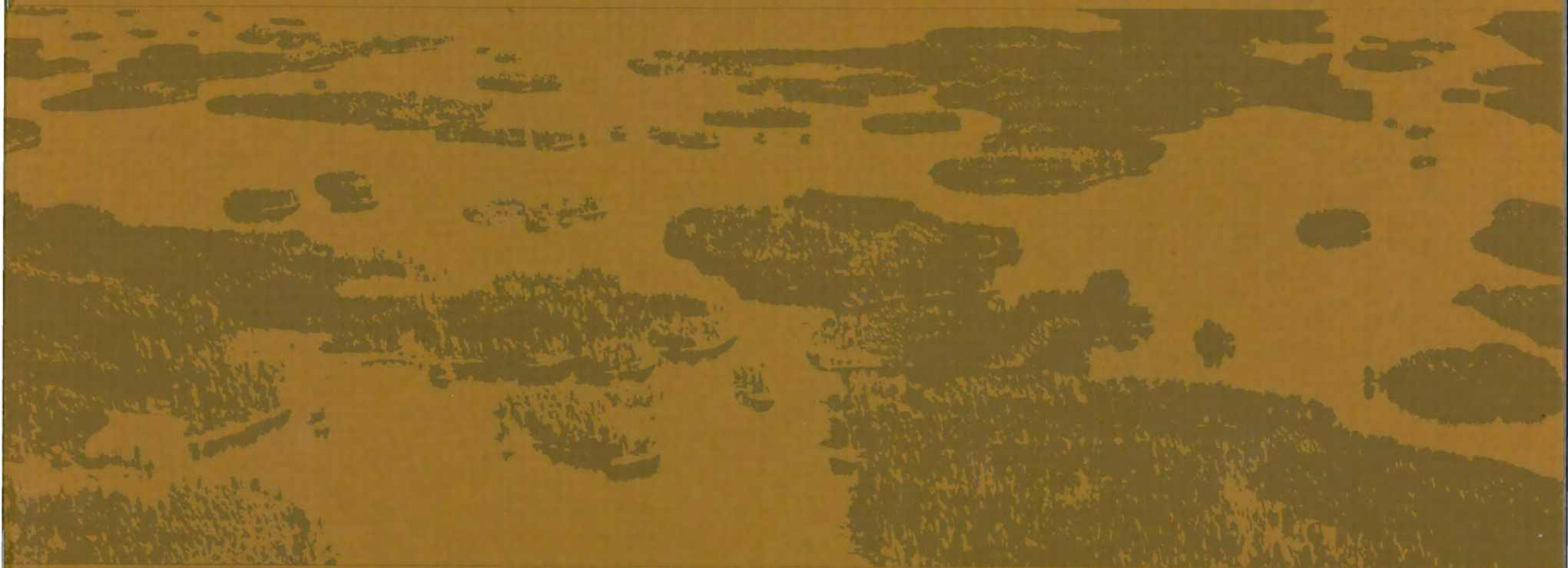
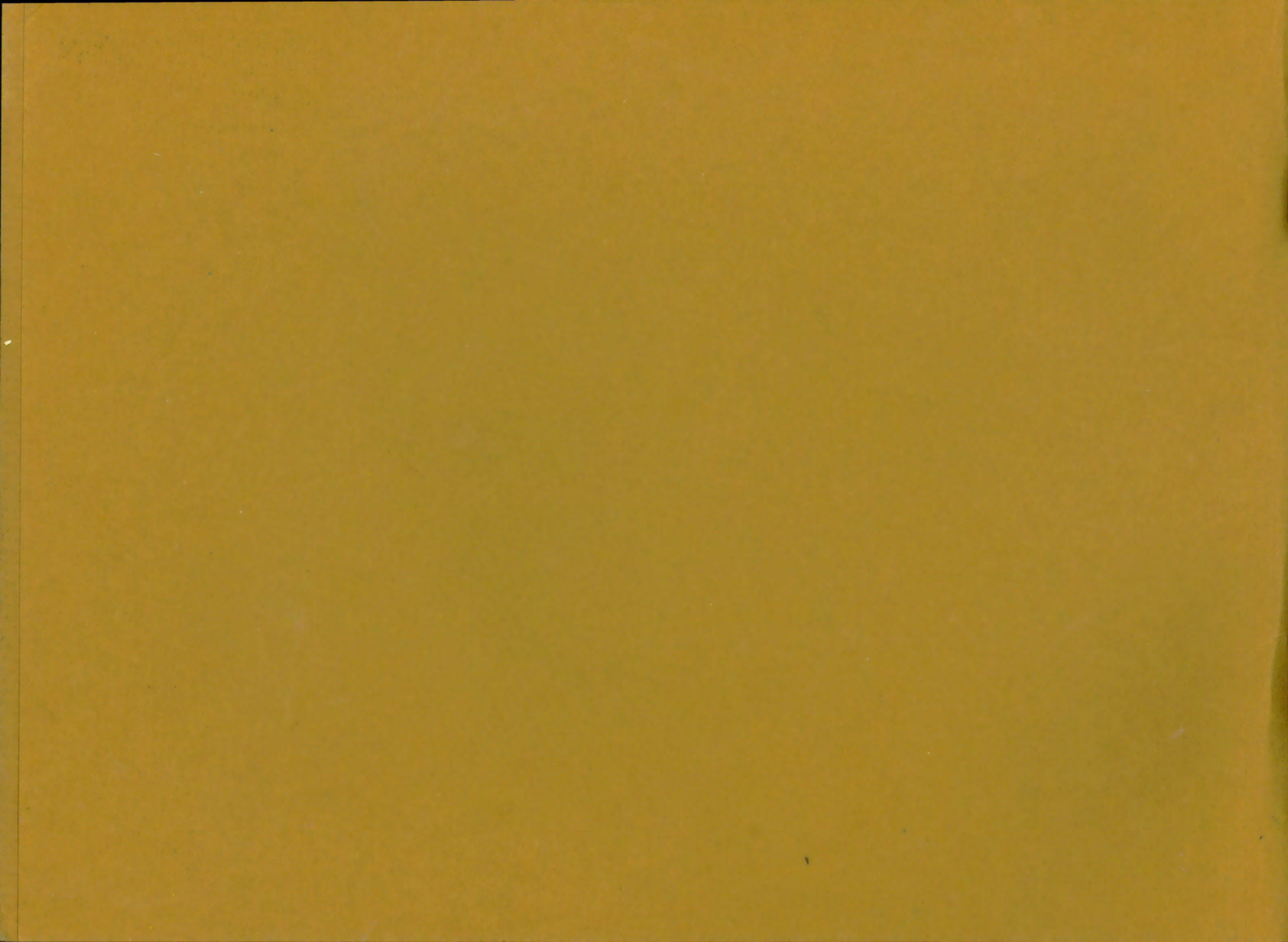


ARCHITECTURE



IN FINLAND



ARCHITECTURE IN FINLAND

An exhibition of Finnish architecture and design, including examples of wooden furniture by Alvar Aalto and a collection of books, magazines and other publications on Finnish architecture and planning.

Acknowledgements:

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Introduction to the Exhibition

There is no doubt that the art for which Finland is most famous is ARCHITECTURE. This comparatively small country's contribution in this field has been proportionately far greater than that of much bigger countries in Europe and elsewhere.

The one person we tend to identify with Finland's fame in architecture is of course Alvar Aalto and this is so with good reason. It would be unfair, however, to say that the unique developments emanating in that country are entirely due to his work. There are many historic and cultural reasons for the country's emergence as a great creative centre, particularly since the 1930's, but as so often in history these latent forces need the precipitating and catalytic synthesis of a single man of vision. Even if Aalto was this person, he has had such an effective influence in his country that a whole new generation has come into existence which, while regarding him as its mentor, has nevertheless built up a reputation based solidly on its own merits. It is significant that although Finland has enjoyed architectural fame for something like half a century now, its contributions in

previous ages have not been such as to warrant its recording in the great histories of European architecture.

Finland in the past has always been an outpost on the edge of Europe, remote and little influenced by the great historic periods. Christianity came comparatively late and therefore it has no great ancient monuments such as Gothic Cathedrals. In the late 18th and early 19th centuries Helsinki's and other cities' formal town planning came into existence in the public squares and related monumental buildings by the German architect Engel. This was in a period of Imperial Russian influence when its ponderous white neo-classic buildings were modelled on the work of, and in fact mostly designed by architects imported from western countries. This was obviously an effort to emulate the taste and power symbolized by central European architecture of the time.

At the beginning of this century, the country's architecture went through a period of national romanticism exemplified by the distinguished work of Eliel Saarinen. It is interesting to remember that it was his son Eero Saarinen who was the one voice amongst the competition judges that spoke so strongly and convincingly for the choice of

Utzon's Sydney Opera House design.

The main contributing factor to the remarkable development of Finland's modern architecture and design is however not to be found in its historic achievements but rather in the fundamental makeup of its people.

Unlike their Russian neighbours, Finns were never serfs but lived in self-sufficient village communities. The rigors of climate and topography as well as being the centre of innumerable foreign power struggles from both East and West have made them a uniquely self-reliant and fiercely independent people, anxious to control their own destinies.

