plan, drawn by the author.

1:150

The Villa Stenersen embodies Kormo's expertise in modern house design and represents a fusion of innovative practices from across Europe, making it a truly "international" work that can stand alongside other avant-garde houses. While some Norwegian critics may regret the house's forceful form and the prominent use of reinforced concrete in the construction, these same elements align with the priorities of International Style architects.

Korsmo applies a blue cobalt to the background wall on the main façade and a deep orange colour to the canopies, which accentuates the columns that support the house and provides shade to the direct sunlight during the day, both used to highlight the functionalist-style. The perception of functionalism as "white", by later generations, is a misconception influenced by the prevalence of black-and-white pictures that obscure the true range of colours used in architecture. When studying the images of the period of construction, it is almost impossible to understand that the villa is painted in such dramatic colours if the user hasn't been there personally because all the pictures from the late 1930s are taken in a cold grey scheme.

The South Elevation Plan proposes a grid of a series of "Insulux" glass blocks in the first and second floor that have been carefully modulated to create a sense of rhythm and movement across the surface of the façade. This material was relatively new, at the time, for construction. It was, originally, designed for use in industrial and commercial buildings, but Korsmo saw its potential to create a unique and striking visual effect on the façade of Villa Stenersen, which made him be one of the first architects to use this component in a significant way. French windows are open to the balcony at the West end of the façade, at the first floor, and the other window openings are centred between the structural pillars. Arne wanted a wall without windows and even composed a photographic collage, but the client decided.

As Korsmo himself noted a few years later, "When the understanding of function, material, and form becomes a living aesthetic ideal for those who want something built, this will manifest itself as a stricter demand on the architect's qualifications, and architecture will once again become the living, artistically powerful expression of the vibrant joy of life and of human trust. An owner who takes a leap of faith with the architect is therefore entitled to the best possible result." (Arne Korsmo. Villa Stenersen, 2016)¹.

¹ Arne Korsmo. Villa Stenersen. (2016, November 24). Divisare.

PLANETVEIEN 12

Oslo, Norway

Architect: Arne Korsmo and Grete Prytz Kittelsen

Project: Planetveien 12

Address: Planetveien Road, Oslo

Area: 268 m²

Number of floors: 3

Type of project: Single family house

Heritage: Protected house

Actual use: Private house

Built: 1950-1955

Client: Arne Korsmo and Grete Prytz Kittelsen



Fig. 160: Interior view of Planetveien 12. Picture taken by the author.

"Its architecture transcends the solutions typical of its time: Kormo's house at the forest edge clearly deserves its reputation as a pearl of architecture"
-Elisabeth Tostrup. (Tostrup, 2014) ¹

¹ Tostrup, E. (2014). *Planetveien 12: The Korsmo House - A Scandinavian Icon*. Artifice.

GRETE PRYTZ KITTELSEN AND ARNE KORSMO

Grete Prytz Kittelsen and Arne Korsmo were a particularly productive team in many fields apart from the product design one. Searching for a house to live in, Grete and Arne, together with the architect and the couple's friend Christian Norgberg-Schulz, ended up designing and building three detached houses in Planetveien 10-14. Their home was located "**between midriffs**", in the middle of the houses, and was distributed differently from the other two.

The house was inspired by the Japanese architecture which influenced, before, their apartment in Bygdøy. This "apartment" in the surrounding islands of the peninsular area of Oslo, which in Norway they denominate "**cabin**", had a wide living room with a lot of configured seating space for events with friends and family, a bedroom, a small kitchen in the first floor plan, a bedroom-office and a shared bathroom. These ideas, everything but conventional as he draws them in his sketches, of the "**reunion house**" with the middle void space to create life in it, to "live the space" with direct connection to the nature, was transported to the design of Planetveien house.

In Planetveien 12, private and professional functions, such as "ateliers", home-offices and working areas, were designed in to achieve the idea of a "**working home**". *The term "working home" sounds very positive to my ears, it is a lovely place to live and work* – Grete Prytz (Brokstad, n.d.)¹.

The "decor" was designed to suit the needs of each individual. It reflected Korsmo's idea of the "**Home Meccano**" concept, which had the objective of integrating all human needs, physical and psychological. Together, Grete and Arne created their own universe here for everyday living and entertaining, and this was reflected on their idea of **dancing the space**.

The houses situated in Planetveien were regarded as one of the most comprehensive achievements of Arne's career. However, it would not have been such immense success without the ideas and contribution from Grete's input around layout, colours and interior designs. They moved in Planetveien 12 at the beginning of 1955 before the interior was completed. Life together did not last forever for Grete and Arne. They got separated in 1960, but kept in touch as friends and colleagues. In 1968, they both assisted to a conference for designers in Peru, where Arne died because of altitude sickness in the Machu Pichu. It is said that he died in Grete's arms.

¹ Brokstad, A. E. (n.d.). Grete Prytz + Arne Korsmo = <3. Retrieved April 27, 2023.



Fig. 161: Grete Prytz Kittelsen and Arne Korsmo dancing in their home Planetveien 12.



Fig. 162: Interior perspective sketch of Planetveien 12.

