"Like a Sculptural Painting": Arne Korsmo's Interior Architecture in Norway after World War II

Author(s): ASTRID SKJERVEN and Clarence Burton Sheffield Jr.
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ASTRID SKJERVEN

"Like a Sculptural Painting": Arne Korsmo's Interior Architecture in Norway after World War II

Arne Korsmo (1900-1968) is regarded as one of Norway's most distinguished Modernist architects.[1] Despite his strong international orientation, which led many in his own country to describe him facetiously as "Korsmo-politan" or "Norway's Le Corbusier," he remains largely unknown abroad.[2] In the interwar period he designed a series of fashionable villas in Oslo, and it is these for which he has received the greatest recognition. He was simultaneously active in a number of fields, ranging from city planning to the design of individual objects, and this versatility was even greater following World War II. Some of his best design dates from the first half of the 1950s.

Korsmo's work always shows his eye for the whole and his meticulous adjustment of every detail to that end. The objects that he designed always stand in a special relationship to the room, and the room in turn to the architecture and surrounding landscape. Moreover, he maintained that the architecture should be adapted to the occupant, as a general philosophy and in his practice with the particular client. The surroundings, he believed, should stimulate the individual in personal development and self-realization. From precisely this mode of thought, the interior space itself—the place where the owner dwelled—became the essence of his architecture. Korsmo's interior designs therefore constitute some of the most important work of his career.

Early Training and Design of the Interwar Years

Korsmo obtained a classical architectural education at the Norwegian Institute of Technology (Norges tekniske Høgskole, NTH) in Trondheim, where he passed his diploma examination in 1926. After completing his studies, he moved back to Oslo where he quickly acquired practical training with some of the leading architects of the period.[3] The 1930s proved to be his most productive period. In 1935 he opened his own architectural office, and he built up an extensive practice and illustrious reputation, mainly for the building and decoration of private villas for a wealthy clientele who appreciated the modern, the fashion-

Astrid Skjerven is the Head of the Library, Statens Håndverks- og Kunstindustriskole, Oslo, and a Ph.D. candidate at the University of Oslo.

able, and the exclusive. His main works of this period include the Villa Dammann, Oslo, 1930, and the "We Can" exhibition (Vi kan utstillingen), 1938, also in Oslo, an exhibition of handcrafts and industry.[4] The latter was, in many ways, the Norwegian pendant to the 1930 Stockholm exhibition, which was famous for its manifestations of the Functionalist style in architecture and design. In addition to furnishing the buildings that he designed in the interwar period, Korsmo had a number of purely decorative commissions. These included the decor of private houses, boutiques, and restaurants. On at least one occasion he attempted stage decoration and was criticized for the fact that the sets appeared to be "extremely European."[5]

Like the majority of the Norwegian architects of his generation, Korsmo quickly evolved from a classical to a Functionalist style,[6] although he had no special interest in Functionalism's social and political implications. In comparison to colleagues such as Ove Bang, for example, who blended national elements into his Le Corbusier-inspired villas, Korsmo was far more internationally cultivated. This resulted in a small degree of opposition to his work among the more traditionally oriented architects, especially toward the end of the 1930s when there was a growing reaction to Functionalism's cool geometrical style.[7] Despite the severity of his Functionalist exteriors, however, his interiors had a strong strain of Art Deco until about 1930. The furnishing of his own dwelling of 1929-1930, an apartment in Lille Frøensvei 14, Oslo (now destroyed), is typical in its sophisticated, slightly Parisian character. Strong colors were used on ceilings and walls, such as red, black, and silver, in addition to wall paintings after his own design.[8] The ceiling was lowered to allow indirect lighting, and the curtains were used as flexible spatial dividers like the furnishings by the French architect Pierre Chareau from the beginning of the 1920s. For the most part, Korsmo's furniture consisted of his own tubular steel designs.[9] Several of his designs for boutique interiors also date from this time, and had the same fashionable French character. A car showroom for Citröen in Bygdøy allé, Oslo (destroyed), had wall paintings evoking the work of Sonia and Robert Delaunay. The arts and crafts shop Petit Art, which Korsmo decorated twice, in 1930 and 1931, at its two different locations on Drammensveien in Oslo (both destroyed), also had a large abstract wall painting and other features inspired by Le Corbusier.

The Villa Dammann, at Havna allé 15, Oslo, 1930 (partly preserved),[10] was strongly inspired by the Dutch architect Willem Marinus Dudok: compositions shifted between horizontal and vertical elements, as well as between open and closed and light and dark areas. The dining

room was designed to give the family's collection of paintings an optimal exhibition space. Therefore the view to the south was obstructed by a wall added to provide room for the collection. Its only windows were narrow slits under the roof. Light primarily came from the window openings on the opposite wall. In this way, the room was provided with an even light that did not disturb the view of the paintings. In the semicircular workroom a continuous band of windows opened toward the south. To a large extent, the designs of the rooms and their furnishings, mostly consisting of tubular-steel pieces, were generated through a repetition of the exterior geometrical forms. Indeed, the architectonic elements dominated the interior composition, while the furnishings paraphrased and accentuated them.

In his commissions for interior design where he was not the architect of the exterior, however, Korsmo felt freer to develop the spaces on their own terms with less regard for the architectural structure and to use decor and color more conspicuously. This was certainly the case in an apartment of about 1935 for the attorney S. Horn, Tullinsgate 4, Oslo, 1935 (destroyed; Fig. 1).[11] Here Korsmo created a strong, colorful, decorative composition reflecting the owner's needs and personality as the architect understood them. Because the main living area also served as an office, it had to combine professional and private activities, and to allow concealment of each of them by simple manipulation. Including many practical details, the desk and bookcase were combined and executed with obvious craftsmanship, which emphasized the materials and textures. Their color and pattern conveyed a certain impression of Art Deco reminiscent of Pierre Chareau's Maison de Verre in Paris,

FIGURE 1
Arne Korsmo (1900-1968), apartment for attorney S. Horn, Tullinsgate 4, Oslo, 1935. From Arne Korsmo, "Moderne boligbygg krever moderne møbler" [Modern Dwellings Require Modern Furniture], *Vi selv og våre hjem* 6 (June 1936): 17.

1928-1932. A feature typical of Korsmo was the draw curtains. They were decorated with a legal text in reversed script that could be read in a mirror on the opposite wall. The owner of the house, a jurist, could pull the curtains and refer to the text if his guests did not leave on time.

During the middle of the 1930s Korsmo designed a series of villas inspired by Le Corbusier, for example in Slemdalsveien 33a-c, Oslo, 1935-1936 (interiors destroyed). The spaces were simple, with great openness and the architect's customary emphasis on refined details and lighting effects. As in Tullinsgate, Korsmo tailored the design to the occupant as he viewed her. In the Villa Heyerdahl at number 33c, for instance, the lady of the house enjoyed cigarettes, and so Korsmo chose colors for her bedroom that he thought would be beautiful against the cigarette smoke.[12] Just as with the decoration of the curtains at Tullinsgate, the idea was not the client's but Korsmo's. Indeed, the occupant's personal tastes were secondary to the motives and artistic desires of the architect. Korsmo designed the interior according to how he himself saw the practical and aesthetic needs of his patron. The furniture was mostly of wood and had an "organic" silhouette in keeping with the material's natural structure. It seems influenced by Alvar Aalto and the Swedish furniture designer Bruno Mathsson's wooden furniture, though Korsmo's was less radical in design and construction. This use of natural materials and softer forms had already developed earlier in Korsmo's career.

Also suggestive of Le Corbusier, Korsmo first employed reinforced concrete construction in the Villa Stenersen from 1937. His earlier villas, of 1931-1933, were constructed of cubic volumes of related sizes, something that anticipates the concrete skeleton and his use of the module during the 1950s and that has clear associations with contemporary nonobjective painting.[13]

Beginning with Korsmo's designs of the end of the 1920s, these elements recur in his interiors of the interwar years: wall paintings of his design, indirect lighting, mirrors to increase and vary spatial effects, storage cabinets functioning as room dividers, and furnishings of solid craftsmanly execution with an emphasis on flexibility of use and placement. He composed his interiors not merely of items of his own design, but of relatively diverse elements with extremely rich colors, creating the aura of a completely conceived totality. Within the whole certain variations were possible. During the postwar period, Korsmo would further develop and perfect this technique of interior design, which his biographer Christian Norberg-Schulz called "collage."[14] It implied the rejection of an entire century of design conventions in favor of a starting

point that was freer and more flexible, with forms constructed according to the principles of abstract composition in the fine arts.

Postwar Interior Design

During World War II, Norway was occupied by the Germans, effectively halting building activity.[15] During the latter part of the war, Korsmo resided in Stockholm, like a number of other Norwegians and Danes. Sweden and especially Stockholm functioned as an intellectual sanctuary and an arena for the exchange of international ideas in what was for the most part an occupied and war-ravaged North. He formed a lifelong friendship with the Danish architect Jørn Utzon (b. 1918), and he had the chance to study Japanese architecture further—for example, the teahouse in the garden of the National Museum of Ethnography, a type that had impressed him much earlier, in 1921. The postwar period, when he returned to Oslo, brought professional changes and the design of decorative objects took a much more central place in Korsmo's career. The leaders of the reconstruction—the powerful housing associations, which actually controlled most of the building activity in the field of housing—wanted simpler and more sober buildings with a more accessible, national, and traditionally oriented style than the modern and elegant style Korsmo had used. It was difficult for him to obtain commissions. He had little to fall back on but his work as a lecturer in interior design at the National College of Art and Design (Statens Håndverks- og Kunstindustriskole; SHKS), in Oslo, a position he had held since 1934. Fortunately, his wife, the goldsmith and enamel designer Grete Prytz Korsmo (now Grete Prytz Kittelsen),[16] enlisted him in revitalizing the designs of her family's famous goldsmith firm J. Tostrup. During this period, she was his most important collaborator and source of inspiration.