This history reveals itself in the many old timber buildings that show the indigenous home-spun craftsmanship which later gave rise to the forceful industrial design in our century.

Industrialization came late to Finland — not until the early part of the 20th century in fact during the 1920's, when the rest of Europe had progressed considerably with its mass production techniques. This sudden industrialization acting upon the strong handicraft tradition (which had been unencumbered by the age-old stylisms of the giants to the South), gave rise to the inimitable

brilliance of design that emerged. Today, Finnish objects-of-use-design, furniture, fabrics, crockery, glassware etc. has come to be considered the standard of excellence virtually throughout the world.

The best in Finnish product design embodies the rare quality of refined selectively attuned to mass production and therefore average consumer demand orientation. This tendency is quite parallel to their concern in town planning and housing to meet the demands of the great majority, those of moderate means.

In today's world which is suffering the debased excesses of illiterate mass production and undesigned environments, there is a desperate need for universal solutions of excellence of this kind in all spheres of design. From this view point, Finnish architecture is unsurpassed. It does not concern itself with buildings produced with far above average means, no Seagram buildings or millionaires' houses, but exemplary housing and town planning for the majority of average people.

Amongst the many new towns and settlements that have come into existence in Finland, Tapiola is the most well known. It is a new town for about 20,000 inhabitants, housed at a density of 26 people per acre.

The way Tapiola was conceived,

its construction and financing organization is exemplary by world standards. The initiator was Heikki von Hertzen, the president of the Finnish Housing Foundation, a private non-profit organization brought to life by a consortium of trade unions, family welfare leagues and other national organizations. The competition for the three-dimensional town plan was won by Aarne Ervi and later many well-known architects designed its buildings.

The result is visually superb, the totality of its self-contained community environment positively utopian to Australian eyes (when I saw it in 1966, I felt that I would probably not see anything comparable in Australia in my lifetime). In spite of Tapiola's vast open landscaped spaces, it houses at least twice our typical suburban density. The key to this is obviously the carefully planned mixing of widely spaced high-rise buildings with grouped and individual housing types (a procedure made impossible by our restrictive two-dimensional zoning rules). An unused brick pit became a central lake around which community buildings were placed. Landscaping hides cars, pedestrians and cars are separated, there are none of the visual horrors of advertising signs,

overhead wires, but instead only a sense of serenity of man-made objects beautifully related to natural landscape.

No one building group stands out from the totality of the experience. They are all, virtually without exception, excellent and designed by many independent architects (among them Aarne Ervi, Toivo Korhonen, Kaija and Heikki Siren). The fact that their buildings are all different and yet relate effortlessly and achieve visual coherence, contributes so much to the success and essence of the totality. Finnish architects by their training and cultural heritage have reached a level of civilization in their work that makes them respond to the challenge and high moral aim of achieving totality in this way. (One hates to imagine the visual excesses and desperate competitive individual glory seeking that would result from an Australian group endeavour of this kind!).

The cultural climate in which such things can happen is so very different from our own. The general public in Finland takes a keen interest in architecture and planning. Environmental issues, their social and aesthetic implications are a matter of universal concern and politicians have planning platforms in their election policies (what a far cry

from our own who consider effective planning procedures to be politically untenable). The public interest and concern in environmental matters reaches its peak in the reverence Finns have for their great architects and designers, in particular the position Aalto enjoys in his own country.

From the very beginning of his practice in the 1920's, he has produced memorable epoch-making buildings; the library at Viipuri with its magnificent spaces and first use of moulded plywood on its interiors and furniture; the Sanatorium at Paimio with its expressive structure and planning organization, and many others. His work has a unique organic quality both in planning and form. The subtle use of few materials; the white sculptural forms combined with beautiful timbers in his interiors are brilliant essays of restraint that combine elegance with a warm human inviting atmosphere. The excellence of workmanship with its delicate and accurate detailing are evidence of the high level of craftsmanship in the country which allows architects to demand tasks in their designs which we would be reluctant to even contemplate.

The hard edged geometry in the tradition of modern European architecture takes on a new life

from his hand, and from that of so many of the subsequent generation of architects.

The fact that their work is so highly regarded in their country is evidenced by the existence of the Museum of Finnish Architecture, an organization which receives government support and which is responsible for arranging this exhibition.

For a small country of a mere 5 million people to bring together such a fine collection of work and show it in many parts of the world is in itself a great cultural achievement. We must applaud such an effort and be grateful for the initiative that has made it possible for us to enjoy it. It can be only hoped that the influence which this exhibition will undoubtedly have in Australia will inspire us and make us resolve to set our sights higher than in the past for the sake of the future of our own environment.

HARRY SEIDLER

National Romanticism

- 1 Gesellius, Lindgren, Saariñen **Hvitträsk, the architects' house, Kirkkonummi, 1902**
- 2 Lars Sonck & Valter Jung **Bank interior, Helsinki, 1904**
- 3 Lars Sonck **Eira Hospital, Helsinki, 1905**
- 4 Lars Sonck **Cathedral, Tampere, 1902-07**

Art Nouveau

- 5 Nyström, Petrellius, Penttilä **Apartment House, Helsinki, 1901**
- 6 Onni Tarjane Takaharju **Sanatorium, Punkaharju, 1900:1903**
- 7 Selim A. Lindqvist **Villa Johanna, Helsinki, 1905:1906**
- 8 Selim A. Lindqvist **Villa Ensi, Helsinki, 1910:1911**

Art Nouveau — Constructivism

- 9 Selim A. Lindqvist **Commercial Building, Helsinki, 1900**
- 10 Sigurd Frosterus **Competition entries for the Viipuri and Helsinki railway stations, 1904**
- 11 Selim A. Lindqvist **Electric Power Plant, Helsinki, 1908/1913**

Monumentalism

- 12 Eliel Saarinen **Project for the Palace of Peace, the Hague, 1905**
- 13 Eliel Saarinen **The Parliament House, competition entry, Helsinki, 1908**
- 14 Eliel Saarinen **Railway Station, Helsinki, 1904:1906-14**

Saarinen's Town Plans

- 15 Eliel Saarinen **Canberra-plan, competition entry, 1912**

- 16 Eliel Saarinen **Helsinki decentralization plan, 1917-1918**

Classicism of the 1920's

- 17 Sigurd Frosterus **Department Store Stockmann, Helsinki, 1916:1924-30**
- 18 Martti Välikangas **Käpylä Garden City, Helsinki, 1920-25**
- 19 Gunnar Taucher **Communal Workers' Apartments, Helsinki, 1926**

Early Functionalism

- 20 Alvar Aalto **Theatre, Turku, 1928**
- 21 Alvar Aalto & Erik Bryggman **Exhibition Building, Turku, 1929**
- 22 Erik Bryggman **Burial Chapel, Parainen, 1930**

Functionalism

- 23 Alvar Aalto **Offices of the Newspaper 'Turun Sanomat', Turku, 1929**

The building accommodates the editorial offices, the printing shop, the administrative and mailing department and apartments for senior executives. The structural frame is of reinforced concrete, while the circulating back-up wall is of lightweight concrete. Various types of skylights are fitted into the flat roofs. This was the first time Aalto experimented with large, round skylights on a conical concrete base. Due to the slab construction, the reinforced concrete frame can exhibit either a symmetrical or asymmetrical column arrangement.

- 24 Alvar Aalto **Library, Viipuri, 1927-35**
The library is in the city of Viipuri, part of Russia since the war. The building comprises a library with a lending department and reading rooms on different levels. The lower wing has a

lecture room downstairs and administrative offices upstairs. The light streams in through round, conical skylights, about 6 ft. in diameter, and is reflected so that a shadowless, diffuse light is given. The artificial lighting follows the same principles. The undulating ceiling of the lecture hall is so designed that every point in the room is acoustically 'alive'. The reflections off the ceiling are planned so that the sound waves are dispersed as far as possible from the speaker, no matter where he stands in the room along its periphery.