THE COLOUR PALETTE STUDY



Stue (modulert sofa-
pute):
NCS S 1060-B



Kjøkken (hydraulisk
fortau):
NCS S 1515-Y40R



Stue (modulert sofa-
pute):
NCS S 1040-Y10R



Stue (innvendig
trapp):
NCS S 4050-R80B



Sovesal (hodegavl i
tømmer):
NCS S 3010-Y40R



Stue (modulert sofa-
pute):
NCS S 1070-Y80R



Inngang (vestfasade):
NCS S 6030-R70B



Stue (tømmertak):
NCS S 4020-Y30R



Stue (modulert sofa-
pute):
NCS S 2502-B



Badstue (keramisk
belegg):
NCS S 8502-Y



Utvendig fasade (vin-
dusrammer i tre):
NCS S 6020-Y20R



Stue og sovesal (tep-
pegulv):
NCS S 3500-N

The colour scheme of the Planetveien 12 house was carefully selected, consisting on bright colours in the living room area and soft and muted colours based on the own material colour in the kitchen, bedrooms and bathroom.

A detailed survey of construction history and colour analysis has been carried out in almost every room at Planetveien 12. This has provided a comprehensive understanding of the original colours, materials, and decorations used, providing a solid foundation for an accurate **restoration** of the house, which is the property of a private owner, to its original design.

Even though, Planetveien is one of the works with less bold colours on the walls and ceilings, in contrast with other houses, the colour is present in every detail of the house. From the staircase, the cushions of the living room and the art and the ceramic pieces designed by Grete and Arne to the timber furniture in the overall of the house and the ceramic pavements. The overall impression was that of small **colour contrasts**, with variations between smooth and matte surfaces and textures.

However, a room stood out for its use of mustard yellow, deep red, dark and bright blue and grey; the **living room**, the heart of the house. One hundred cushions in a variated palette of colours were utilized to adapt the room for its various purposes, and their flexibility allowed them to be rearranged as needed and stacked for seating or lounging. In addition to the main furniture pieces, the room featured lightweight wicker chairs that could be easily folded and transformed into "bamboo suitcases" with enough room to store daily objects.

A canvas in grey-white hue, stretched over a frame made of Oregon pine, was designed to be extracted from the ceiling void, where the staircase with deep blue fabric steps was hidden, by following a fixed track, in order to conceal it. Grey is a prominent colour, as well, visible in the carpeted floors throughout the entire house; from the living room to the bedroom.

Nature brings us the most important colour that appears in the house, amidst all its beauty. The rooms are designed to open up to the western garden, where the serene colour of nature can be observed in all their glory, and closed off to the east, facing the public road, allowing the privacy and peacefulness that the garden provides.

SITE PLAN

Planetveien is a tranquil cul-de-sac¹ located on the outskirts of Oslo, nestled right on the border of Nordmarka, the city's surrounding forest. This idyllic location is where the old Anker Road seamlessly merges into the forest, passing by a serene lake called Banntjern, with smaller paths leading uphill towards Vettakollen.

The cul-de-sac, which extends towards the north, is relatively flat, high elevated above the sea level, where the houses are situated. The terrain gently slopes down from the side of the road, providing the houses with breathtaking panoramic views towards the west and southwest.

The three houses in this neighbourhood stand out distinctively from their neighbours. While the surrounding houses are predominantly traditional gabled wooden houses on spacious wooded plots, along with some newer, denser developments, these three houses exude a modernist charm. Their flat roof and white-painted panel façaded with narrow borders of wood create a sense of sleekness and regularity in the modular design. The houses are composed of alternating one-storey and two-storey volumes that come together to form a seamless, homogeneous wall facing the road. Its key element is the "module", which establishes a clear framework for the entrance doors, garage doors, and windows, each configured uniquely in each of the three houses.

Despite their shared structural design, the houses have a sense of individuality and character. The close proximity of the houses to each other, with only a narrow strip of grass lawn and edging stone separating them from the road, creates an almost urban atmosphere that contrasts with the natural, rocky and forested surroundings.

Among the three houses, Korsmo's house stands out with its intriguing and harmonious appearance. Its unique design elements and thoughtful detailing in the interior spaces make it particularly captivating, adding to the overall charm of the cul-de-sac on Planetveien.

¹ A cul-de-sac is a dead-end street or a closed-off street with only one entrance and one exit. It is usually a circular or U-shaped street that ends in a turnaround for vehicles, preventing through traffic. It is a French term that means "bottom of a sack" or "dead-end".

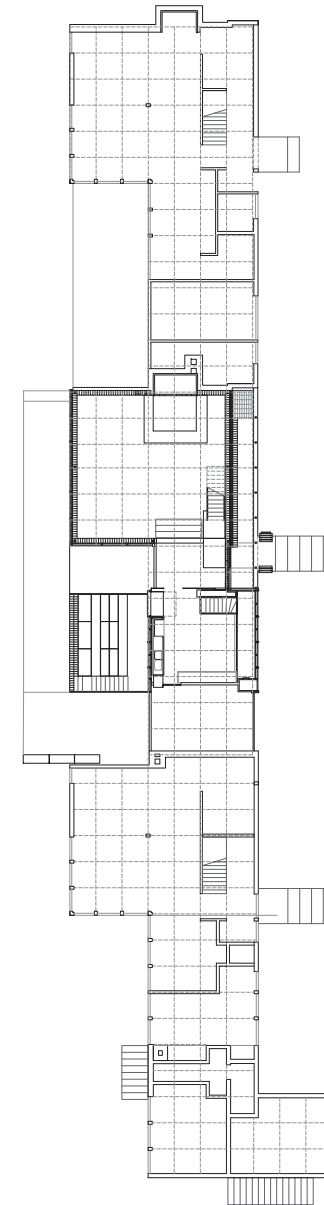


Fig. 163: Site plan, drawn by the author.