With his wife as an encouraging artistic partner with great technical and practical skills, Korsmo designed objects in silver, enamel, and plastic. Most notable is their "Korsmo" flatware in silver, 1947-1954 (Fig. 2). Such objects in silver, enamel, and plastic were particularly influential for the developments in Scandinavian Modern during the 1950s. They had a sculptural character, and some of them gave the impression of floating or being in motion. A naturalistic orchid vase, for instance, resembled the floral centerpiece in the Japanese tearoom's holy niche, the *tokonoma*. Grete and Arne Korsmo's table settings and arrangements of their own and others' objects, for both private use and public exhibitions, were intimately conceived compositions that stood in a spatial relationship to the room.

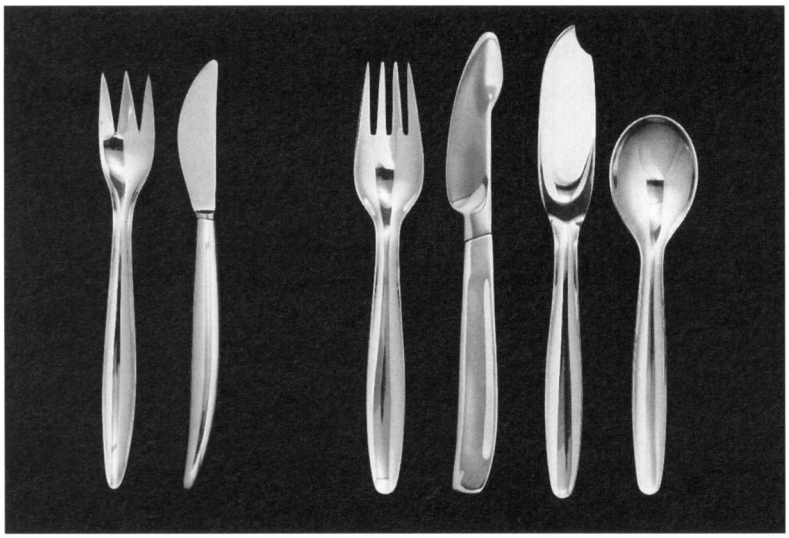


FIGURE 2
Korsmo, "Korsmo" silver flatware, designed 1947-1954 in collaboration with Grete Prytz Korsmo; produced by J. Tostrup, Oslo. Kunstindustrimuseet i Oslo.

In the Korsmos' postwar undertakings, the painter Gunnar S. Gundersen also played a key role, through his knowledge of abstract art. Like Korsmo, Gundersen had a strong international orientation. He began to work with a nonfigurative means of expression very early, and was the only Norwegian painter who cultivated the Constructivist style over time. The two often said humorously that they might have switched roles as architect and painter.[17] They shared a strong interest in the psychology of perception: of how the eye perceives elements such as colors, planes, lines, and their various constellations, and how this knowledge might be transformed into a new language of vision. The collaboration lasted for several years. On one occasion, in 1955, Gundersen designed jewelry for J. Tostrup. He also designed advertisements for the Korsmos' metal objects.

Korsmo also collaborated with the Danish architect Jørn Utzon. Among their projects, they entered the "International Competition for Low Cost Furniture" sponsored by the Museum of Modern Art, New York, in 1947-1948. They submitted a design for a bentwood chair with a seat composed of canvas stretched over the bentwood frame (Fig. 3). (The design was never completed or put into production.) In the chair category it was Charles Eames who won. Of the three thousand submitted works, however, Korsmo and Utzon's entry was among the few illustrated in the exhibition catalogue.[18] They sent the same design to the Danish Cabinetmaker Association's furniture competition in the spring of 1949, where it garnered a second prize.

During 1949-1950 the Korsmos made a study tour of the United States where they visited the Institute of Design in Chicago and met a

number of the nation's foremost architects and designers, including Frank Lloyd Wright, Charles and Ray Eames, and Walter Gropius.[19] This experience made a lasting impression on Korsmo's activity as a designer, as will be described below. His membership in CIAM (Congrès Internationaux d'Architecture Moderne) was another important frame of reference, and at the request of the influential architectural theorist and historian Sigfried Giedion in 1950 he took charge of a Norwegian CIAM group.

Among the few architectural commissions that Korsmo received after the war was a summer house at Larkollen outside Oslo, which he built in 1947 (for the most part preserved). The building was strongly Japanese-inspired and had a number of references to the teahouse in Stockholm, including its indirect lighting. Several of the rooms had a translucent, regularly divided screen placed on the underside of the ceiling fittings like a kind of lowered roof. Lighting filtered through the screen and was thereby soft and pleasing, making the interior a poetic echo of the teahouse.

The two homes that Korsmo decorated for himself and his wife are among his few interior designs of the postwar period. The first, their apartment of 1950 in Løchenveien 12 on Bygdøy in Oslo (now destroyed; Figs. 4-6), demonstrates the architect's resourcefulness in the difficult postwar period. He called the result "a spatial experiment, the closest explanation is to regard it as a sculptural painting."[20] By this he meant the way the interior was built up: the colors, objects, and details were placed so that they constituted a unity, like an abstract composition. The principles of composition found in abstract art such as de Stijl were similar to the prevailing modular system in architecture, and could therefore easily be applied to this interior. With the exception of the summer house Korsmo designed at Larkollen, the decoration of their apartment was one of the first examples in Norway of Japanese inspiration during the 1950s. In addition, it had many parallels with the Charles and Ray Eames House in Santa Monica, 1945-1949, which the Korsmos had just visited in 1949-1950.

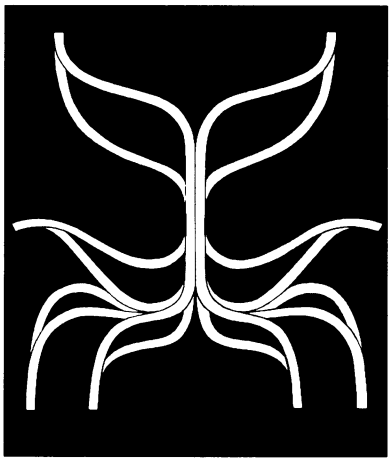


FIGURE 3
Korsmo and Jørn Utzon (b. 1918), competition design for a chair, 1947-1948. Norsk Arkitekturmuseum, Oslo.

The semidetached house on Bygdøy, in which the Korsmos rented a couple of rooms in a larger apartment, was a typical postwar building. It was rather traditional, without special architectural qualities, and in no way to Korsmo's liking. On the ground floor he created a "room within a room" with the help of modular movable walls made of a framework of Oregon pine covered with white sailcloth, based on the Japanese principle of light walls of rice paper. In addition, he covered the two-gabled windows, whose forms he particularly abhorred, with the

same kind of walls, which here could be pulled aside to admit daylight. His spatial planning was open, with cabinets and shelving units used as spatial dividers. One of the cabinet arrangements provided a relatively large opening or niche, in which he placed a vase and a pot, the total having much in common in its construction, design, and use of materials with the *tokonoma*, or holy niche in Japanese tearooms. The color scheme consisted of the primaries, red, yellow, and blue, together with white, not unlike a painting by Mondrian. Indeed, Mondrian, who inspired the Eames House exterior, here inspired Korsmo's interior, in both the color scheme and the plan.[21]

Along the edge of the ceiling of the Korsmos' apartment were bands of blue lights behind lacquered pine slats, and the space in the ceiling center was covered with blue fabric.[22] This was an example of "Korsmo blue," a term that originated from his frequent use of blue in different shades throughout his career. The design was an assemblage of the couple's own works together with the furniture and objects they had collected on their American tour. The couple's radio was painted white and placed on a stand made according to a sketch by Korsmo, probably one of the first radio stands designed in Norway. A small table hidden in the wall could be extended out and used for dining. The wickerwork sofa could also be used as a bed. The combinations of objects from different cultures and the mannered arrangements of them were also common to the furnishings at the Eames House. The minimal space available to Korsmo owing to the postwar housing shortage, and the covered windows, however, gave the Oslo apartment a heavier and more compact character.

In spite of its many references to other architects, this interior was distinctly Korsmo's in atmosphere and expression. He turned an anonymous postwar dwelling into a Modernist shrine. This was done by gathering works by his favorite Modernist artists and designers as well as objects he and his wife had designed, by using a Mondrianesque color scheme based on primary colors, by providing a particular kind of indirect lighting through the translucent cloth covering the windows, and by carefully arranging the various objects according to the compositional principles of abstract art and the sense of proportion of classical laws.