- 25 Alvar Aalto **Tuberculosis Sanatorium, Paimio, 1929-33**

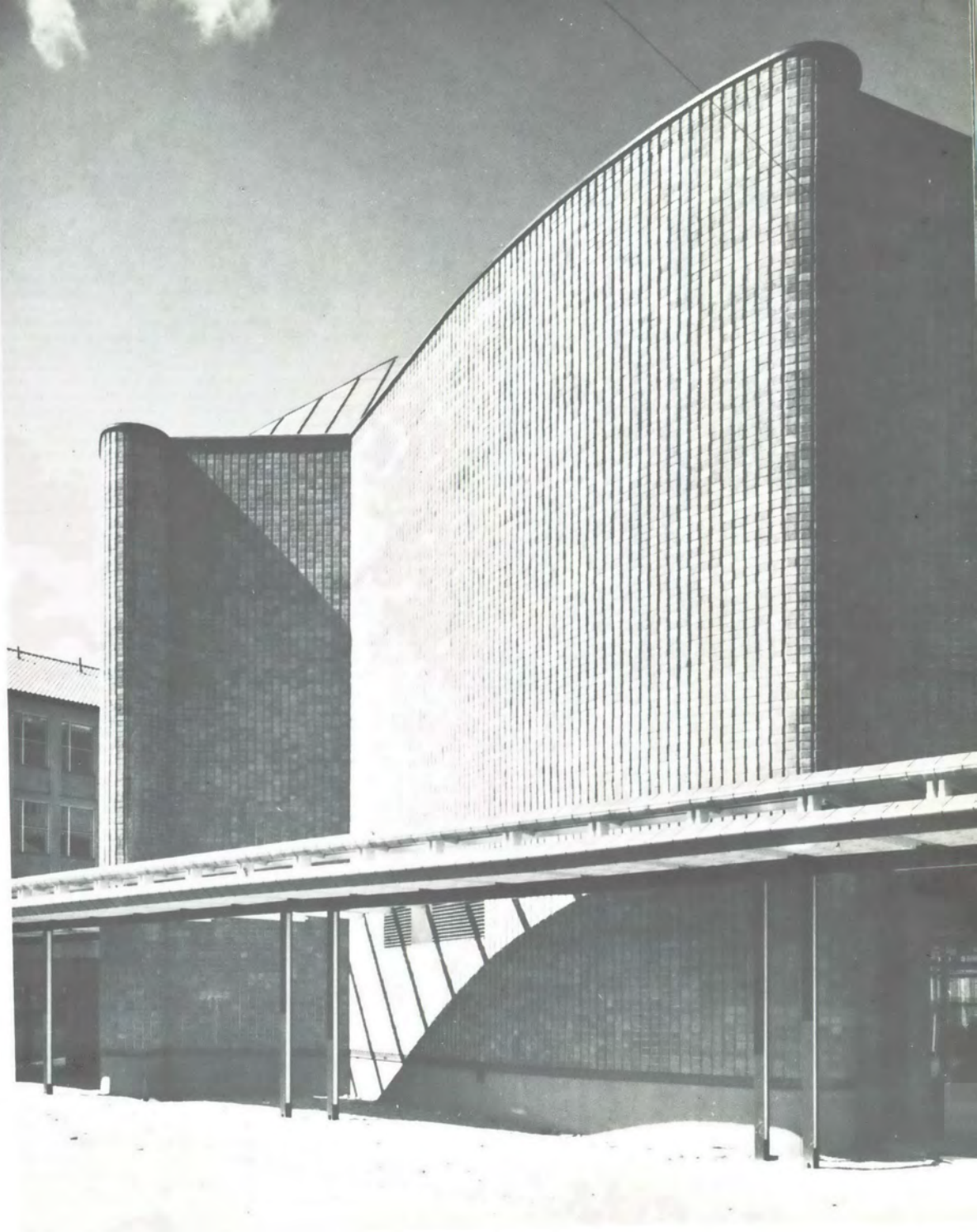
The sanatorium, which has c.300 beds, was built with the aid and co-operation of some fifty communities and certain towns.

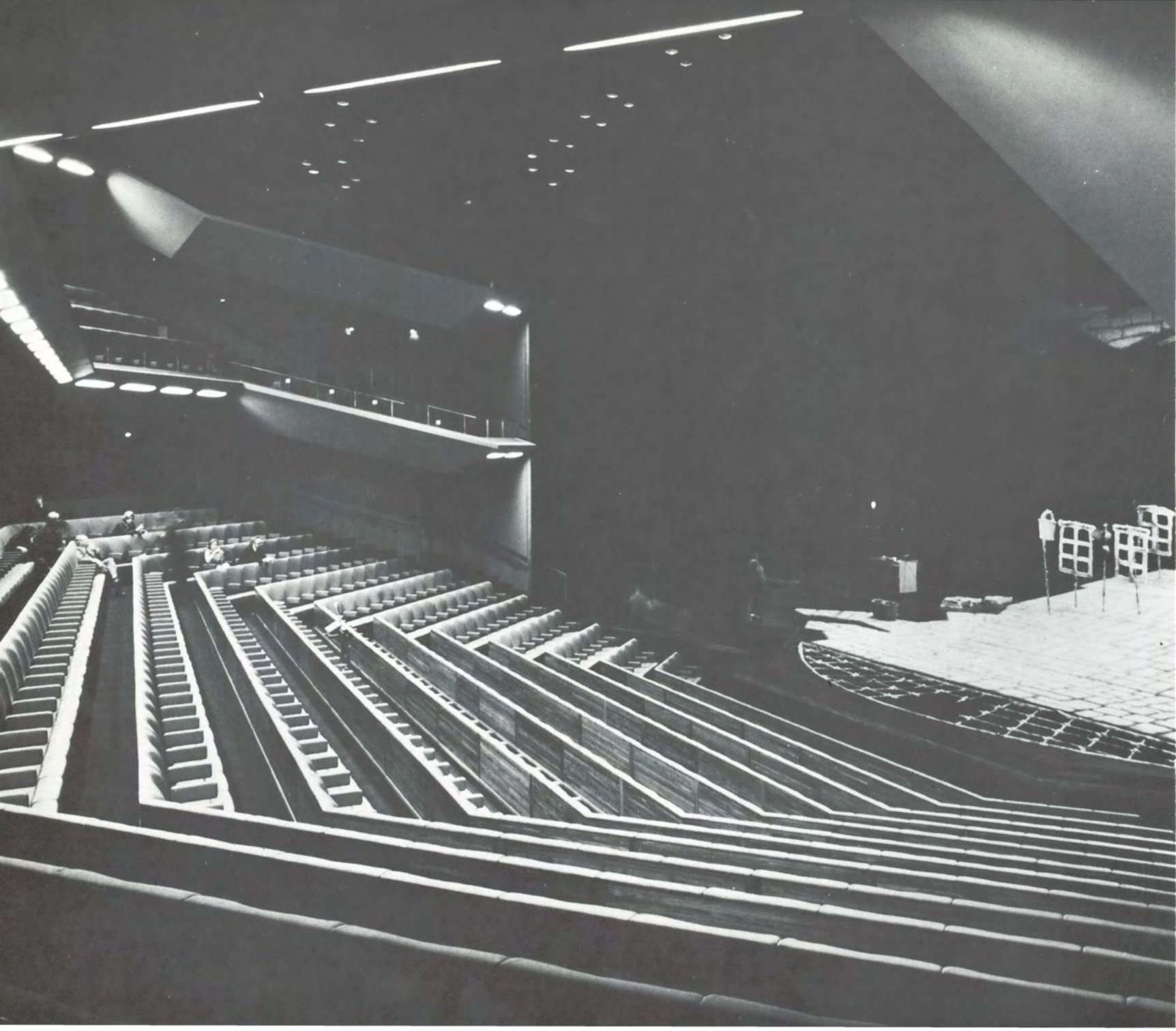
The main architectonic idea was to create maximum comfort for patients, who often stay at the sanatorium for long periods. The various activities of the sanatorium are concentrated in separate wings, freely planned to make the most of the weather conditions. The furniture and most of the details were especially designed for the sanatorium.

- 26 Alvar Aalto **Cellulose Factory at Sunila, Karhula, 1936-39/1951-54**

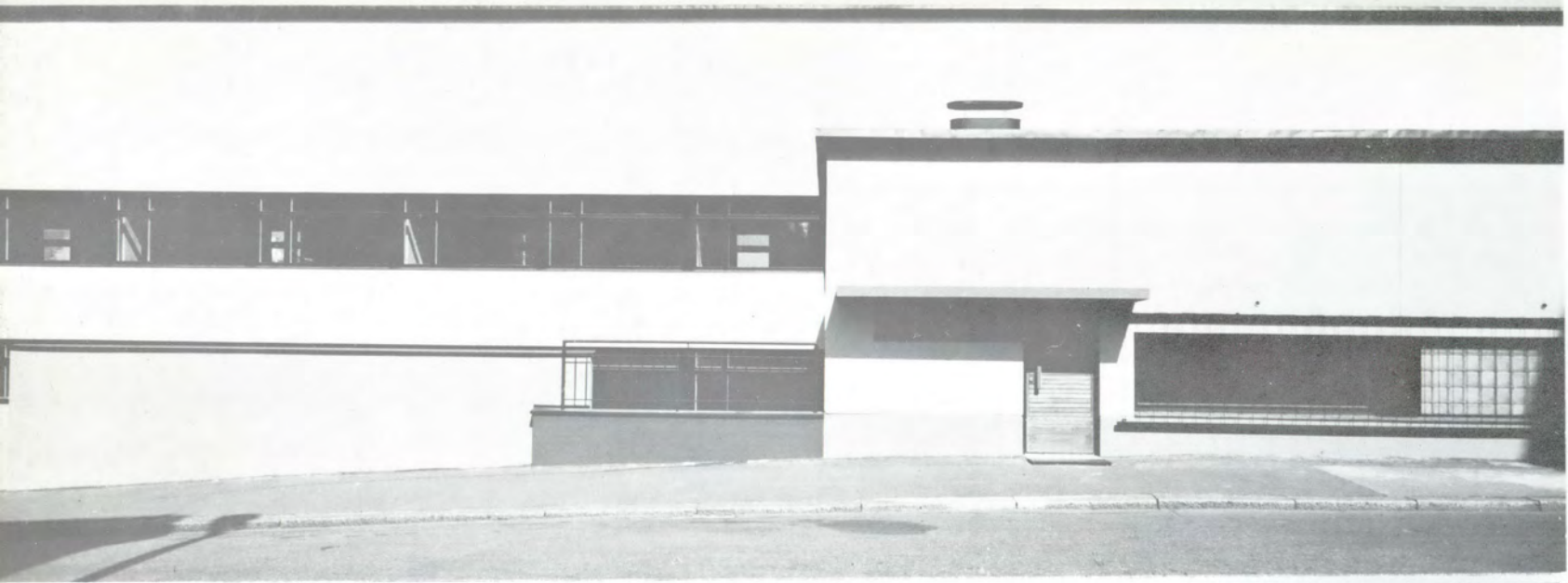
The factory is situated on an island with a steeply sloping shore so that sea-going ships can tie up directly without requiring special port facilities. A narrow strait separates it from the mainland, where the residential areas are located.