1:250

UNDERGROUND FLOOR PLAN

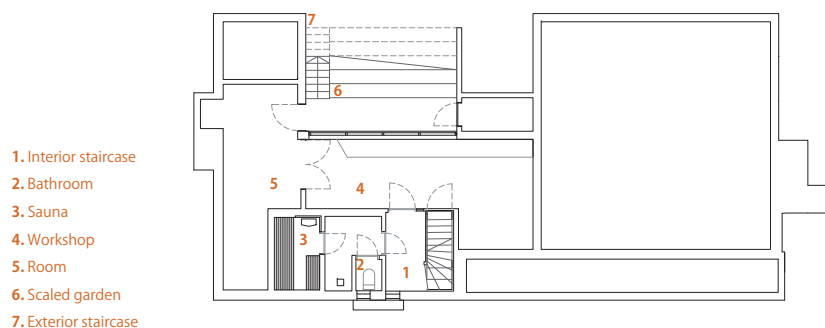


Fig. 164: Semi-subterranean floor, redrawn by the author.

1:150

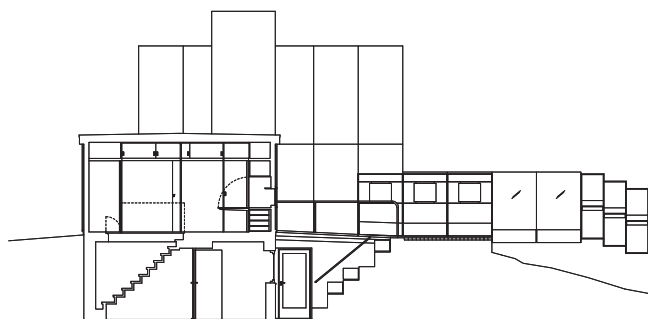


Fig. 165: Section plan, redrawn by the author.

1:150

The basement workshop can be accessed via a narrow-carpeted staircase from the kitchen, and it boasts a long horizontal window that provides a stunning view of the sunken garden. The garden features five large steps filled with plant containers that lead up to the deck behind the house. The workshop also features a double door with wired-glass panels that leads to the boiler room, which houses a large enameling kiln and a boiler that provides hot water for the underfloor heating system. The boiler can run on either electricity or oil, depending on which is more cost-effective at the time. Additionally, there is a lightweight sliding door that can be used to create a sleeping alcove for overnight guests, which was once used by Sverre Kittelsen's youngest son.

In keeping with Grete Prytz Kittelsen's vision for the space, the basement also includes a cedar-lined sauna with an adjoining shower and toilet. Cedar wood is a particularly durable material with an exotic fragrance. The sauna has been in use nearly every day since its installation and is perfect for a brief rest after a morning shower or for drying clothes when semi-heated.

The workshop was specially designed to accommodate Grete's art work and was equipped with a forge, a propane gas tank, an acid bath, and a large proofing press for printing. The unique architectural concept centred around the long horizontal window that provides ample natural light from the garden to the worktable situated in front of it.

To achieve this, Arne Korsmo had to excavate a larger pit which was transformed into the sunken garden terrace filled with plant containers. A passage ran along the house wall and featured a glass door that allowed daylight into the boiler room while also serving as an outdoor exit for the workshop. Additionally, there was an iron barred door leading to an outdoor storage space.

When designing the house, both considered how they would move throughout the space and how this would impact their daily lives. By carefully planning the circulation, the design was intended to challenge traditional notions of living by promoting a more open and fluid environment. The main rooms were arranged to communicate with each other without exclusion, encouraging movement and exploration throughout the house, while creating a dynamic and interactive space that was conducive to modern living (Tostrup, 2014)¹.

¹ Tostrup, E. (2014). *Planetveien 12: The Korsmo House - A Scandinavian Icon*. Artifice.



Fig 166: East façade, main entrance. Picture taken by the author



Fig 167: Urban space in front of the main entrance. Picture taken by the author



Fig 168: Urban space in front of the main entrance. Picture taken by the author



Fig 172: East façade of the house facing the entrance green area.



Fig 173: Entrance stairs and bench.

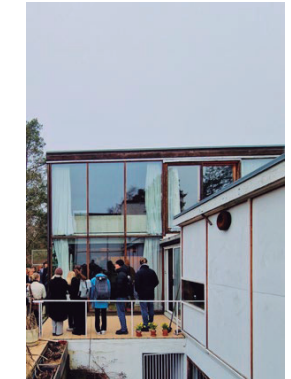


Fig. 174: West façade of the house facing the interior garden.



Fig 169: Sauna in the underground floor. . Picture taken by the author

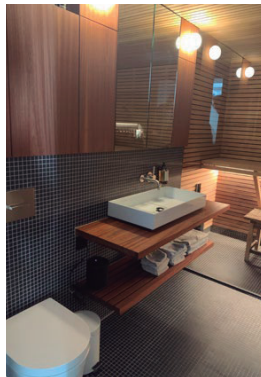


Fig 170: Sauna in the underground floor. Picture taken by the author



Fig. 171: Glass door. Picture taken by the author

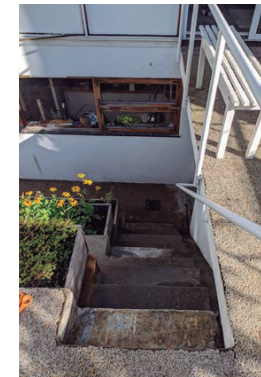


Fig 175: Semi-subterranean garden staircase to the workshop.



Fig 176: Semi-subterranean garden staircase and terrace.