Korsmo's second work of the postwar years and his principal one was the dwelling he designed—both exterior and interior—for himself and his wife at Planetveien 12 in Oslo (Figs. 7-9), and built between 1952 and 1955 in collaboration with Christian Norberg-Schulz.[23] This single-family row house was inspired by the work of Ludwig Mies van der Rohe and consisted of a simple, modular frame of steel with plate glass. As in the Eames House, one long side of the house was composed of large

windows that faced the landscape. Whereas the Eames House was constructed of cheap industrial elements, however, Korsmo's house was entirely custom-built on both interior and exterior. Whereas the Eameses had chosen to separate work and leisure into two different areas, the Korsmos strived to integrate the two spheres into one. They saw the house as their "working home" where everything was organized to support their professional development (Fig. 7). Each had a studio, and the living room could be used for their professional activities, such as the presentation of models, theatrical performances, and the like. Everything was therefore designed for optimal flexibility. The living room was freed of columns by means of an extra steel frame reinforcement. This allowed a space of 3.66 meters between the supports, but it broke the construction's rhythm and made the house five times as expensive to build as the others in the row.[24] The solution was debatable in light of the principles of construction, as well as the aesthetic principles of Modernism. It demonstrates the high priority that Korsmo placed on the interior and his

FIGURE 4
Korsmo, living room of the Korsmos' apartment, Løchenveien 12, Bygdøy, Oslo, 1950. Photo: Norsk Arkitekturmuseum.

strong emphasis on aesthetics and spatial effects, at the expense of construction principles and economy.

If the exterior fulfilled Mies's credo "less is more," the interior had an entirely different, warmer character. While the exterior appeared to be a thin, neutral skin, from the inside the entire wall of windows made it possible to feel that the surrounding natural landscape was drawn into the house. The lighting fixtures were recessed in the ceiling and produced a subdued light (Figs. 8 and 9). With this subtle illumination and low seating, the room had the atmosphere of a warm shelter. Crucial to this effect was the hearth, slightly sunken and placed in a corner opposite the row of windows. Even at the Eames House a hearth was planned, but this was abandoned when the idea was called "absurdly romantic" by the Eameses' friend and colleague Eero Saarinen.[25] At Planetveien, however, it would be difficult to construe Korsmo's fireplace as romantic. If anything, a warm inner core was necessary in a house that opened out toward a landscape covered with snow for much of the year. Furthermore, the fireplace with its group seating evoked the Japanese tearoom where

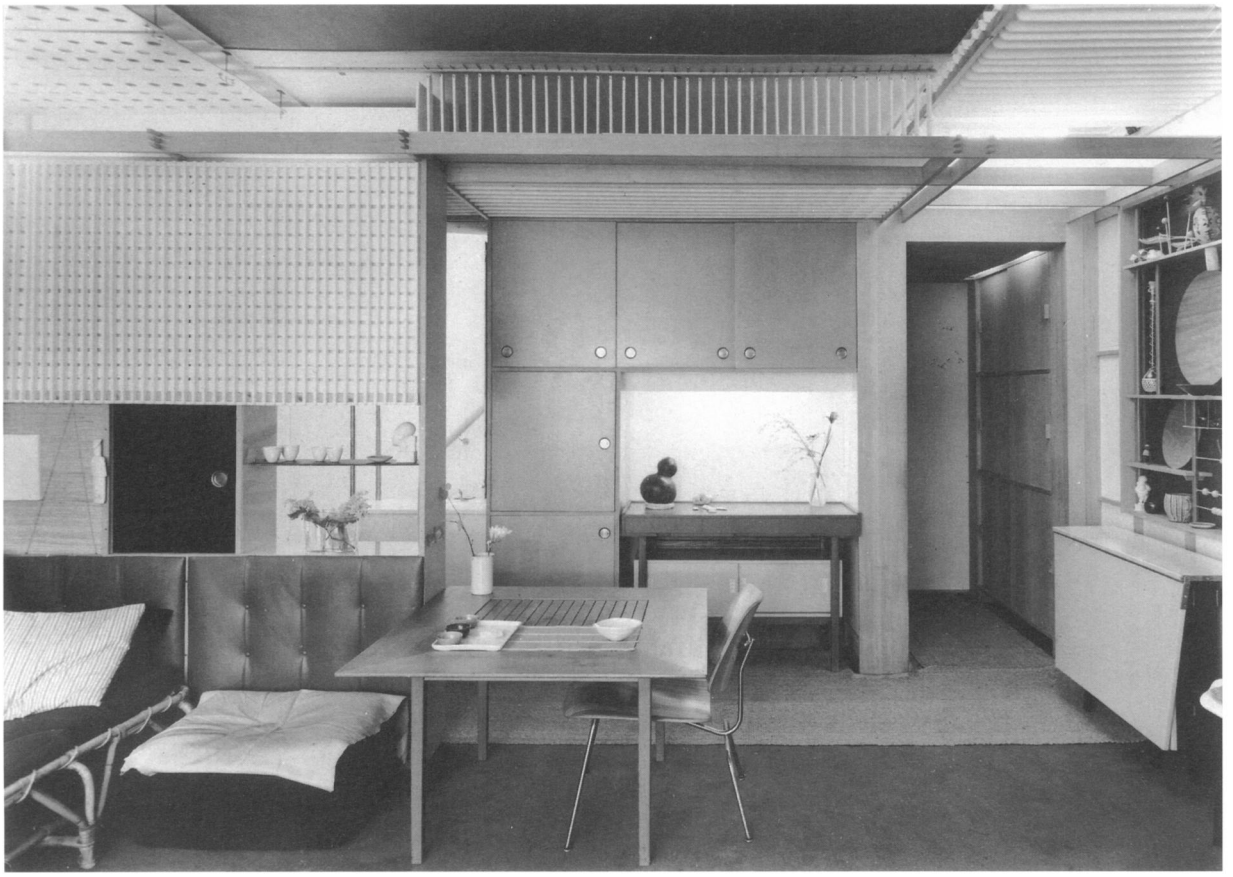


FIGURE 5
Entryway of apartment at Løchenveien 12, Bygdøy, Oslo, 1950. Photo: Norsk Arkitekturmuseum.

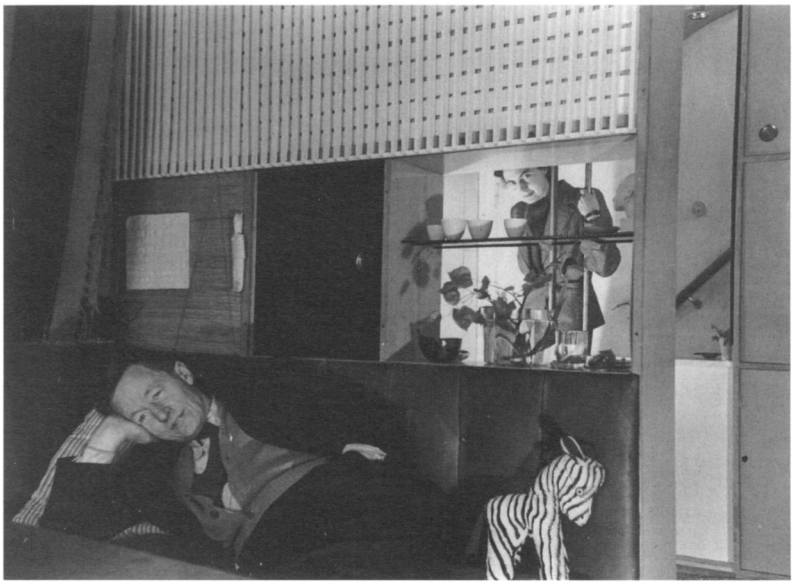


FIGURE 6
Apartment at Løchenveien 12, Bygdøy, Oslo, 1950: Grete and Arne Korsmo with stuffed animal. Photo: Norsk Arkitekturmuseum.

people gather for rest and contemplation, a parallel that Korsmo pointed out in an essay on Japanese and Western architecture.[26]

Korsmo also wanted the room to retain its impression of tranquillity independent of how furniture and other items were arranged. Therefore, he chose a calm and neutral gray-white for the curtains and walls.[27] Though he also used a "Mondrianesque"[28] color scheme, as he had at the apartment in Løchenveien, he transferred it from the ceiling and walls to foam-rubber cushions covered in fabric in the primary colors, together with white, gray, and black. The colors were therefore less dominant in the space than they had been in Løchenveien.

Korsmo's particular use of the cushions was a Japanese-inspired element, and probably one of the first times the idea was used in Norway. The hundred cushions could be arranged according to the particular needs and anatomy of the family and their friends, and square wooden boards in the same dimensions could be placed on the pillows and thereby function as tables. In this way, every guest could freely create his or her own temporary arrangement. Further, the pillows could easily be grouped together for entertainment or group conversation. The wicker deck chairs were light enough to be carried outdoors to the terrace—another instance of flexible design. The paintings and other wall decorations were not permanently secured, and single paintings even hung for a while out in the garden.[29]

One of the walls in the living room was equipped with tracks from which movable shelves could be hung according to changing needs. These tracks also made it possible to turn the wall panels, which were

white on one side and black on the other. In this way the whole wall, or parts of it, could change color. Track lighting in the ceiling also allowed pinpoint illumination of the pictures. In addition, the wall expanses concealed built-in bookcases, a space-saving element that made the open window surfaces of the other walls possible. The lights and the reversible wall panels were technically intricate details to increase flexibility of use and appearance. They demonstrate a kinship with the mode of thinking in Pierre Chareau's Maison de Verre where reversible wall screens and bookshelves could change the room's size and function. In Planetveien, there was also an aluminum staircase to the second floor which could be raised with the help of a motor and thereby open up the entire room for performances.[30] The staircase was constructed like an airplane stair, and produced by a firm that made such products.[31] A similar stairway, but one without a motor, appears in the Maison de Verre between the ground and second floors.[32] In the Eames House as well there was a ladder in the living room that extended up to the roof and could be secured as desired to the roof beams.