The frame of the factory is concrete, the walls being mostly of brick. One of the main themes of the architectural conception resulted from the complicated materials handling circulation associated with the cellulose fabrication process — a continuous movement of raw materials and their intermediate products. The housing is built in terrain interspersed with countless outcrops of rock, hills and small valleys. The basic





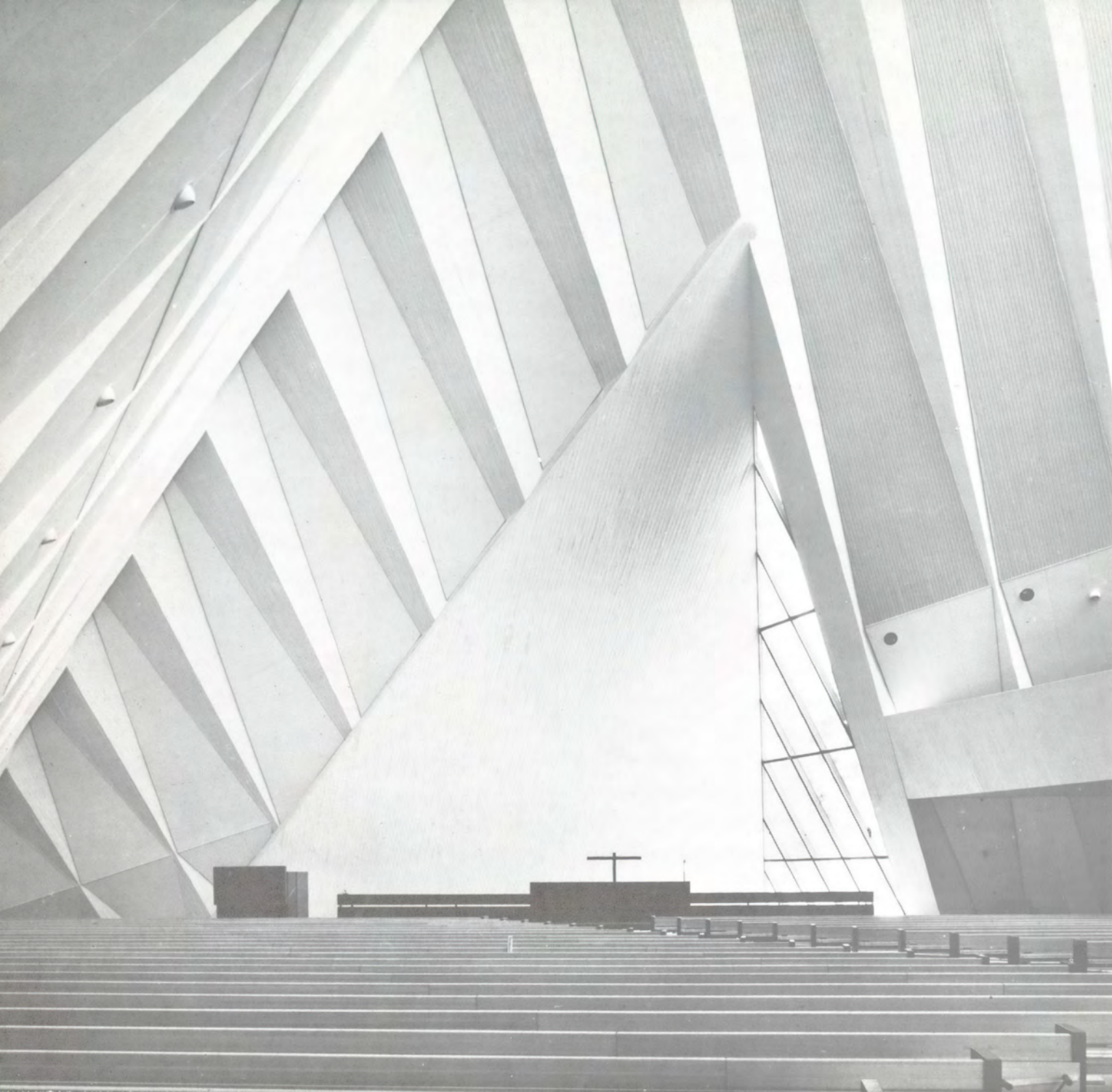




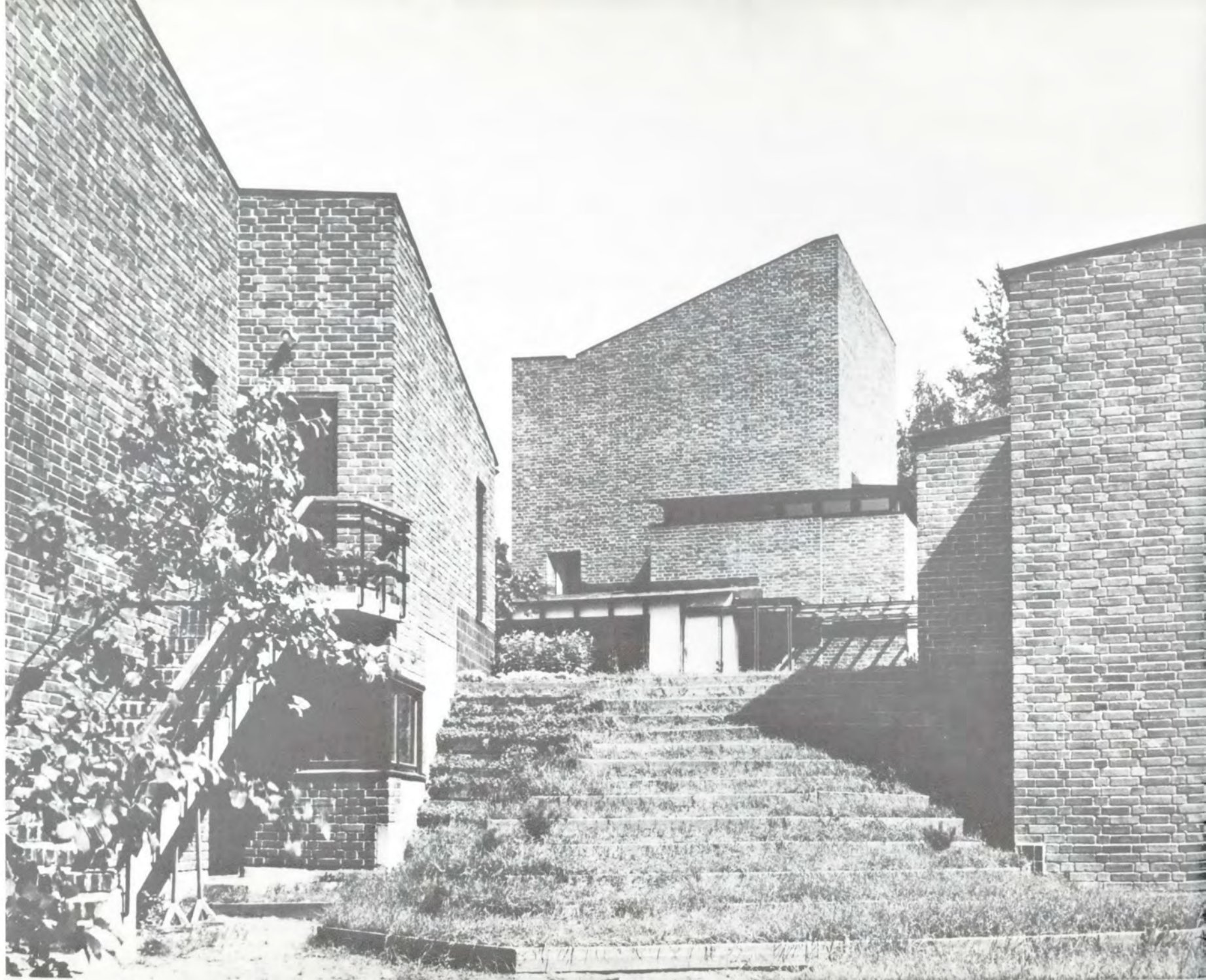


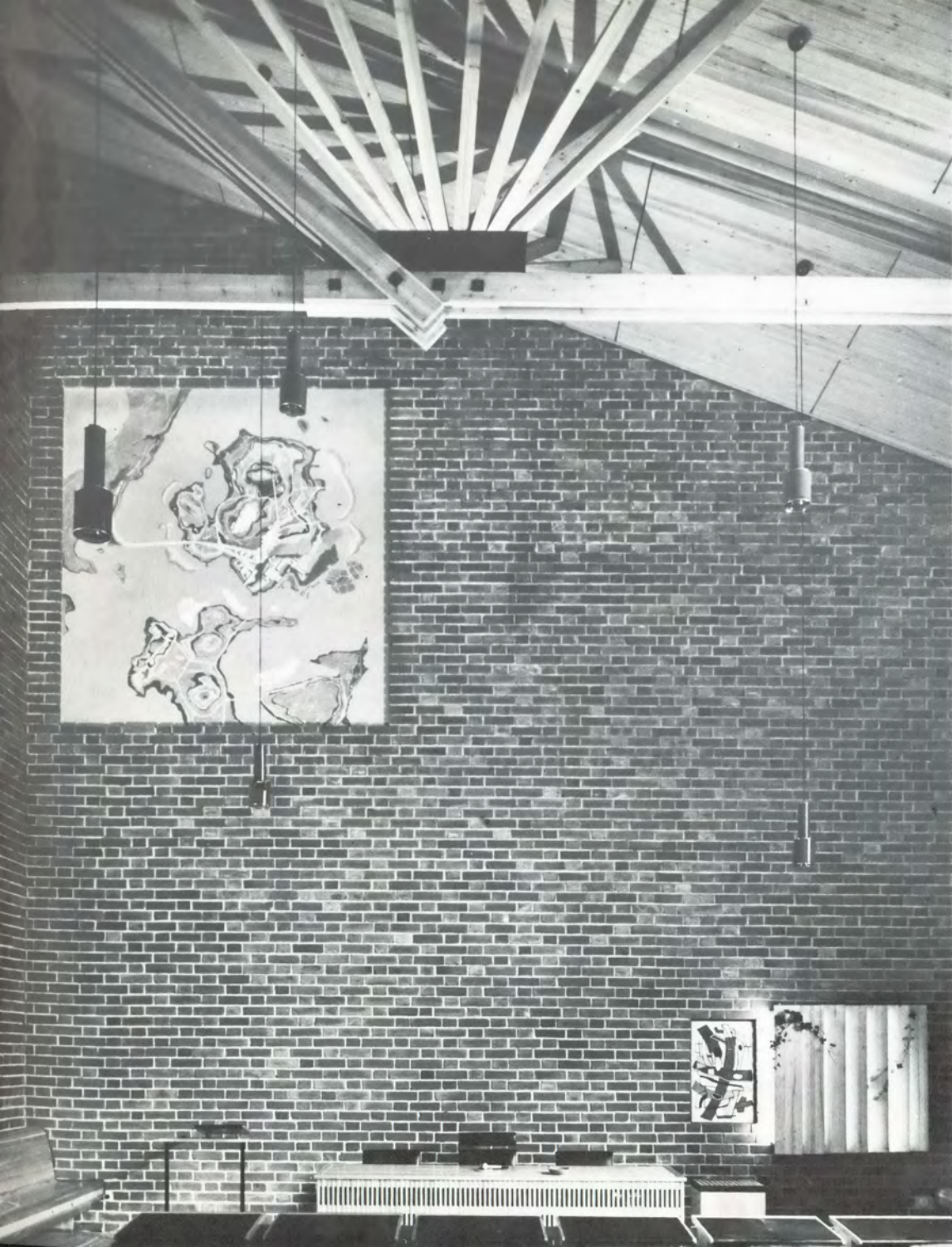




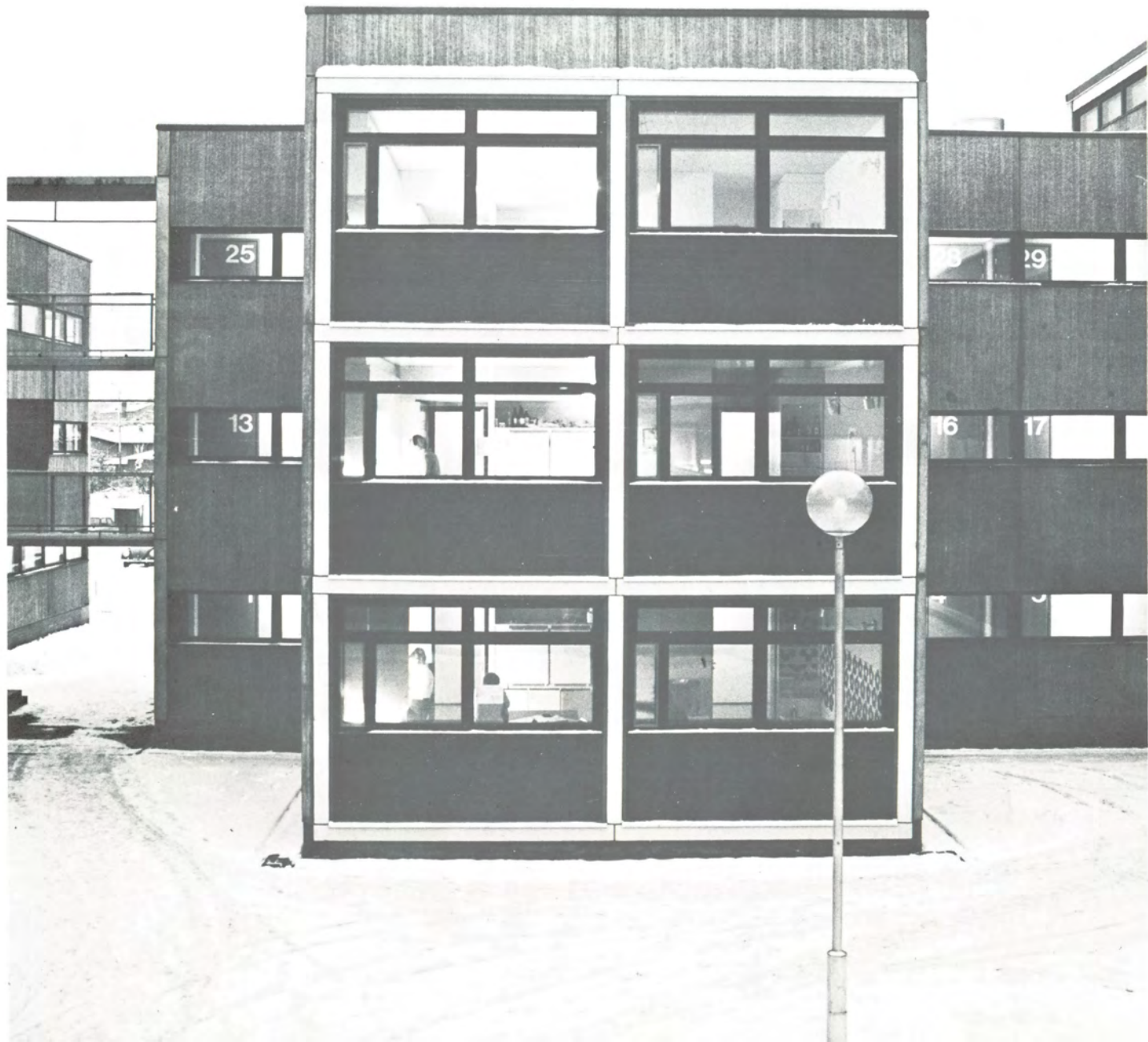


















Niemelä Farm House.
Seurasaari open-air
museum. Helsinki.

idea was that the south slopes of the hills are for housing, the valleys are for traffic and gardens. The entire development is divided internally into different groups, each of which has its own independent architecture.

27 Alvar Aalto Villa Mairea, Noormarkku, 1938-39

The main building, open gallery and sauna, form a group around a courtyard containing a swimming pool. As the owner has a large art collection the plan is based on the idea of the connection of everyday life with art. The ground floor forms one large room, which by means of movable partitions can be divided into smaller sections; a hall, drawing room, library, dining room. The partitions consist of deep closets, which also serve for storage of paintings and sculpture. All the interiors, including the furniture, were specially designed for this house.

28 Alvar Aalto Finnish Pavilion at the New York World Fair, 1939