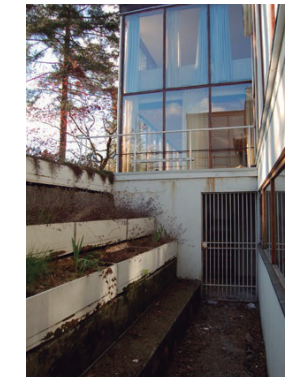
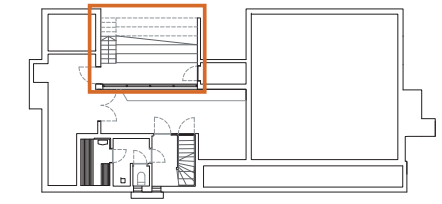
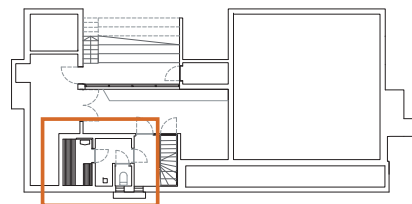


Fig. 177: Semi-subterranean garden staircase and workshop openings.



GROUND FLOOR PLAN

The entrance door creates a barrier between the outdoor and indoor spaces, with the entrance hall serving as a junction between the kitchen, living room, and upper room. The floor is covered in yellow Högånäs tiles, and coconut matting is placed on the mat well by the door. The ceiling is made up of translucent plastic panels with concealed light fittings that allow for illumination even at night. The hall has a lower ceiling height than the kitchen, giving it a unique character. It is sparsely furnished with a hall stand, a Charles Eames dining chair, and a basket for umbrellas and walking sticks. The teak veneer wall to the left is a single large sliding door concealing a wide cupboard for storing suitcases and other items.

The kitchen is designed unconventionally, with teak veneer and mouldings covering the walls and narrow slats of Oregon pine covering the ceiling. There is only one window, which is located in a cabinet nearest to the door leading to the wooden deck, which is only visible when the cabinet is open to conform a small kitchen table.

A series of photographs in the edition of *Byggekunst* in 1955 shows how the kitchen could be used for everything from dancing to food preparation, and from metal and woodworking to laundry and ironing (Tostrup, 2014) ¹. Architecture should be understood as a place where any activity can be performed in its most basic form.

Lamps concealed within the skylight provide additional illumination. The drop-leaf table for everyday meals is next to the wall of cabinets adjoining the former garage, now a workshop. The table can be extended to a very long 260 cm from its minimum length of 26 cm. The living room, which is accessed through three steps, has a concrete wall with yellow Högånäs tiles and steel columns that support the upper floor and roof. The cushions in the room are covered in woollen fabric of various colours, and there are shallow cupboards with reversible doors that can be either black or white. Moveable steel rods allow shelves to be hung at different heights. The area in front of the fireplace is tiled with yellow fire-proof brick, and the rest of the floor is covered with grey carpeting. The floor has a warm-water underfloor heating system.

¹ Tostrup, E. (2014). *Planetveien 12: The Korsmo House - A Scandinavian Icon*. Artifice. Chapter "the combi kitchen and flexible solutions".

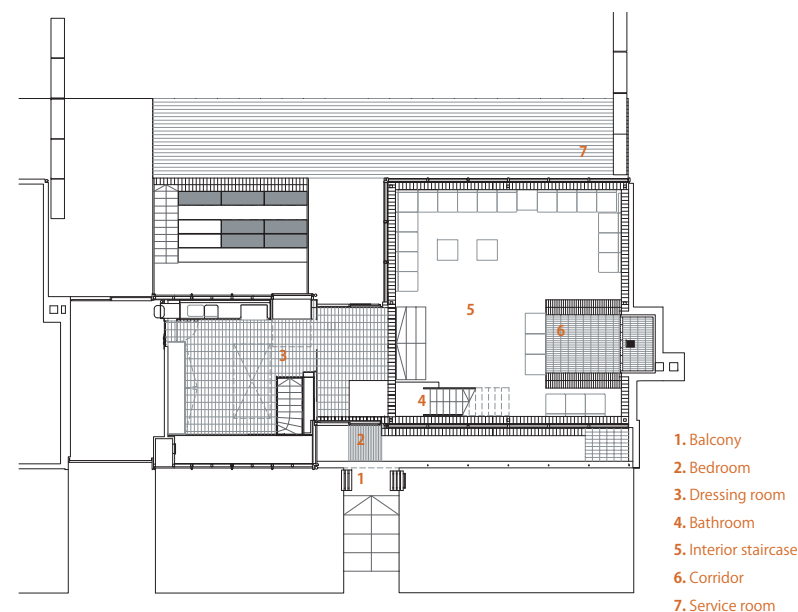


Fig.178: Floor Plan, redrawn by the author.

1:150

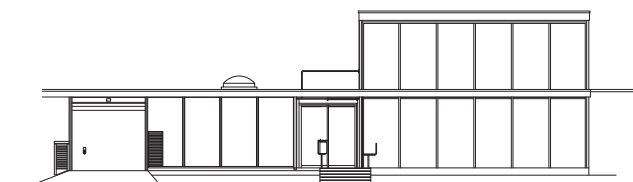


Fig.179: Elevation plan, redrawn by the author.