One of the factors that gave the house on Planetveien its special quality was the successful cooperation on the interior between the Korsmos and the painter Gunnar S. Gundersen, who took part in the planning of the house from the beginning. He described the collaboration as "an inventive process that was to create both a dwelling and a workplace."[33] He functioned as a consultant for the color scheme, and

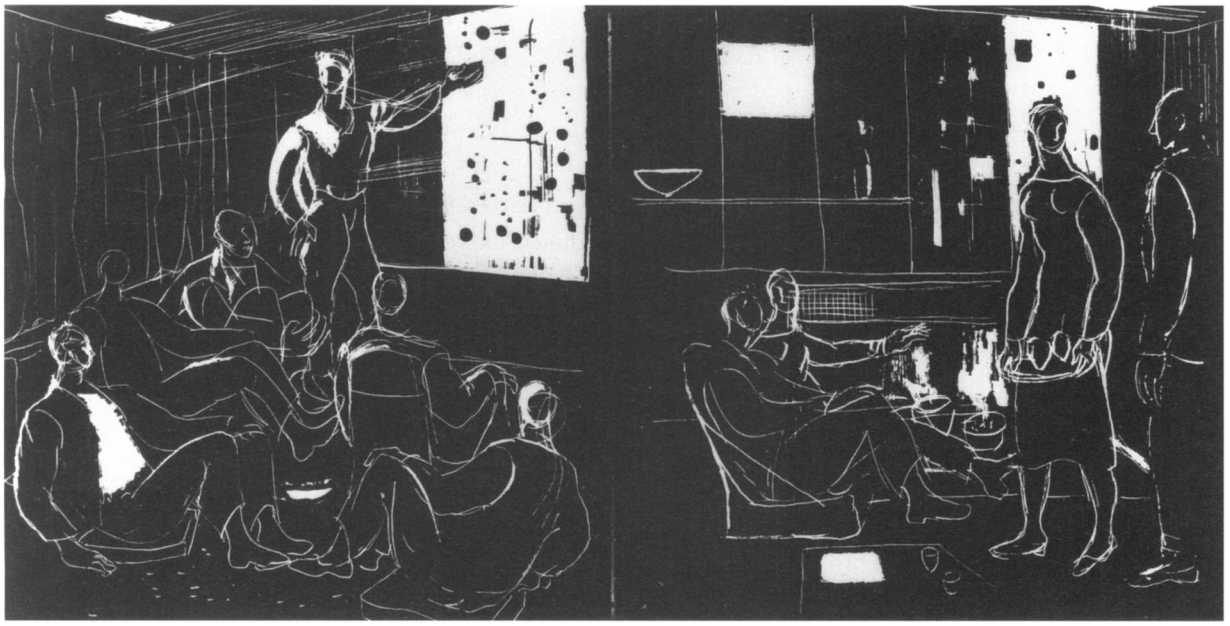


FIGURE 7
Gunnar S. Gundersen, undated sketch for Grete and Arne Korsmo's "Studio-home" at Planetveien 12, Oslo. Photo: Norsk Arkitekturmuseum.

painted the large wall decoration beside the stairs leading to the second floor. He regarded his own task as part of a larger whole, in which the building's location, construction, materials, colors, and degree of openness and enclosure constituted the main components. The relation between indoors and outdoors and the variations of light during the day were the basis for the color scheme, and even for the large wall decoration, of which the main color was a warm gray, with elements of black, white, red, and blue. The wall painting had to hold its own with the view of nature outside. Gundersen described his task in this way: "The decisive point was if I, by working with pure painterly elements in a discreet way, could enter into competition with the view, and at the same time keep the wall in its place. Thereby, the quality of the architectural space could be kept intact and simultaneously become enriched."[34] What Gundersen described was a total work of art in which there was no border between art and architecture and its various elements, and in which even the separation from the surroundings was reduced. The theme was

FIGURE 8
Korsmo and Christian Norberg-Schulz, living room of Korsmos' dwelling at Planetveien 12, Oslo, 1952-1955. Photo: Norsk Arkitekturmuseum.

FIGURE 9
Living room of dwelling at Planetveien 12, Oslo. Photo: Norsk Arkitekturmuseum.

underlined by the various planes surrounding the decoration. On the second floor, the painting could be seen through an interior glass wall, while another, outer wall of windows provided a view of the landscape beyond. Under special light conditions, the painting was reflected in the outer glass wall and thereby overlapped the view of the landscape. This intricate relation between reflections and transparent planes, painting and architecture, art and nature, greatly enriched the room, and resulted from the close collaboration between Gundersen and Korsmo.

In the kitchen, flexibility was also a keynote. Composed of cabinet units, the room opened both toward the entryway and the living area. By the standards of the period, here was a dream of efficiency in the

American style. The counters could be covered by rolldown tops or sliding doors so that the space could conceal its functions as required. Behind one sliding door, for example, was the washing machine, refrigerator, and freezer. Contemporary photographs and articles show that Korsmo attempted to demonstrate the beneficial impact of technology on the domestic sphere. He believed that technical innovation in the form of machines would liberate people from the boredom of routine labor and free them for imaginative activity, thus permitting a new, more creative life style.

Flexibility in design and plan, the use of the latest technological devices, and a heightened aesthetic expression made the Korsmos' dwelling on Planetveien into an ultramodern home—both by Norwegian and international standards. From an artistic perspective, Korsmo had obtained much greater calm and clarity at the Planetveien dwelling than at the Bygdøy apartment, perhaps more than in any of his best work of the interwar era. The dwelling represented a high point in his artistic activity, where he had largely achieved the unity he desired of nature, exterior, interior, and furnishings, as well as among the smaller individual parts. His results derived equally from painterly principles and architectural theory. The improved economic situation and more plentiful material resources following the first, hard, postwar years also obviously influenced Korsmo's achievement.

In 1956 Korsmo was appointed to a professorship in architecture at the Norwegian Institute of Technology (NTH) in Trondheim, a position he occupied until his death in 1968. In this last period of his life, he had few commissions beyond his academic work. His last great assignment was the interior remodeling of the venerable Britannia Hotel in Trondheim, 1961-1963, which he undertook in an elegant, reductionist style, in collaboration with the architect Terje Moe.

Exhibition Designs

In the course of the 1930s Korsmo gained a distinguished reputation as an exhibition architect, partly because of his contributions to the Norwegian pavilion at the Exposition Internationale des Arts et Techniques dans la Vie Moderne in Paris in 1937[35] and to the "We Can" exhibition in Oslo in 1938. During the period from 1951 to 1958, he was also responsible for several exhibitions of Norwegian applied arts abroad. The high point was the Norwegian section at the tenth Triennale in Milan in 1954, where Norway, under the direction of the Norwegian National Association of Arts and Crafts (Landsforbundet Norsk Brukskunst), participated for the first time (Fig. 10), showing contemporary

FIGURE 10
Norwegian section, Tenth Triennale, Milan, 1954. Photo: Norsk Arkitekturmuseum.

Norwegian applied art. This can probably be described as Norway's greatest design success abroad. The Norwegian representation received a number of award medallions, some twenty-four in all, including Grand Prize to Korsmo for the architecture. There was one special circumstance that helped to make this success possible: Scandinavian Modern was on the point of breakthrough to international recognition at the beginning of the 1950s, and the Nordic countries were the Triennale's favorites. Furthermore, the Norwegian pavilion had received especially favorable financial and organizational support, and, in addition, the exhibition architects had assembled a good team[36] that was given almost complete freedom to work. These circumstances also allowed Korsmo a large say in

the choice of objects to be displayed; and he utilized his position to pick things that he thought were especially suitable for a professionally oriented, international audience. His choice of objects was unorthodox, however. All this set off a lively debate in the Norwegian daily press.[37]

The Norwegian pavilion was a simple, rigid, modular structure in wood and cork that was painted blue. The weaver Hannah Ryggen's tapestry *The Prodigal Son* (1944) set the keynote for the blue of the walls. Also included was a series of paintings, an assemblage, and a sculpture created by Gunnar S. Gundersen especially for the exhibition. The entryway was slightly raised above the floor plane in order to make the objects on either side more visible. The proportions were approximately the same as in an ordinary dwelling. The relatively few objects included were not shown in isolation but as in an ideal modern Norwegian home, in groups or in table arrangements, with rag rugs on the floor and chairs placed with the table settings. The objects thus came into their own as home furnishings in dignified company. In this imaginary residence, there was no room for the ordinary or for divergent expressions of taste. Nothing was permitted to threaten the harmony of the whole. Korsmo and his wife were able to show their own designs in the form of a special table setting for a traditional Norwegian meal of herring. They created several of the items specifically for the occasion. In a style between the rigorously geometrical and the organic, these designs formed a rhythmic play with the geometric architectural frame. In all, the exhibition presented a rigorous, disciplined visual unity and a concept of taste that expressed both Scandinavian Modern and the main currents of international Modernism. Korsmo had created an exhibition that entirely succeeded in impressing an international jury of contemporary arbiters of good taste.