Determinants in the creation of the pavilion were the significance of Finland's northern location and the attempt to achieve a combination of horizontal and vertical effects. The 52 ft.-high pavilion consisted of four storeys in all. The top series of photographs showed the country; the next, the people; the third, somewhat lower down, work, and finally the bottom series depicted the results of the above three factors — the products. By using free architectural forms and sloping wall surfaces the uppermost series of photographs and products became visible to the spectator, as did those on the lower walls.

29 Erik Bryggman Sports Institute, Vierumäki, 1936

The Sports Institute is in most beautiful natural surroundings on the Salpausselkä ridge, about 540 ft. above sea level, on a crystal-clear lake. Thanks to its excellent territory the place is ideal for both winter and

summer sports and for an institute of physical culture.

The high central wing, which contains the offices, teachers' rooms, library and students' quarters, connects with the dining-room and clubroom wing in the west and with the gymnasium in the south-east.

30 P. E. Blomstedt Pohjanhovi Hotel, Rovaniemi, 1936

This tourist hotel stood on the Arctic Circle by the Kemijoki river, but was destroyed during the war. The lounge and saloons faced north, giving a view of the midnight sun and Northern Lights. The upper floors contained the bedrooms facing east, overlooking the river towards Ounasvaara fell. From the beginning the building was planned to allow for as much adaption as possible, so that the main part could be raised by two storeys and so that more beds could be placed in the hotel rooms as needed.