1:150



Fig 180: Living room's view to the outside area. Picture taken by the author



Fig 181: Living room's modulated sofa. Picture taken by the author

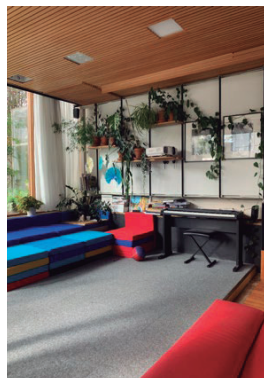


Fig 182: Living room's piano area. Picture taken by the author



Fig 183: Sliding doors in the kitchen. Picture taken by the author



Fig 184: Functional kitchen with a folding dinning table hiding a window open to the exterior space. Picture taken by the author



Fig 185: Interior details of the kitchen drawers. Picture taken by the author

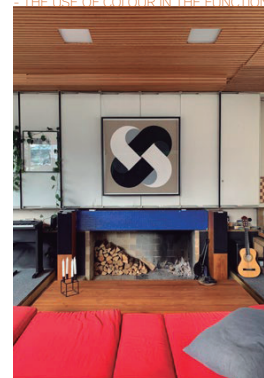
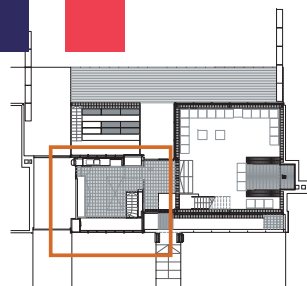


Fig 186: Lille Frøen, Oslo, Norway. Picture taken by the author



Fig 187: Havna Allé, Oslo, Norway. Picture taken by the author

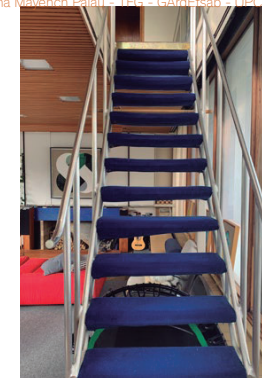


Fig 188: Havna Allé 1, Oslo, Norway. Picture taken by the author



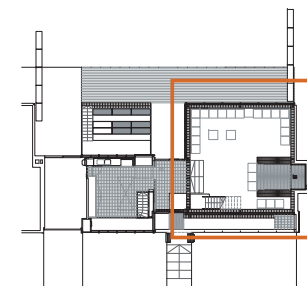
Fig 189: Lille Frøen, Oslo, Norway. Picture taken by the author



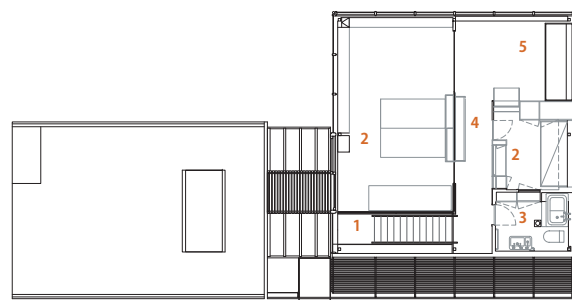
Fig 190: Havna Allé, Oslo, Norway. Picture taken by the author



Fig 191: Havna Allé 1, Oslo, Norway. Picture taken by the author



FIRST FLOOR



- 1. Interior staircase
- 2. Bedroom
- 3. Bathroom
- 4. Dressing area
- 5. Office area

Fig. 192: First Floor, redrawn by the author.

1:150

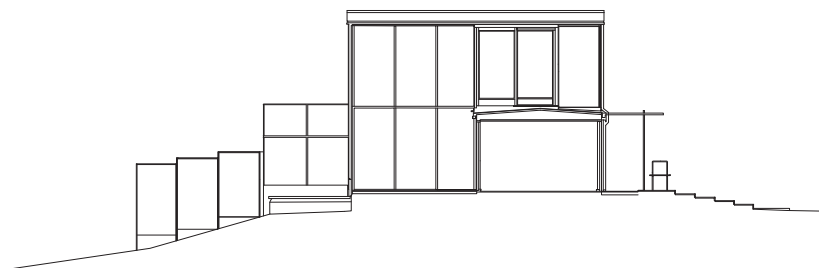


Fig. 193: Section plan, redrawn by the author.

1:150

Reaching the upper floor, one is immediately struck by the spaciousness of the large room, where the south and west walls are entirely illuminated by windows, and the east wall is adorned with a huge piece of art painted by the artist Gunnar G Gundersen, a close friend of the couple. A cupboard that previously housed foldaway beds partitions the upstairs landing from the combined bedroom/design studio, while low-level cabinets with Oregon pine doors and black-lacquered tops and carcasses echo the low concrete wall surrounding the living room below. The cabinets form an aesthetically pleasing framework for the desks and contain the space for store clothing.

In the 1970s, one of the windows was replaced with a sliding glass door, which made it easier to ventilate the room. The sliding door leads onto a small wooden balcony above the glass roof of the hall, and the upper floor windows have two layers of curtains: an outer layer of pale grey light-reflecting fabric and an inner layer of the same golden-white wool fabric used in the living room. The combination of the glass walls, low-level cabinets, work-table surfaces, and the former foldaway-bed cupboard creates a grand and intimate space.

The bathroom is located opposite the top of the staircase, next to the north wall of the house, and shares an internal wall with the combined dressing and guest room. Skylights in both rooms provide natural daylight, and ingenious design solutions make the most of the limited space. The dressing room features a foldaway guest bed and fitted furniture, while the bathroom has a sit bath and black mosaic tiles covering the floor and walls.

The upstairs landing, dressing room, and above dado-height in the bathroom all feature fitted cupboards and wall cladding made of teak veneer, the material used in the overall of the house, that serves as well as a division for the bedroom's privacy. The landing also features a small niche with two cross-bars set into the teak veneer wall, reminiscent of Japanese design. Some elements of the fitted furniture in the dressing room were recycled from the Korsmos' former apartment on Bygdøy, while others were used by Korsmo for teaching at Oslo's National College of Applied Arts. Nowadays, the bathroom ceiling is made of slatted Oregon pine, while the ceilings throughout the rest of the upper floor are painted white. The upper floor also has wall-to-wall carpeting, and like the living room, it has an underfloor heating system.¹

¹ Tostrup, E. (2014). *Planetveien 12: The Korsmo House - A Scandinavian Icon*. Artifice.