Korsmo was also involved with the eleventh Triennale in Milan in 1957, this time as the architect for one of two Norwegian sections (Fig. 11),[38] which officially appeared as one unit. The result was a silver medal for the architectural structure and several other award medallions. On exhibition was art glass from Hadeland glassworks, objects in silver and enamel from Tostrup, together with home furnishings in steel and enamel from Cathrineholm. Most important among the displays were the results of new research in enamel: to show products with this enamel was the purpose of the exhibition. The enameled objects were few, relatively alike in materials, and marked by an extreme simplicity of expression. To display them all, Korsmo responded to the space available and the other types of objects. The allotted space was extremely difficult for exhibitions, with a small floor area of twenty-five square meters and an uncommonly

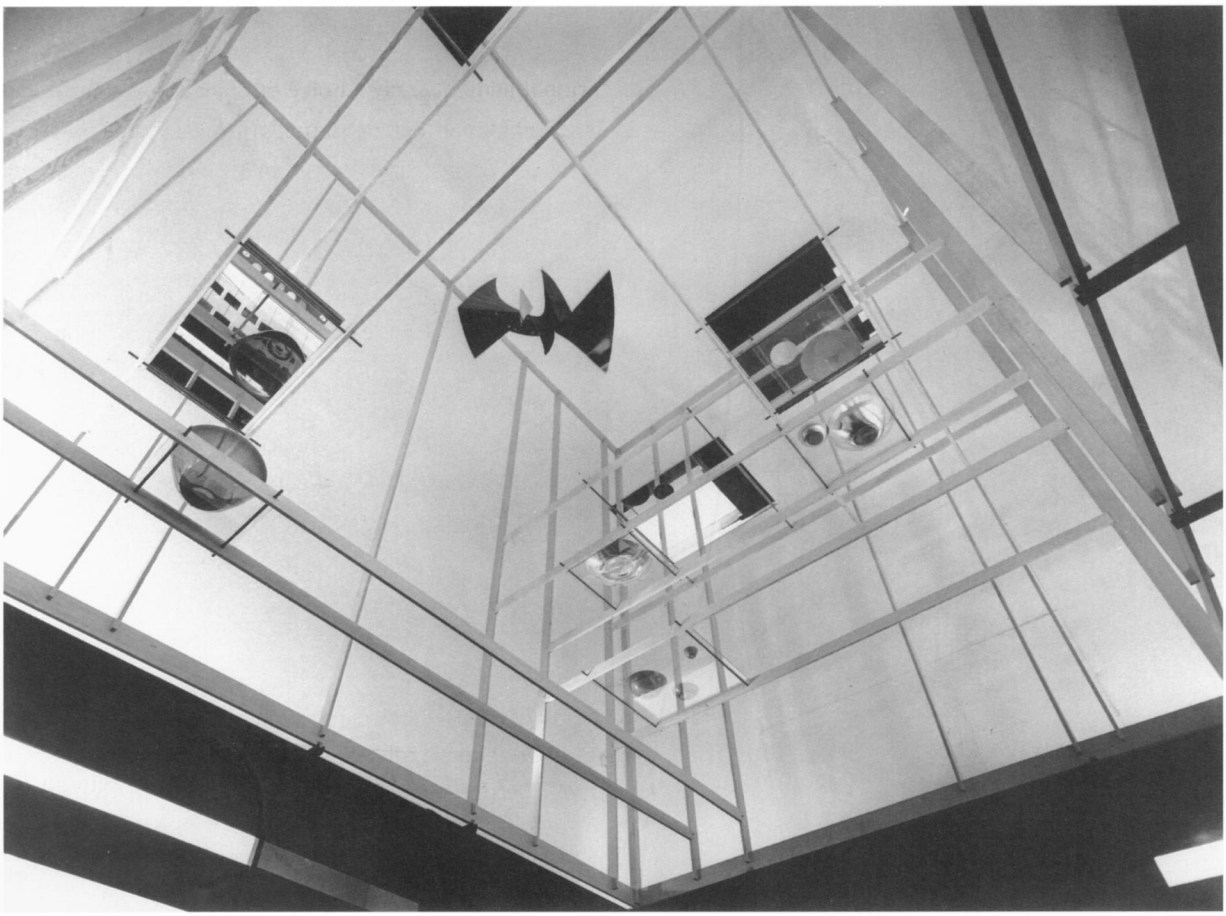


FIGURE 11
Norwegian section, Eleventh Triennale, Milan, 1957. Photo: Norsk Arkitekturmuseum.

high ceiling height, of seven and a half meters. In order to utilize the entire spatial volume, he fastened a cage of Oregon pine high up on a wall, filling the room entirely to the ceiling. In the middle of the "cage" hovered a fairytale bird in rustproof steel and enamel, designed by Gunnar S. Gundersen. The objects were placed in part in the cage, in part in the showcase below it on the floor. The floor was covered with a dark mat so that it appeared to be lying in darkness. A large number of spotlights were trained on the cage and directly illuminated the objects, exploiting the reflectivity of the glass and enamelwork. Overall, the setting resembled a theater with the objects in the leading roles. The Norwegian newspaper *Dagbladet* wrote: "The public will come to feel as if they have wandered into a kind of gigantic jewel box from the Thousand and One Nights."[39] Refined in its simplicity and its sharp contrasts of light, this interior ignored the utilitarian value of the household objects and elevated them into abstract art forms.

The results of scientific investigations in enamel were also shown theatrically. Impressively illuminated cases in an otherwise pitch-dark

space displayed experiments in color and enlarged photographs of molecules as if they were magical formulae. A painting by Gunnar S. Gundersen made a sympathetic neighbor: art and science formed a natural unity. The sensational solution of this pavilion, a spatial experiment more than an exhibition of applied art objects, may reflect Korsmo's new professional situation as a professor in Trondheim. He had left the design commissions and the circle of the applied arts in Oslo. Architecture and spatial experiments were once again his primary field of activity. His exhibition concept also expressed a certain trend at the time, particularly in the development of Scandinavian Modern that refined style at the end of the 1950s. With its extreme simplicity and emphasis on line, clear-cut forms, color contrasts, and abstract ornamentation, it was intimately connected to the abstract art of the period.

Teaching Activity

As a teacher Korsmo made a strong impression on the interwar and postwar generations of designers and architects in Norway.[40] Among these are the interior architects and designers Tormod Alnæs, Birger Dahl, Alf Sture, and Liv Arvesen, the industrial designer Thorbjørn Rygh, and the architects Sverre Fehn and Geir Grung. In the postwar period, interior design was given great attention owing to the serious challenges of reconstruction that the country faced. From the time he started as an instructor in interior and furniture design at the National College of Art and Design (SHKS) in the interwar years, Korsmo participated in reforming instruction according to Bauhaus principles, "with the Bauhaus books so to speak in hand," as he put it.[41] The Bauhaus influence altered the previous goal of the school's instruction: while the earlier curriculum had dealt with the design of particular furniture and suites of it, Korsmo regarded furniture as an integral part of the interior. He was the first in Norway, around 1945, to lecture on interior design, or "room art," as it was called there.[42] A contemporary critic defined his concept as "the final result of many designers' work—in the most varied areas—where every detail is painstakingly weighed and put together into a deliberate composition"; an interior based on this teaching was like a "painting liberated from the surface and freely operating in the space."[43] Student exercises could consist of the furnishing of a home, of a small restaurant, of the interior of a ship.[44] Korsmo thereby shattered the traditional framework of interior design training, whose domain until then had primarily been the home. By collaborating with other classes, students created complete interiors, including furniture, textiles, dinnerware, and so on. Nontraditional materials such as plastic and plywood

were often used. These projects were frequently undertaken in cooperation with industrial concerns.