31 Erkki Huttunen Nakkila Church, 1937

This country church was built for a congregation of 1,000 of which 150 can be placed in the gallery. The church is built of brick, the vaulting and steeple of concrete. The ceiling is corrugated boarding for acoustic reasons. In the basement is a burial chapel and a crypt.

32 Yrjö Lindegren & Toivo Jäntti Olympic Stadium, Helsinki, 1934-40/-52

The stadium was constructed for the 1940 Olympic Games, but work was interrupted by the war. The grandstand was later extended so that the total capacity of the stands is now for about 50,000. The arena has a 400m track, a 65 x 100m football field and plenty of space for field events. The training quarters, changing rooms, showers, etc., are under the grandstand and the east stand. In the north-west wing, extending from the grandstand, is a sports museum.

33 Hilding Ekelund & Martti Välikangas Olympic Village, Helsinki, 1939-40

This was the largest and most notable modern housing development, after the Sunila project, to be built in Finland as a complete unit. The area was named the 'Olympic Village', because it was intended for housing sportsmen during the 1940 Helsinki Olympic Games, which were cancelled because of the outbreak of the war. The area consists of some 40 different buildings containing about a thousand flats.

Recent Architecture

34 Aarne Ervi Tapiola centre, 1954

The centre plan is based on an architectural competition held in 1954. The middle part, which consists of an office tower and a shopping centre, was completed in 1961. A swimming baths and church (Aarno Ruusuvuori, 1965) have been built around a large reservoir, and a theatre, library and hotel will later be constructed here. The shop group comprises some twenty shops of varying size. Goods are transported from the outer side of the small yard. Banks in the office block are at the square level. On the other floors are various local government offices and public departments.

35 Alvar Aalto House of Culture, Helsinki, 1958

The building is a meeting hall for several labour organizations. The main task was the creation of a large hall which could be used for both concerts and congresses. As these different functions call for perfect acoustics the interior took the form of a clam shell in concrete combined with wood and tile. The asymmetrical and architectonically free form of the concert hall used a new facade element. By employing a wedge-shaped special brick, which had been developed for this purpose, it was possible to use the same brick to make the exterior walls curve with different radii. A canopy on pillars links the

concert hall wing with the office wing and demarcates the courtyard facing the street.

36 Woldemar Baeckman Sibeliusmuseum, Turku, 1968

The museum is part of the Swedish University (Abo Akademi) in Turku, and is situated amidst small-scale historical buildings in the area around Turku Cathedral, by the Aura river. It houses not only the music history collections, but also the university's departments of music and art history, the latter temporarily.

The Sibelius Hall, with 90-100 seats, is intended mainly for chamber music performances. In composition, the square (3.00 x 3.00 metres) in all three dimensions, is the basic unit. The roof of the Sibelius Hall consists of four shell constructions (hyperbolic paraboloids) on a square (9.00 x 9.00m) ground plan. The main materials are clean-cast, untreated concrete, dark brown clinkers, natural coloured linen, interpregnated pine, glass, bronze.

37 Timo Penttilä City Theatre, Helsinki, 1967

Because of the unrestricted and relatively large site it was possible to locate the important areas of both stages on the same level. The architect tried to preserve the park-like character of the site and the building was partly sunk into the deep rock.

The public areas form a long strip along the south side of the building. This gives the cloakroom and foyer of the large stage an open view of the park and bay. The cloakroom and foyer of the small stage are inside the building without a view to create an enclosed and intimate atmosphere. The large stage is a traditional theatre stage-auditorium arrangement with moving portal and fire-curtain. The distance to the stage was kept at a minimum. There are 920 seats in the large auditorium.

The great adaptability of the small stage is partly due to the construction of the seating, the arrangement of which can be changed on four moving

carriages. It can quickly be adapted from a normal seating arrangement right up to a ¾ arena.

The frame of the building is reinforced concrete, the facades glazed ceramic tiles.

**38 Reima Pietilä, Raili Paatelainen
Dipoli, Student Union Building,
Otaniemi, 1966**

Dipoli, the student union building, operates during the term as the main restaurant for 5,000 technical students and serves the 2,000 students living in the technical students village. Between terms the village operates as a hotel and congress centre, with Dipoli as the main building.

The café, student and general restaurants, main hall and upper lobby of the main storey can be combined or separated for different functions by movable walls. The lobby and hall areas of the first storey are also organized so that they can be linked to serve the same major event or cut off to act as hall, theatre, meeting rooms, general restaurant and students' restaurant and club.

The free-form roof of the main hall and restaurant is supported by main beams running in various directions and one-way secondary beam systems, which vary direction in the different sections. The concrete slabbing on the lower surface gives an irregularly undulating space-type surface. The surface materials of the building are copper, wood, bare concrete and natural stone.

**39 Aulis Blomstedt Annex to the
Workers' Institute, Helsinki, 1959**

The old part of the institute was built in 1927 in the neo-classical style then common throughout Northern Europe. Approximately 7,500 people attend the Workers' Institute, which functions in the main as an evening school. During the daytime the premises are used as an elementary school with 15 classes. The extension is joined to the older part in such a way that the original staircase well also serves the extension. In the new section is a large assembly

hall with a stage, a restaurant for pupils, two large auditoriums, and special classrooms and smaller lecture rooms. Because of the considerable difference in level between the surrounding streets, the yard is bounded to the south by a high rockface.

**40 Toivo Korhonen University,
Tampere, 1960/1967**

The university stands in an area reserved for future public buildings. The town here is dominated by 7-10 storey buildings. In surroundings such as this, a building of this size can make its presence felt only by means of simple, large elements of form. The plan is cruciform in shape. All the rooms calling for large spans and great heights — the main hall, lecture rooms, library — are in the main mass. Large bank surfaces divide the university from the nearby industrial area and passing traffic, whereas the wall facing the view is all glass. The narrow wings for the various institutes mainly contain small rooms, and as the space requirements here may change, the plan is reminiscent of an office building.

The drama studio, which belongs to the second building stage of the university, is not a separate theatre but the university laboratory for theatre teaching and research. Consistent with its laboratory nature, the theatre is not split into the usual auditorium, stage, wings and dressing room sections.

**41 Osmo Lappo Kajaani Garrison,
Sports Centre, Kajaani, 1962-1964/1968**

The barracks buildings form a horseshoe. The canteen, sports building and soldiers' quarters surround the central courtyard, and the entrances to the men's premises open to it, while service traffic runs from the outer edges of the group of buildings. The sports hall has two gymnastics halls that can be combined and a swimming pool with a separate auditorium seating 200. A reinforced concrete beam system covering all hall

areas rests on the lengthwise outer walls of the halls. The outer walls are supported by reinforced concrete pillars at 10-metre intervals. The entire structure is strengthened by massive towers on the northern side. The soldiers' quarters are for the garrison's leisure-time use. They have a men's hall, a cinema room seating 450, which forms the garrison's largest lecture room and where educational films are shown, and which is an ordinary cinema in the evenings. Selection of the building materials are aimed at high wear resistance. There are few painted surfaces. The facade material of all buildings is red brick.

**42 Kaija and Heikki Siren Studio
Theatre, Helsinki, 1954**

The studio theatre is an extension of the old National Theatre (1902). It is an enterprise working independently, but technically connected to the old theatre, so that the subsidiary rooms of the latter — dressing-rooms, dressmakers' shop, carpenters' shop, etc. — also serve the new stage. The new building also contains a drama school and a restaurant.

**43 Alvar Aalto Vuoksenniska Church,
Imatra, 1958**

A church has not only a sacral but also a social function to fulfil, and this is particularly true in a highly industrial community such as Vuoksenniska. To resolve this problem the architect has endeavoured to achieve a form which is fully that of a church, but nevertheless so that the social activity is uncompromisingly provided for.

Thus the fundamental concept of the church was of a series of three church halls, which lead into one another and can be connected as needed by means of movable walls.

The windows in the curving longitudinal wall form a canted, diagonal pattern so that together with the underside of the ceiling they reflect and distribute the spoken word to the entire congregation.

**44 Oja Laiho and Bengt-Vilhelm Levon
Movable element-built church,
Vuosaari Helsinki, 1969**

The building, on a rocky site, is temporary, and there is still no information on the ultimate use the site will be put to.

The building is designed for disassembly and transfer to some other part of the suburban parish. The bearing steel shell is set directly in the rock and on underground concrete pillars. This has left the surroundings unchanged. The wall elements and upper and lower floor elements, plywood-faced, are bolted onto steel struts. 12-22 cm mineral wool sheeting provides heat insulation in the elements, and asbestos cement sheeting gives sound insulation.

**45 Reima Pietilä, Raili Paatelainen
Kaleva Church, Tampere, 1966**

The church form began to take shape mainly through work with models. The best of many versions was selected and the drawings were made on this basis. The walls were of slip-cast concrete. Acoustic tile was planned for facing the inner walls, but in the event, the bare concrete surface was left on the inside and the outer side was faced with brick. The acoustic structures of the church were located between the beams of the one-way beam system in the upper floor layer. The church has seats for 1,050 and 80 performers can be put in the choir tribune. The floor material is sand-coloured clinker.