Fig 194: View from the interior staircase. Picture taken by the author

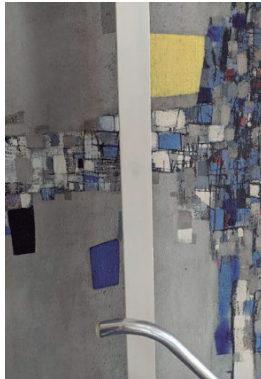


Fig 195: Art piece restored from the original drawing. Picture taken by the author

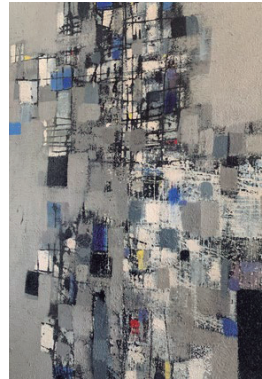


Fig 196: Art piece restored from the original drawing. Picture taken by the author



Fig 200: View from the deck. Picture taken by the author

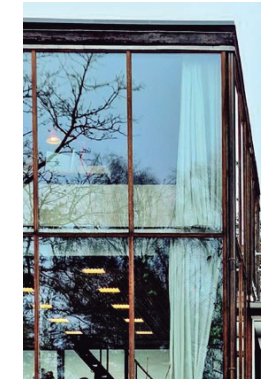


Fig 201: Exterior view from the garden. Picture taken by the author

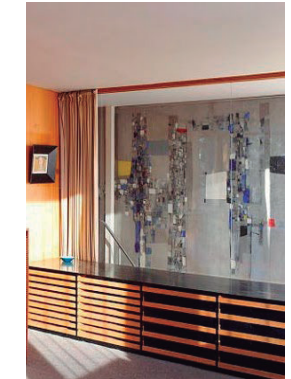


Fig. 202: Interior view to the restored drawing in the wall. Picture taken by the author



Fig 197: Dressing and home office area. Picture taken by the author



Fig 198: Master bedroom. Picture taken by the author



Fig. 199: View from the master bedroom to the deck. Picture taken by the author



Fig 203: Office area. Picture taken by the author



Fig 204: Office area. Picture taken by the author

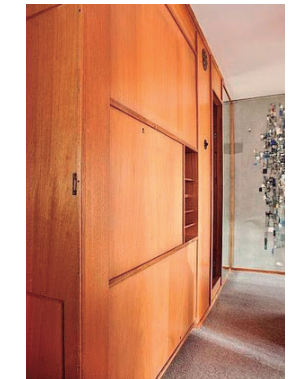
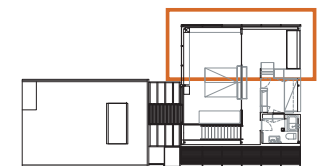
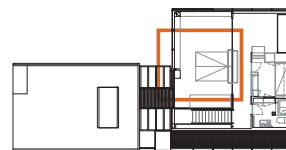


Fig. 205: Modulation of the dressing area and the folded bed. Picture taken by the author