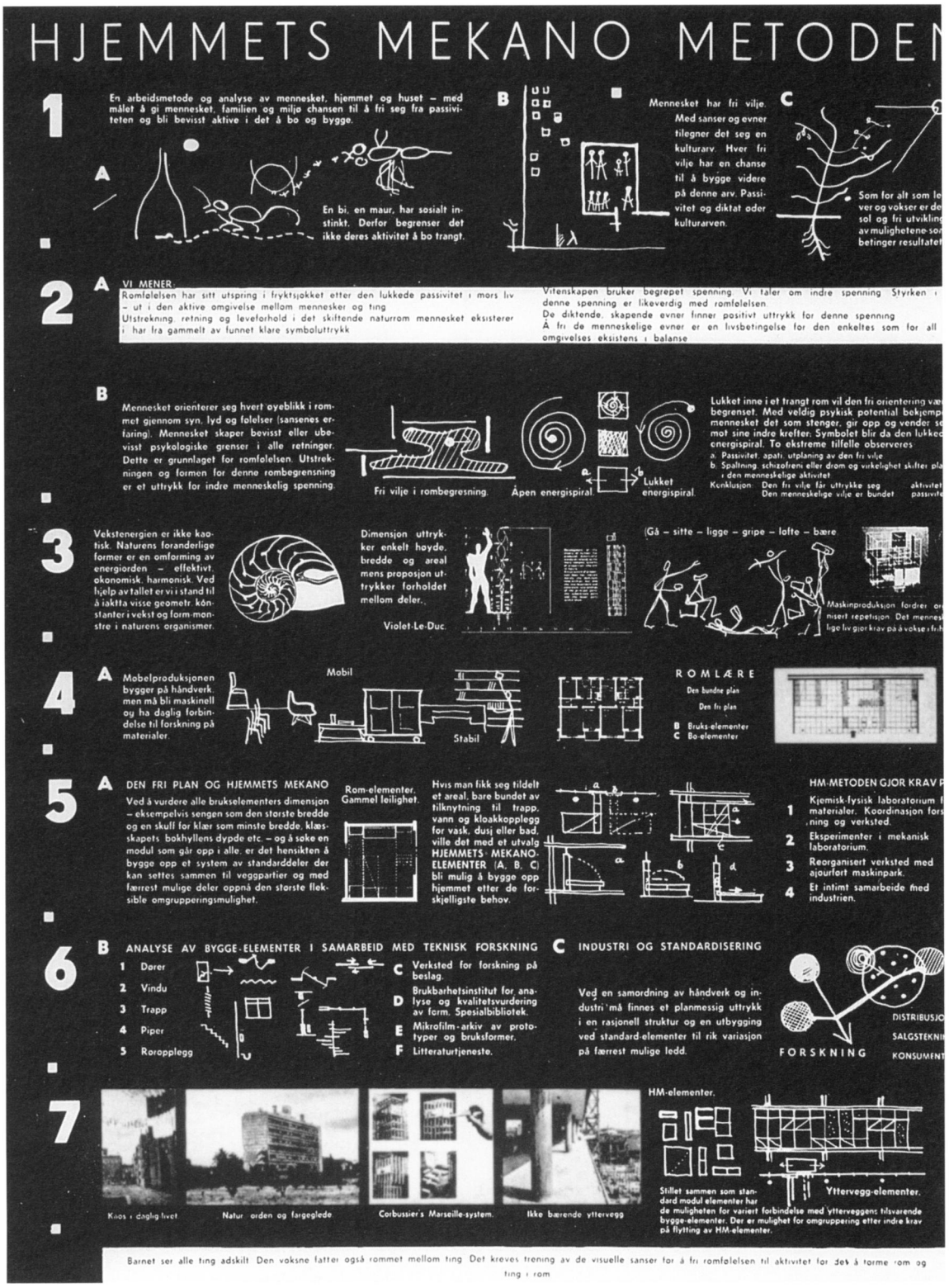
On a number of occasions the students were able to construct an entire apartment in full scale and to furnish it completely, bringing Korsmo's design theories to life. In 1952 and 1953 they built a forty-eight-square-meter (Fig. 12) and an eighty square-meter apartment within the school, sizes determined by the government's official restrictions on dwelling area.[45] These apartments realized the ideas that Korsmo had presented in a lecture and poster, "Hjemmets Mekano Metoden"[46] (The Home Erector-Set Method), in 1952 (Fig. 13): modular construction with the largest number of functions possible, walls in the form of cabinet sections, lightweight furniture, and a maximized amount of free floor space, especially facing outward toward a south wall of windows.[47] The potentially changeable floor plan allowed various spatial effects. In the eighty-square-meter apartment, the central idea was that everything not in use should be placed in a cabinet. Furthermore, all the cabinets were ventilated. In the kitchen floor there were to be patented trap doors to the cellar. Outside, in the entryway to the apartment, would be placed an accessible storage cabinet of weatherproofed material with aluminum fittings to hold skis and other winter equipment. This could be removed during the summer or used to form a windbreak by being mounted on the roof and door.[48] A mechanical metal joint was designed, and later patented, to link the various components of the apartment, such as cabinet and wall elements, in many different ways. One of the walls, made of soundproof wallboard, was even used for a "color game," in Korsmo's term. It had movable colored pieces attached to the holes in the board. Their contrasts of red and blue also appeared in the drawers and the door facing toward the wall of windows: this Mondrianesque composition recalled the outer walls in the Eames House as well as in Korsmo's own apartment at Løchenveien. The few pieces of furniture were light and easy to move. Flexibility in all details was the solution of the day.

In the forty-eight-square-meter apartment, Korsmo condensed his earlier design (Fig. 12). Given the minimal space, he attempted to obtain maximal flexibility by means of sliding panels leading to the sleeping and kitchen areas, "hideabeds," and walls composed of cabinets.[49] The kitchen was placed in a cabinet section that filled a whole wall.[50] The color scheme and mirrors were used to increase the impression of space in the apartment. Korsmo later planned to investigate the economics of building wall cabinets to replace bedrooms, and further to explore child psychology in connection with housing.

FIGURE 12
Forty-eight-square-meter apartment created as a teaching project at the National College of Art and Design (Statens Håndverks- og Kunstindustriskole, SHKS), Oslo, 1953. Photo: Norsk Arkitekturmuseum.

FIGURE 13 (opposite)
Korsmo, "Hjemmets Mekano Metoden" (The Home Erector-Set Method), poster, 1952. Photo: Norsk Arkitekturmuseum.

Critics were generally negative about the forty-eight-square-meter apartment, believing it would be impossible for four persons to conduct their different activities simultaneously without having unusually flexible personalities.[51] One quoted remark heard during a guided tour: "Here one must indeed have a driver's license in order just to live."[52] The criticism was clearly justified. It seems to have come from upper-middle-class observers, however, who had no tradition of living in small areas and multipurpose rooms. Nevertheless, the minimal space of the residence reflected the reality of the time. Among average families the same room had always served several functions, and hideaway or Murphy beds were not something new. Indeed, the multiple uses of the minimal space may have been less troubling to a family with a more traditional attitude toward interior design than Korsmo's uncommon design and materials and the absence of decor in the ordinary sense.



The furniture prototypes that his students produced under Korsmo's supervision were inspired by American furniture designs, especially those by Charles Eames and Eero Saarinen. The students experimented with materials like steel, plastic, and mesh. Korsmo was especially proud of Ragnar Myre's prototype chair in burned-lacquer and mesh, which was developed in collaboration with the National Institute of Technology in Oslo in 1951. This closely resembled Eames's Wire Mesh Chair of 1951-1953 for the Herman Miller Company.[53] Korsmo's students were also trained in wickerwork furniture, something of increasing popularity in the postwar years. Several of the students' works appeared both at the Triennale in Milan in 1954 and as furnishings in Korsmo's own home. Evidently many of his own ideas found expression in his students' works.

In 1952 a "Design Education Summer Course" was arranged in Oslo, uniting 120 participants from the entire Nordic region. The initiator was Korsmo, who, thanks to the couple's connections following their trip to the United States, managed to attract instructors from the Institute of Design in Chicago to Norway. The course was possibly the first to introduce the Nordic region to the modern American design curriculum on a broad basis. Doubtless it acted as a catalyst for the debate in Norway concerning industrial design versus arts and crafts, an issue that persisted through the 1950s.

As a professor from 1956 onward at the Norwegian Institute of Technology (NTH) in Trondheim, Korsmo further developed the spatial experiments that he had initiated with his students in Oslo. In Trondheim he was active in establishing a laboratory for space, light, and color experiments in collaboration with Gunnar S. Gundersen and the architect Arne E. Holm. The experiments built on the findings of perceptual psychology, and were strongly influenced by the experiments of the American researcher Adalbert Ames Jr. Such instruction in spatial design continues at the NTH to this day, and is led by Korsmo's former student, the interior architect Liv Arvesen, among others.

For those who accepted his style and personality, Korsmo was an inspirational teacher, and his lectures were popular among students. He typically showed a number of slides of well-known Modernist works by such figures as Alvar Aalto, Mies van der Rohe, and Charles and Ray Eames, but he also integrated them with landscape images. In this way, he was able to present the aesthetic and ideological foundations of international Modernism as he saw them and also to insist on nature's intimate connection to artistic production.[54]

Prototypes, Aesthetics, and Theoretical Foundations

Korsmo did not take his inspirational models from Norwegian architects, but from the great, internationally respected Modernists. "Being up to date," as he expressed it, with current international trends absorbed him, and he verged on being an opportunist. He was preoccupied not only with the architects Alvar Aalto, Mies van der Rohe, Walter Gropius, Le Corbusier, Pierre Chareau, and Charles Eames, but with artists such as Alexander Calder, László Moholy-Nagy, and Piet Mondrian. For his interior design projects in the postwar years, the closest parallels are found in the work of Chareau and Eames. Korsmo was an admirer of the Frenchman and on several occasions visited his Maison de Verre in Paris, 1928-1932. Even if there are few similarities to be found in the literal sense, Chareau's influence on Korsmo is obvious. This especially applies to the simple architectonic structure and the many minutely conceived details aimed to increase flexibility of use. The practical details also served as aesthetic elements. There are also differences, however. Chareau's tendency to make "introverted interiors"[55] was rejected by Korsmo, who always strived to allow the interior space to communicate with the surrounding landscape. Chareau's taste for surrealistic or symbolic elements was also absent. The most significant difference was the relationship to manufacturing techniques. Chareau's use of materials and ideas was in large part derived from industrial and other surroundings outside the home, but he did not regard industrial production as a goal, and he collaborated over many years with the craftsman André Dalbet and his metal workshop. All of Chareau's products and their details were closely tested there without any desire to translate them later into a more rational system of production. Korsmo, on the other hand, clearly acknowledged the merits of standardization and industrial production, while stating that he was also concerned with the quality of products produced by hand, even if they often involved a very complicated process. This could be one of the reasons that so few of his furniture designs and other objects were ever put into regular production.

The strongest parallels for Korsmo's work are the designs of Charles and Ray Eames. The similarities are especially great between the Eames House in Pacific Palisades, California, 1945-1949, and the design and planning of the Korsmos' homes on Løchenveien and, later, on Planetveien. There were also fundamental similarities between both couples' love of objects and the combination of them in the form of continuously shifting assemblages. Even if the Korsmos' decorations did not have the same strong, multicultural character and did not contain historical

objects, the two couples took the same pleasure in their collections and the beauty of each item. While the Eameses' so-called "functioning decoration" had its origins in Arts and Crafts aesthetics and in the romantic decorative tradition that survived in the United States throughout the twentieth century,[56] Korsmo's designs and the couple's table services and combinations of objects show a greater moderation and clearer commitment to abstract art and to the Japanese decorative tradition where simplicity was an absolute law. These two factors held Korsmo's already restricted sense of decoration in check, and possibly also contributed to his quest for perfection and simplified expression.