**46 Aarno Ruusuvuori Church,
Hyvinkää, 1961**

The church hall is shaped as a relatively sealed space, where people remain in contact with the external world only through the agency of the light falling from above. The principle of construction for this space rising to the light was solved by means of a corrugated slab. In marked contrast to the corrugated surface of the roof is the evenly illuminated back wall of the chapel, which direct the eye towards the altar.

The assembly hall, which can be

combined with the church proper, lies on the first floor, above the entrance. The work centre, a simple building like a wall, forms a termination of the churchyard.

47 Kaija and Heikki Siren Students' Chapel, Otaniemi, 1957

The chapel consists of a series of spaces, beginning with the partly enclosed forecourt, continuing through a low vestibule to a steeply rising nave, and terminating in an altar wall of glass. The view of the landscape through this glass wall has been the point of departure of the plan. Instead of an altar decoration in the ordinary sense, the tree-clad hill now serves as an 'altar-piece', with colour and lighting varying according to the season of the year. Only a cross has been erected outside the glass wall.

48 Alvar Aalto Town Hall, Säynätsalo, 1952

The commission for the design of the town hall was awarded in 1949 on the basis of an architectural competition. The moraine-like masses of earth dug from the foundations have been deposited in the centre of the building complex. Thus a central town hall plaza has been created one storey higher than the surrounding streets and buildings. Due to its elevated setting the plaza or civic assembly area is endowed with a quiet, intimate character, while at the same time it separates the public parts of the building from the stores along the street.

In addition to the local government offices with a chamber for the Town Council, there are apartments and a community library.

49 Viljo Revell in collaboration with Heikki Castren, Bengt Lundsten, Seppo Valjus & John B. Parkin Associates Town Hall, Toronto, 1958/1965

The project won the first prize in an international competition in 1958. The building consists of three parts: the podium, the towers, and the nucleus. The podium contains public

service offices at the centre of which there is a large circular lobby which serves as an access area. The towers contain offices to which the public does not normally have access, thus restricting public circulation to the base of the building.

In the nucleus is the Council Chamber, with adjacent rooms for the use of the public and council members.

50 Alvar Aalto 'Rautatalo' Office building, Helsinki, 1955

One of the main problems was the construction of a commercial building in the centre of the city, an area characterised by office buildings dating from the period 1925-30. An attempt was therefore made to design the structural bays so that their rhythm would fit in with the surroundings. The building is constructed on a reinforced concrete frame. The light, exterior metal framework carries only the glass facade and wind loads.

The interior is built around a travertine, skylighted hall. Lighting fixtures are installed above the skylights over the hall so that the illumination at night is the same as by day.

51 Viljo Revell & Keijo Petäjä Industrial Centre, office building, Helsinki, 1952

The architects attempted a clear expression of their idea through circulation, structure and mechanical installations. In order to avoid the effect of overweight bulk they tried to keep some open spaces, particularly at the first floor level through which there is a view of the sea from the street behind the building.

On the ground floor there is shop space and the entrance to a garage, on the first floor a café and the Palace Hotel grill. The second to seventh floors comprise offices, and the three floors above these the hotel, with 60 rooms and rooms for meetings, as well as a sauna-bath with a view over the harbour.

52 Arvi Ilonen Water Tower, Järvenpää, 1966

Most water towers in Finland have a

centric construction. The need for two tanks often dislocates what is otherwise a straight-forward construction principle. With the Järvenpää water tower, the aim has been to find a structurally simple design and a logical shape for the two tanks. The water tower is composed of structural and movement sections. The supporting structures, stairway tower and bearing wall, which has space for a lift, are slip cast concrete. The tank sections are pre-stressed concrete. The tank was built for the needs of 35,000 people. There is a panorama terrace on the water tower roof.

53 Timo Penttilä Ratina Stadium, Tampere, 1966

Tampere central sports field was built in the middle of Ratina peninsula on the site of a former gravel pit. The spectator stands were located on the slopes of the pit, apart from the main stand and the premises under it, which are on the open fourth side. Owing to the height differences, public access to the stands is from above.

The bearing structures are untreated site-cast reinforced concrete. The roof of the main stand is reinforced concrete. The 6.5 cm thick angled slab between the frame beams has an overhang length of 21 metres and a beam interval of 6.6 metres. The main stand takes 4,300 people. There are 2,550 seats and 1,200 standing places in the uncovered stands.

54 Viljo Revell 'Kudeneule' textile mill, Hanko, 1955

The plan is based upon a proposal entered for a restricted competition in 1953. The building complex is situated on the north side of Hanko promontory, and contains office and factory premises, in addition to ancillary rooms.

The fundamental principle — rooms as undivided entities — makes it possible to undertake flexible reorganisation of the production process and to carry out the construction in stages. The skeleton of the building is of reinforced concrete, the floor built directly on

the ground. The roof and the facades are of corrugated aluminium plates.

55 Aarno Ruusuvuori 'Weilin & Göös' Printing works, Tapiola, 1964

The sites in the Tapiola light industrial area permit relatively great building rights. Effective exploitation of the area requires a two-plane solution. The levels were also appropriate for a printing works, for accommodation differing in character. It was decided to solve the task with a constructive space element, which in repeated form constitutes the building entity. This constructive element is a body 27 x 27 m in size and in two floors. This intermediate plane is dimensioned for 2000 kg/sq.m, and supported by pillars and beams with a span width of 9 m. The central tower, which carries the roof, goes through this plane. The roof construction is suspended on this central tower, which means that there is a vertical support for 729 sq.m of floor area in the printing works. The tower is 3 m in diameter, and contains the ventilation plants. As a result, each unit is completely independent and viable.

56 Aulis Blomstedt Chain-houses, Tapiola, 1954

The groups contain a total of 12 apartments à c.97 m². Each forms a distinct repeating unit, in which the low section is used as a shed or sauna, or is reserved for later expansion. The row is almost completely enclosed from the road, but on the forest side each house has its own sheltered garden.

57 Yrjö Lindegren 'Serpent House', Helsinki, 1951

The plans for the construction are based on the idea of easily fitting the building into the varying shapes of the terrain, so that the unbuilt area could be preserved in its natural state as far as possible. This has been achieved by means of the 'pleated' shape of the building using specially designed step-lamellae. The direction and difference in altitude of the lamellae

conform with the demands of daylight and with the shape of the terrain. The living rooms are regular rectangles; the varying outer appearance of the buildings has thus not been achieved by means of vaguely shaped rooms. In addition to the apartments, there is also a service building in the area containing a day nursery and a kindergarten, a sauna-bath with swimming pool, central heating plant and a laundry.

58 Bengt Lundsten, Björn Krogius, Veli-Pekka Tuominen **Vaarala Terraced Housing, Hakunila, 1969**

The general idea of the project was to build a compact area on a small scale so that the outer areas are clearly differentiated according to their use. Motor traffic has been limited so that cars may use the streets within the blocks of houses only in special cases (service, ambulances, etc.). Normally these areas are meant for pedestrians only. Technical services and storage units have been placed in separate buildings. The apartments are all two storeys high and have fenced courtyards. These courtyards are connected to a collective courtyard in the middle of three houses. Parking will be isolated from the housing but connected to the pedestrians walks. The different characters of the various areas have been emphasised by plants and lights. The softness of the ground made piling necessary. Prefabricated basebalks lie on the piles. The framework is of light-concrete elements and rests on these balks. The remarkable lightness of these elements made it possible to minimize the number of the piles. The exterior walls are partly of light-concrete elements, partly of wooden elements, which also contain the windows and doors. Each apartment consists of a living room, 3 bedrooms, a kitchen, a bathroom and a sauna bath, a separate WC and a storage room for clothes. Many colours have been used in the area to give it life and individuality in contrast to the uniformity of the apartments.

59 Jan Söderlund and Erkki Vælovirta **Student Village, Turku, 1969**

The planners were given the commission on the basis of a 1967 competition. The objective is to build an original, economic housing project to meet the needs of the current population of ten thousand, which is expected to grow considerably, and to provide good conditions for study, attempting to avoid the dangers of isolation.

The building should take an estimated ten years, building two blocks a year. The completed village will have 2,700 single rooms and 450 family apartments. Administrative premises, club and leisure premises, sports and gymnastics premises, creches, a shopping centre and a restaurant will also be built.

The bearing structures are system-built concrete walls. The end walls are of concrete elements and the exterior room walls are wooden outer wall elements painted bright colours. Each block in the village has its own colour, making orientation easier. To avoid monotony, the courtyards between the blocks are designed differently.

60 Kaija and Heikki Siren **Terraced Houses, Kontiontie, Tapiola, 1955**

The area consists of 47 homes $\pm 87 \text{ m}^2$ in four row units, three separate garages and a building for auxiliary areas. As the areas have been planned for families with a number of children, the aim has been to create a peaceful garden-like courtyard milieu isolated from traffic. There is storage space for bicycles, gardening equipment, etc. in the yard of each home. The girders running along the building are concrete elements. The facades are wooden external wall elements, the largest element being $2.6 \text{ m} \times 2.3 \text{ m}$.