THE "HOME MECCANO" CONCEPT

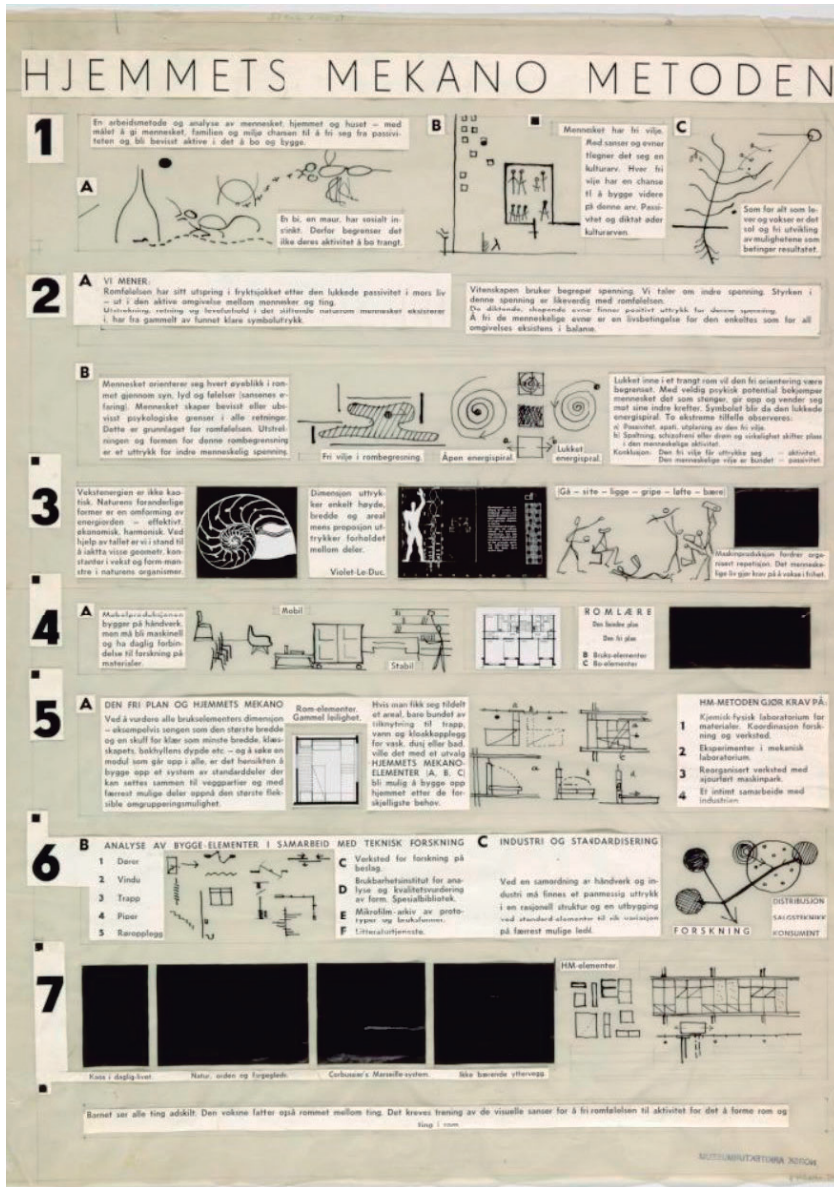


Fig. 206: The Home Meccano concept.

1:150

In the PAGON edition of Byggekunst, Arne Korsmo's short article introduces the concept of "Home Meccano", which he explains in a plate-style format with white text. Korsmo and many others have referred to this explanation frequently, as the term "Home Meccano" has proven to be rhetorically powerful and a stroke of genius for disseminating the concept.

The article highlights Korsmo's criticism of conventional houses and their cramped rooms that are ill-suited for accommodating traditional furniture. He argues that post-war economic difficulties needed rationing of living space, which led to psychological impacts such as the "impulsive of fear". Korsmo calls for radical change and proposes scientific research into all aspects of dwelling and housing, going beyond simple time-and-motion studies of housewives in the kitchen. He envisions an "Institute of Usefulness" that evaluates design, shape, colours, and other factors in-depth.

The Home Meccano method, according to Korsmo, build on the ideas of Le Corbusier's early system houses from the First World War, where space can be configured freely by combining different units with defined purposes. The goal is to stimulate psychological activity and counteract passivity, allowing individuals and families to consciously participate in their cultural environment. Korsmo's illustrated explanation of the Home Meccano method emphasizes the importance of a working method and analysis of the individual, the home, and the house to enable freedom from passivity and conscious engagement in dwelling and building.

Korsmo's approach is associative and synthesizes various factors, including human free will, the use of senses to orient oneself in space, principles of growth in nature, and flexible living space. He also analyses structural elements based on technical research and industrial development, advocating for standardization and citing the flexible form of housing mastered by the Japanese as an example to follow.

Arne views Home Meccano's concept as a way to creatively design standard units in flexible living spaces, allowing for self-expression and variety with limited resources. He highlights the importance of space experience and element interaction in Home Meccano, which he sees as the ultimate expression of life (Tostrup, 2014)¹.

¹ Tostrup, E. (2014). *Planetveien 12: The Korsmo House - A Scandinavian Icon. Artifice.*

TAXONOMY



Fig. 207: Interior perspective sketch of Villa Dammann.

Villa Dammann

Address: Havna Allé 15, Oslo

Area: 217 m²

Type of project: Single family house

Built: 1932

Client: Ulla and Axel Dammann; Sverre Fehn



Fig. 208: Interior perspective sketch of Villa Stenersen.

Villa Stenersen

Address: Tuegen Allé 10C, Oslo

Area: 518 m²

Type of project: Single family house

Built: 1937-1938

Client: Rolf and Annie Stenersen



Fig. 209: Interior perspective sketch of Planetveien 12.

Planetveien 12

Address: Planetveien Road 12, Oslo

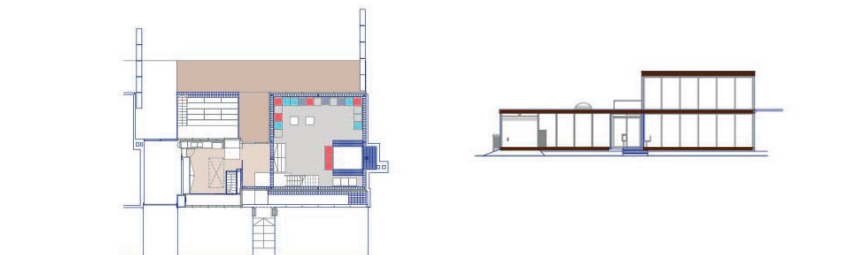
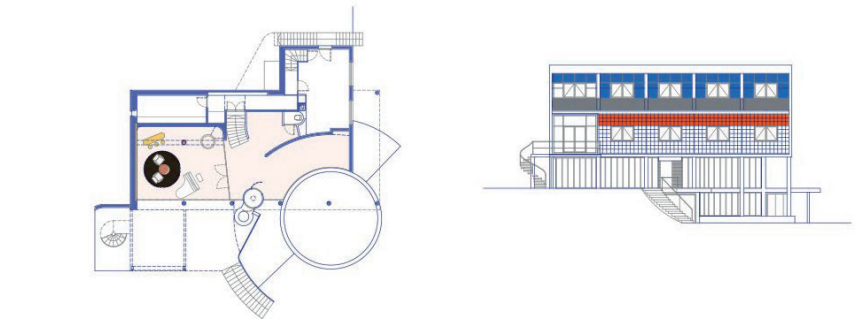
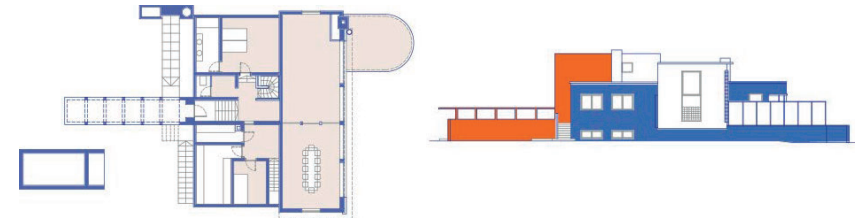
Area: 268 m²

Type of project: Single family house

Built: 1950-1955

Client: Arne Korsmo and Grete Prytz

Scale 1:400



- CHAPTER IV -

CHAPTER IV

FINAL REFLEXION

Colour is an essential component of the visual arts, architecture, design and other forms of creative expression:

"IT IS A PIECE OF ART IN ITSELF"

Artist and designers use this element to create perceptions, which are complex, subjective and multifaceted. But, despite its subjective nature, colour has a universal quality that arises in the mind of the observer. It is perceived as an international language.