For both couples, too, the arrangements in their homes were a means to test the visual effects of their professional work. Thanks to their many designs for exhibitions of the goldsmith firm Tostrup and the Norwegian National Association of Arts and Crafts, however, the Korsmos emphasized the discrete individual object to a greater extent than did the Eameses. The former's continuously shifting tableaus were an expression of creative play where play as a "form of work" or "method" was construed as the key to an artistic result. In the realm of production, the differences between Korsmo and the Eameses were great. The latter employed prefabricated industrial elements in much of their home and experimented with new production techniques for their own furniture. For Korsmo, the production process remained something he addressed only on a theoretical level. In practice, he left it to his technically gifted wife or to an experienced craftsman.

Both the Maison de Verre and the Eames House have many features of construction and aesthetics inspired by Japan, as do Modernist buildings by others. By his own account, Korsmo had been deeply interested in Japanese architecture and culture ever since he saw a Japanese tearoom for the first time in 1921. In an article of 1956, he described which of these qualities he most valued,[57] and took as his point of departure Kakuzo Okakura's book *The Book of Tea*.[58] The teahouse and the tea ceremony expressed a distinctive art of living and represented a world of beauty, order, and harmony. The ceremony's objects were simple and ostensibly insignificant, but were painstakingly chosen according to the season of the year and occasion. Their materials, designs, and craftsmanship were exquisite. When it came to the tearoom itself, Korsmo quoted from Okakura's book: "The tearoom is in itself naked—it is the things that we bring into it that create the beauty of the principal theme."[59] This was precisely how he conceived his home on Planetveien. The architecture consisted of a simple frame construction around the shifting "sculptural painting." He also mentioned that the Japanese term

for tearoom, *sukiya*, means a "dwelling for imagination"—in other words, that it leaves something for the imagination to complete. This echoed Korsmo's own belief that the environment should stimulate its occupants to creativity. The architect thereby resembled the tea master who arranged for a sublime experience. For Korsmo, the tea ceremony and its refined cultural objects were merged with the aesthetic of Modernism. When Okakura, as quoted by Korsmo, defined the difference between Japanese and Western design traditions, he could just as well have described the difference between Modernism and historical tradition:

> An actual experience of beauty can only occur by means of concentration upon some central motives. In this way one can understand the opposition between our tearooms and Western domestic architecture where interiors often function like a type of museum. From the vantage of our customary experience of simplicity in ornament and continuously shifting decoration, a Western interior—unpleasantly filled with paintings, statues, and other bric-a-brac—gives the impression of existing as a type of ornamental display. It requires a great mobilization of forces to look at only one masterpiece.[60]

The words could have been Korsmo's own, and those of many others. They show Modernism's rejection of historicism's conventions in interior design and its own ideals of purism and simplicity, partly built on Japanese models. In the Japanese aesthetic precisely as expressed in the tea ceremony and in Okakura's book, Korsmo found a mode of thought that strengthened his own aesthetic and his personal means of expression.

Korsmo described the theoretical basis for his interior design in 1952 in a poster titled "Hjemmets Mekano Metoden" (The Home Erector-Set Method; Fig. 13) and in a lecture.[61] The documents represent one of his few written attempts to describe his theories and methodology. The title is a key to his message. It was taken from a children's building set of modular components that can be joined together according to the child's changing desires and imagination. It reflects Korsmo's solution to the problem of how a dwelling should be built and furnished in order to satisfy as many needs as possible in the smallest possible area, a problem created by the difficult public housing situation of the postwar era and the government restrictions on space for newly built apartments. It was not enough to produce smaller furniture. What was truly necessary was a thorough modification of the design process on the basis of scientific investigation: "Color, form, in other words, design," he wrote in his 1952 lecture, "must obtain a more thoroughgoing significance than a mere reaction to some exhibition propaganda and articles. This must take place

according to a scientific research methodology and must be coordinated into a unified whole."[62] Korsmo's architectural solution consisted of a free plan, inspired by Le Corbusier's *plan libre*, together with building and furnishing components adapted to a module. A system of standard components could thereby be constructed to be placed together in different ways. The idea was that the system should satisfy the occupants' desires, and create the feeling that they had shaped their home themselves.

Korsmo believed that people, space, and objects enjoyed a close physical and psychological interaction, and he intended to create surroundings that through their visual and tactile qualities would stimulate individual development. These criteria could be satisfied, he thought, if the dwelling was designed on the basis of the research findings of perceptual psychology, together with a modern artistic conception of space. This conception of space would permit its occupants to apprehend the world in harmony with their own time. Only in this way could human life—which was presently chaotic, dominated by science, and unfamiliar with the new techniques of perception in art—once again attain equilibrium. These ideas were an echo of Gyorgy Kepes's extremely influential book *Language of Vision*.[63] Korsmo, however, appeared to emphasize the means to enhance the individual's creative development to a much greater degree than Kepes. Korsmo saw the architect and the designer as representing an elite class that would create the conditions for this equilibrium by synthesizing the advantages of art and scientific research in their creative work. In this way, they would contribute to the elevation of human beings to a higher level. In this Korsmo expressed an evolutionary optimism that was typical of Modernism.

Also part of Korsmo's evolutionism was the idea of designing according to what he saw as nature's inherent laws.[64] Nature, with its continuous organic development of forms according to needs, should be the designer's ideal. Scientific research should explain the underlying structure in nature and the laws of evolution, and thereby give the designer a basis for his creative work. Alvar Aalto and László Moholy-Nagy had similar ideas. In Korsmo's practice, however, his own artistic needs were just as important as the client's practical ones. He allowed himself "a certain emotional adjustment of the dimensions," as he expressed it, thereby permitting himself artistic liberty to develop an aesthetic form built on fine proportions. His ideas on "organic" design and its aesthetic implications are most evident in the metal objects he designed for J. Tostrup, especially his flatware (see Fig. 2).[65]

Korsmo's ideas were not especially original, but were derived from the central Modernist theories. If his statements alone are examined, his

thought may appear derivative. His work demonstrates, however, that he absorbed key Modernist concepts and integrated them into his style with a result that was creative for his time. In the area of production methods for the objects he designed he never attained great heights, and his relation to scientific inquiry was more visionary than concrete. That individual dwellers can create their own designs with the help of standardized components is, in reality, a restricted option, since the architect dictates the ranges of colors, forms, and so forth from which to choose, regardless of the consumer's personal taste. Korsmo was above all an artist, however, and aesthetic values ultimately were his highest interest.[66] His strength as an interior designer rested on his mastery of the combined effects of space, light, color, texture, and proportions, as well as his special ability to organize all of the objects in a space as a total work of art. In some of his interiors, he created a modern design where the border between art, architecture, and objects was completely removed. In addition to his architectural training, which had educated him in the classical laws of proportion,[67] his familiarity with perceptual psychology and the principles of composition in abstract art ultimately led him to adopt his characteristic position. His close connection with abstract art was part of an international trend in architecture.[68]

Korsmo's relatively avant-garde stance made him fairly isolated in Norwegian architectural circles, which were characterized by sobriety and a certain shortsightedness in the first years following the war. Yet Korsmo had enormous influence all the same. First, he was an extremely fertile source of inspiration and an important intermediary for international ideas. He was able to bring important foreign impulses to the next generation of Norwegian architects, as well as industrial and interior designers, and at various international exhibitions he demonstrated to the world the Norwegian contribution to the concept of Scandinavian Modern. Second, his own output remains among the most central work in Norwegian postwar design, despite its limited quantity. To a greater extent than most architects, he made the interior space the starting point of his architecture, yet without losing sight of the whole. "A house after all comes into being from within," he said.[69] What Alvar Aalto regarded as "an architectural accessory," Arne Korsmo made into a "sculptural painting."

—Translated by Clarence Burton Sheffield Jr.

NOTES

1. For a general introduction to Korsmo's life and work, see Christian Norberg-Schulz, *The Functionalist Arne Korsmo* (Oslo, 1986).

2. "Korsmopolitt" is a pun on the Norwegian word "kosmopolitt," which means "cosmopolitan."

3. He worked with Finn Bryn (1890-1975) and Johan Ellefsen (1895-1969), the latter most famous for some of the Functionalist buildings at the University of Oslo; he also worked with Arnstein Arneberg (1882-1961) and Magnus Poulsson (1881-1958), both of whom used a more nationalistic and romantic style. From 1929 to 1935 he shared a practice with Sverre Aasland (1899-1990). It is still unknown what part Aasland took in the partnership with Korsmo, but it was probably more substantial than has been considered previously.

4. Korsmo collaborated on the "We Can" exhibition with Knut Knutsen and Andreas Nygaard.

5. "I godt selskap på Det nye teater" ["In Good Company at The New Theater"], *Dagbladet* (October 2, 1937).

6. The Norwegian Architects' Association arranged a study tour in 1928 to the Netherlands, where Willem Marinus Dudok's and Jacobus Johannes Pieter Oud's works were strongly emphasized. Although the number of participants was severely restricted (Korsmo probably did not take the trip), the tour encouraged wide acceptance of the new style by Norwegian architects.

7. An indication of this might be the rejection of Korsmo's competition project for Norway's pavilion at the New York World's Fair in 1939 in favor of the more traditional and nationalistic one by Odd Brochmann and Finn Bryn.

8. Most of Korsmo's wall decorations of this time were executed by the artist Fredrik Frantze after Korsmo's own pastel sketches.

9. They were made by Josef Kussius in Oslo, as was almost all of Korsmo's tubular-steel furniture in the interwar period.

10. Designed with Sverre Aasland.

11. Arne Korsmo, "Moderne boligbygg krever moderne møbler" [Modern Dwellings Require Modern Furniture], *Vi selv og våre hjem* 6 (June 1936): 16-18.