61 Toivo Korhonen & Jaakko Laapotti **Atrium houses 'Tonttukallio', Espoo, 1959**

With a view to taking advantage of all the good points of terraced housing, while at the same time creating a

sheltered residential milieu, the solution arrived at was the atrium type, in which each house has its own garden. The necessary passages for pedestrians were drawn between the rows of houses. There is parking alongside the through road north of the houses. Part of the site was reserved for service buildings. The residential units are of two types: $90 \text{ sq. m.} + 60 \text{ sq. m. garden}$, and $64 \text{ sq. m.} + 60 \text{ sq. m. garden}$.

62 Raimo Kallio-Mannila and Teuvo Koivu **Domino-System, 1964**

In this building system the sections can be standardized instead of the building.

The basic sections are the roof and floor elements, size $240 \times 480 \text{ cm}$, and the steel pillars. The system can be made to include a host of different sections, such as a pre-fabricated sauna, bathroom or WC. One common feature of the basic and supplementary sections is that they do not depend on the type of building in question, which may be a residential, business or public building.

Steel, timber or concrete can be used as the building material.

63 Kristian Gullichsen and Juhani Pallasmaa **Industrialized Holiday House System, 1968**

The aim of planning was a building system with such a high degree of pre-fabrication that erection merely means putting together ready-made sections, which are even surface treated. The basic structural unit is a cube formed by pillar and beam sections 225 cm long. The beams are attached to the pillars by wedged aluminium joint pieces. The foundation metal pillars fastened direct to concrete pillars coming to just above the surface of the ground, which can be regulated in the perpendicular and horizontal. The horizontal and perpendicular filler sections measure $75 \times 225 \text{ cm}$. The cottage can be adapted to taste by varying the plan and the outward appearance, especially the roof, by using special sections.

64 Kirmo Mikkola **Studio House, Järvenpää, 1967**

The aim was to build studios and adjoining flats for artists as economically as possible. The site is composed of forest with fine trees which were preserved, and a field clearing over which the studios look. The plan is open and can be divided in an individual way, chiefly by walls made up of fittings. The gardens are separated by hedges. The building contains 5 studio-flats $150\text{-}160 \text{ sq. m.}$ in size. The building also has a heating plant, a sauna, and a carport. The walls between the units are light concrete, the rest of the frame timber.

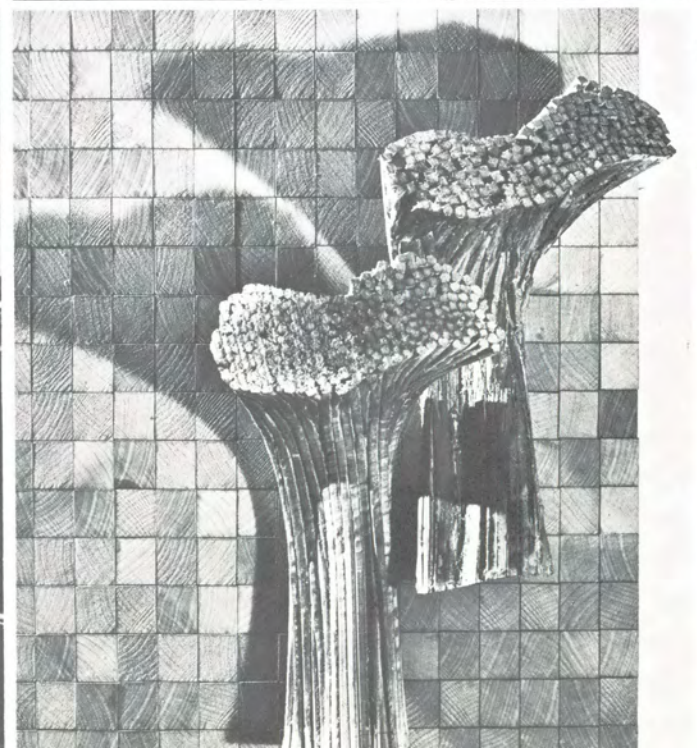
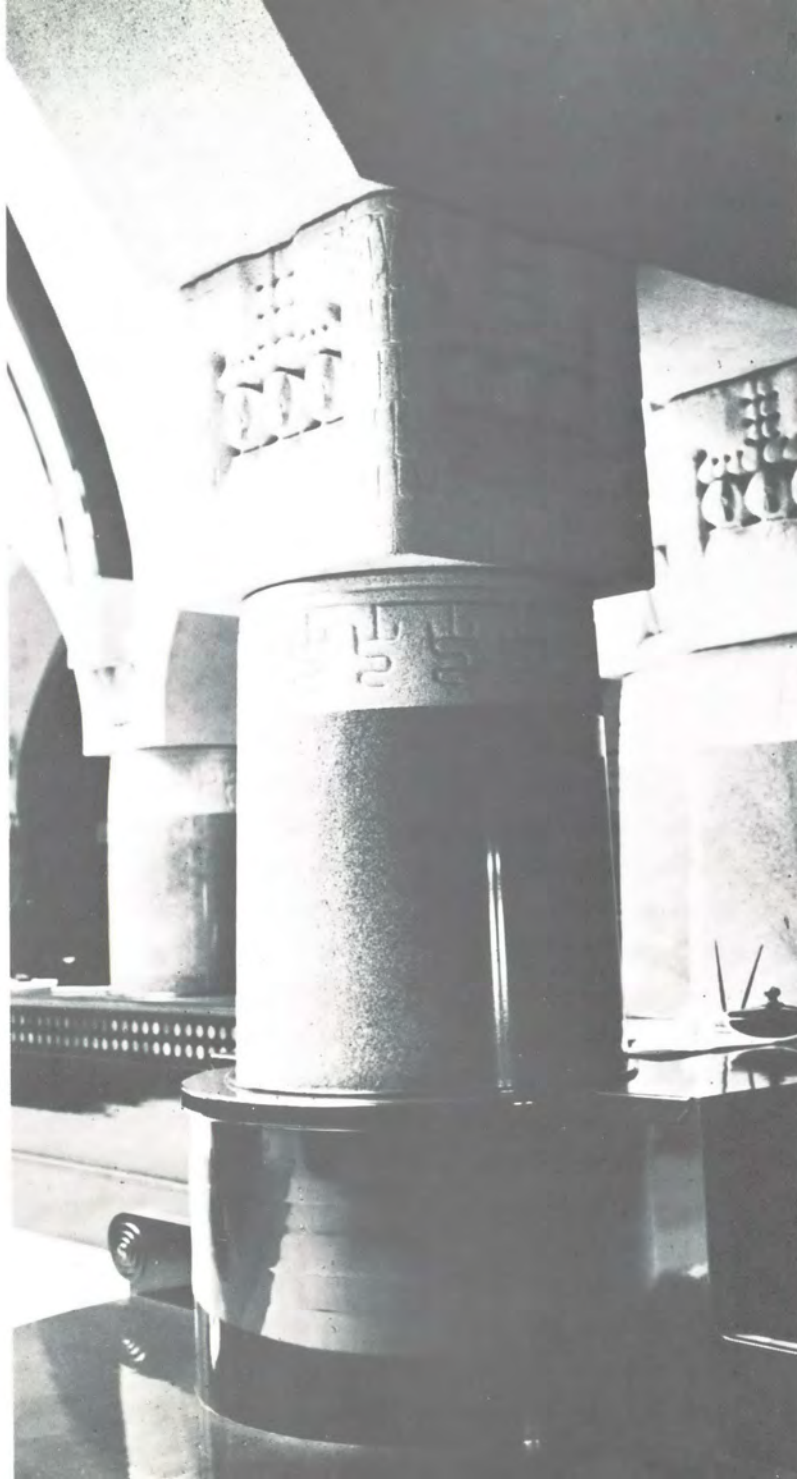
65 Ilkka Salo **Summer House, Naantali, 1967**

The objective was to build a summer cottage for a family of three, with a highly flexible interior and terrace, and a sauna. The surroundings were to be left entirely untouched. The aim was effective use of minimal space, and no separate bedrooms were built; the sleeping areas are divided off by curtains as required. There are many ways of dividing up the area into bedrooms of varying type, size and colour. The glass wall between the inner wall and the terrace can be pushed right out of the building along a beam.

66 Alvar Aalto: **Experiments in wood**

67 Alvar Aalto: **Furniture**

68 Alvar Aalto: **Lamps**



Lars Sonck, Valter Jung. Bank interior, Helsinki 1904
 Alvar Aalto. Stool Legs.
 Alvar Aalto. Experiments in wood.



Pettit: We've been telling Australians about the value of good architectural design for years, but it took the Finns to make an exhibition out of it.

Sevitt: Trade fairs for the display of manufactured goods to interested parties date from the Middle Ages, but the idea of attracting the general public was first brought forward by the Paris Exhibition of 1798.

Pettit: What has that to do with Saarinen, Sibelius and saunas?

Sevitt: Merely corroborative detail, intended to give artistic verisimilitude to an otherwise bald and unconvincing narrative.

Pettit: Stop making an exhibition of yourself.

Sevitt: Now, that's an idea. When does this one Finnish?

PETTIT & SEVITT BUILD ARCHITECT DESIGNED HOUSES IN SYDNEY, BRISBANE, NEWCASTLE, GOSFORD, WOLLONGONG, NOWRA, BATHURST, CANBERRA AND ALBURY.