Architecture is not only about the practicability of construction but also the art of creating spaces that are not only functional but also aesthetically pleasing, and apart from the integration of natural light and shade, materials and textures, and geometrical shapes and forms, one of the most powerful tools to achieve this purpose is the colour.

The studied cases of Arne Kormo's functionalist architecture in this work, Villa Dammann, Villa Stenersen and Planetveien 12, highlight how these visual elements can be used to create dynamic, lively and functional spaces.

From the vibrant blues, yellows, reds and greys used in the cushions and furniture at Planetveien 12 to the interplay of oranges and blues in the façade of Villa Stenersen and Villa Dammann, Korsmo demonstrates how colour creates atmospheres, enhance spatial perceptions, and make a statement.

But his designs also show that colour is not just about making a bold statement. In fact, most of the interiors were hardly ever painted in white, and the impression was one of small contrasts, with variations between smooth and pale surfaces and textures.

The study about colour schemes in Kormo's work shows that he used this element to create harmony and balance, while also creating interest and variety.

He used natural colours, such as the greys and blues found in the carpets at Planetveien 12 and many other coloured fabrics, to create a sense of calm and tranquility. But he also used bright and bold colours to create a sense of energy and liveliness.

Colours can be used to define functional zones within a space, guide circulation patterns, create focal points, and highlight architectural features. It can evoke emotions such as calmness, joy, or excitement, and can even be used to convey cultural or symbolic meanings. Moreover, colour can be used to create a sense of identity and community within a space, as it happens in the three studied cases.

Nature is a rich source of inspiration for design connected to colours. Combining natural elements with a thoughtful use of colour can add depth to a design.

By harnessing the power of colour, architects have the opportunity to create spaces that are not only functional but also meaningful and memorable.

WHAT CAN ARCHITECTS DO?

As future architects, we must remember that colour is a powerful tool that should not be overlooked. It can transform a space and create an emotional response in the people who use those spaces.

Colour can also be used to establish a sense of hierarchy within a space. For example, a bold, bright colour could be used to underline a feature or area of importance, while more subdued colours are used in areas of less significance. This can guide the user's experience of the space and help to create a sense of flow.

We have to learn to use colour as a design element to enhance the experience of the user, to create spaces that are not just functional, but also beautiful and enjoyable.

In order to effectively use colour as a design element, architects must have a thorough understanding of its properties and the way in which can be used to affect a space. They must consider the impact of colour on human perception and emotion.

We must also be mindful of the cultural and social context in which we are designing. Different cultures may have different associations with colours, and its importance to consider the potential impact of those associations on the users of the space, such as Grete and Arne do with their work.

GLOSSARY OF NORWEGIAN TERMINOLOGY

* All the drawings that appear in the investigation are the author's interpretation of the originals plans drawn by Arne Korsmo himself that appear in the book: Villa Stenersen by Tim Benton, Planetveien 12 by Elisabeth Tøstrup, The functionalist Arne Korsmo by Christian Norberg-Schulz, and the research in the Nasjonalmuseet archive and the DigitaltMuseum archive of the Oslo Museum.

Armbind: Armlets
Bad: Bathroom
Badstue: Sauna
Bardisk: Bar counter
Belegg: Coating
Biblioteket: Library
Bolle: Bowl
Brosje: Brooch
Dekorert: Decorated
Detaljer: Details
Dorer: Door
Dorgerikter: Dwarves
Fabrik: Fabrik
Fasade: Façade
Flotesett: Float kit
Foajé: Foyer
Fortau: Pavement
Fotlister: Baseboards
Gardin: Curtain
Halskjede: Necklace
Hårbørste: Hairbrush
Havestue: Garden
Hvileområde: Resting area
Hydraulisk: Hydraulic
Inngang: Entrance
Innvending: Interior
Keramisk: Ceramic
Kjøkken: Kitchen
Kjole: Dress
Markise: Awning, canopy

Modulært: Modulated
Mugge: Pitcher
Og: And
Peis: Fireplace
Pingviner: Penguins
Portikoer: Porticos
Sengegavl: Headboard
Serveringsbestikk: Serving cutlery
Sofapute: Sofa pillow
Solbeskyttelse: Sun protection
Soverom: Bedroom
Sovesal: Dormitory
Soyle: Column
Sør-vest: South-West
Stekekar: Frying pan
Strykejernet: Iron
Stue: Living room
Sukkerkopp: Sugar cup
Tak: Ceiling
Tallerken: Plate
Teppegulv: Carpet flooring
Tjenesteleilighet: Service apartment
Tømmertak: Timber framed ceiling
Trapp: Staircase
Trapperom: Stairwell
Trappetrinn: Steps
Tre: Wood
Utvending: Exterior
Vegg: Wall
Veggfliser: Wall tiles
Ventiler: Valves
Vindfang: Windbreak
Vinduskarm: Window frame
Vinduslister: Window moldings

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