12. Author's interview with the interior designer Birger Dahl, January 29, 1993.

13. Eirik T. Bøe, *Bebyggelsen i Havna allé 1931-33: En studie i Aasland og Korsmos tidlige arbeider* [Buildings in Havna allé 1931-1933: A Study of Aasland and Korsmo's Early Works] (master's thesis, University of Oslo, 1996), vol. 1: 69-91.

14. Norberg-Schulz, *The Functionalist Arne Korsmo*, 41. Insofar as they concern themselves with three-dimensional compositions, the term "assemblage" may be preferable.

15. Norway was occupied by Germany from April 1940 until May 1945. This occupation paralyzed great sections of the society and created vast destruction. When peace came, the population stood at three million people, and of these approximately 100,000 lacked housing. Ingrid Semmingsen et al., eds., *Norges kulturhistorie*, vol. 7 (Oslo, 1981), 60.

16. The two had married in 1945. Grete Prytz Korsmo was his second wife.

17. Author's interview with Grete Prytz Kittelsen, April 5, 1993.

18. Edgar J. Kauffmann Jr., *Prize Designs for Modern Furniture*, exh. cat. (New York: Museum of Modern Art, 1950), 72.

19. This study tour came about in part because Grete Prytz Korsmo had received a Fulbright scholarship.

20. Arne Korsmo, "Romeksperimenter: Innredning av egen leilighet på Bygdøy" [Spatial Experiments: The Furnishing of My Own Apartment at Bygdøy], *Byggekunst* 33, no. 3 (1952): 42.

21. On Mondrian and architecture, see Kenneth Frampton, "Neoplasticism and Architecture: Formation and Transformation," *De Stijl 1917-1931: Visions of Utopia* (Oxford, 1982), 114.

22. Author's interview with Grete Prytz Kittelsen, April 5, 1993.

23. The interior is largely preserved and the house is still occupied, by Grete Prytz Kittelsen.

24. Ulf Grønvold, "Hjemmets mekano i Planetveien: Gjensyn med Arne Korsmos hjem fra 1955" [The Home Erector-Set (Method) on Planetveien: Reencountering Arne Korsmo's Home of 1955], *Byggekunst* 71, no. 3 (1989): 206.

25. Pat Kirkham, *Charles and Ray Eames: Designers of the Twentieth Century* (Cambridge, Mass., 1995), 119.

26. Arne Korsmo, "Japan og vestens arkitektur" [Japan and Western Architecture], *Byggekunst* 37, no. 3 (1956): 74.

27. Arne Korsmo and Christian Norberg-Schulz, "Tremannsbolig ved to av dem" [A Three-Family Home by Two of Them], *Byggekunst* 36, no. 7 (1955): 177.

28. "Mondrian'sk" is an expression that Korsmo and the painter Gunnar S. Gundersen used with respect to a painting that the latter created for the Norwegian section at the tenth Triennale in Milan in 1954. It is most likely that they used it in other connections as well.

29. These were a series of paintings by Gunnar S. Gundersen executed for the tenth Triennale in Milan in 1954.

30. According to Grete Prytz Kittelsen, the stairs were never raised for this purpose.

31. The stairs were supplied by Norsk Flyindustri A/S [Norwegian Aircraft Industry Incorporated]: Korsmo and Norberg-Schulz, "Tremannsbolig ved to av dem," 173.

32. Marc Vellay and Kenneth Frampton, *Pierre Chareau, Architect and Craftsman, 1883-1950* (London, 1985), 263.

33. Gunnar S. Gundersen, "En oppgave i samarbeidets tegn" ["A Project in the Spirit of Cooperation"], *A5* 9, nos. 1-2: 57.

34. Ibid.

35. With Knut Knutsen and Ole Lind Schistad, he submitted a competition model of 1935, and they designed the pavilion.

36. The team consisted of his wife, Grete Prytz Korsmo, the painter Gunnar S. Gundersen, and four of his students from the National College of Art and Design (SHKS): Øivind Iversen, Arne Liagarden, Ragnar Myre, and Bernhard Witte.

37. It was claimed that the jury had not functioned as it should have, and that Tostrup's chief competitor, the goldsmith firm of David-Andersen, saw few of its works included. Others countered that instead of criticizing, observers should be pleased with the good results. Much of the controversy arose from such factors as an extremely short delivery deadline, which occurred during vacation time, and the few acceptable contributions from applied arts firms owing to the poor economy. The upshot was that the exhibition organizers and the architects themselves were forced to produce objects in order to have enough suitable ones. (Astrid Skjerven, *Arne Korsmo: Designwirksomhet i etterkrigstiden* [Design Work in

the Postwar Period] [master's thesis, University of Oslo, 1996], 2 vols., 1: 57-60.)

38. Korsmo's section resulted from the initiative of the firm J. Tostrup, Hadeland's glassworks, and Cathrineholm, which in collaboration with Grete Prytz Korsmo and the Central Institute of Industrial Research had developed a new type of enamel. The other section originated from the initiative of the association I.D. Norsk Gruppe for Industriell Formgivning [Association for Industrial Design—The Norwegian Group for Industrial Design]. This association officially sponsored the section.

39. "Norsk emalje til Triennalen igjen" [Norwegian Enamel for the Triennale Once Again], *Dagbladet* (July 5, 1957).

40. The professional association of interior designers, the Norwegian Federation of Interior and Furniture Designers [Norske Interiørarkitekters Landsforening, NIL], was formed in 1945 and originated in the training milieu of the National College of Art and Design (SHKS).

41. Arne Korsmo, "Til unge arkitektsinn" [To the Young Architectural Mood], *A5* 9, nos. 1-2 (1956): 45.

42. The Norwegian term is "romkunst." "Rom" means both room and space, so the expression refers to both.

43. Birger Dahl, "Interiørarkitektens utdannelse" [The Education of the Designer], *Bonytt* 5, nos. 1-3 (1945): 45.

44. To an extent, the last assignment can be explained by the fact that Korsmo had been in contact with the shipping owner Fred Olsen since the "We Can" exhibition in 1938, in which the firm had a display (author's interview with Birger Dahl, January 29, 1993).

45. Due to the urgent need for housing following the War, the government decided the size of apartments built by the housing associations, and the maximum dwelling area allowable to the individual.

46. Poster and lecture of 1952. The poster was probably distributed among a very small circle.

47. Both apartments are described in *Statens håndverks- og kunstindustriskole, Studieplaner for bolig- og hjeminnredning* [National College for Art and Design, Curriculum for Building and Interior Decoration] (Oslo, 1952), n.p.

48. Arne Korsmo, "Treavdelingen ved Statens håndverk- og kunstindustriskole" [The Woodwork Section at the National College for Art and Design], *Byggekunst* 33, no. 12 (1952): 273-76.

49. According to the designer Arne Remlov, the beds were patented and later industrially manufactured for a more reasonable price than "normal" beds. ("48 kvm huset" vel egnet til romstudier" [The Forty-eight-Square-Meter House (is) Well Suited for Spatial Studies], *Aftenposten* [December 16, 1953].)

50. "48 kvm leilighet," *Bonytt* 14 (1954), 38-39.

51. Hanna Helliesen Moen, "Et apropos til 48 kvm leiligheten" [Speaking of the Forty-eight-Square-Meter Apartment], *Bonytt* 14 (1954): 100.

52. A. F. "48 kvm huset' vel egnet til romstudier," *Aftenposten* (December 16, 1953).

53. According to the designer Birger Dahl, the two were in Chicago in the spring of 1951. They were invited to the Herman Miller Company in Grand Rapids, Michigan, where they got to see a "secret experiment"—the Eames chair in the developmental stage. It was an enormous surprise to the Americans when they declared that they had an almost identical one under development back home at the National College of Art and Design (SHKS) (author's interview with Birger Dahl, January 29, 1993).

54. I examine Korsmo's conception of the relationship between design and natural forms in depth in my master's thesis, *Arne Korsmo*, vol. 1: 108-11.

55. Vellay and Frampton, *Pierre Chareau*, 236.

56. Kirkham, *Charles and Ray Eames*, 143-99.

57. Korsmo, "Japan og Vestens arkitektur," 70-75.

58. The book was first published in the United States (in 1906) and later appeared in a number of editions.

59. Korsmo, "Japan og Vestens arkitektur," 71.

60. Ibid., 72-73.

61. The six-page, typewritten manuscript is titled "An Attempt to Solve the Underlying Foundations in the Training of 'Hjemmets Mekano,' " and is at The National College of Art and Design (SHKS).

62. Ibid., 2.

63. First published in Chicago by Theobald Press in 1944.

64. This theme is treated more thoroughly in my master's thesis, *Arne Korsmo*, vol. 1: 108-11.

65. See Astrid Skjerven, "Material, Technique and Requirements: Arne Korsmo's Flatware," *Scandinavian Journal of Design History* 6 (1966): 54-61.

66. With respect to his design of objects during the same period, it is clear that both practical and production needs had not been given the same priority as aesthetic expression. (Skjerven, *Arne Korsmo*, 1: 27, 64).

67. It is known that Korsmo used the laws of proportion as an "interior building standard," but never slavishly, and he never calculated by means of compass and ruler, tools for which he had great contempt (author's interviews with Grete Prytz Korsmo, April 5, 1993, through May 26, 1995, and with Birger Dahl, January 29, 1993, and December 15, 1994).

68. An example of this is Henry-Russell Hitchcock's influential book *Painting Towards Architecture*, published in 1948 in New York.

69. Korsmo, "Romeksperimenter," 42.