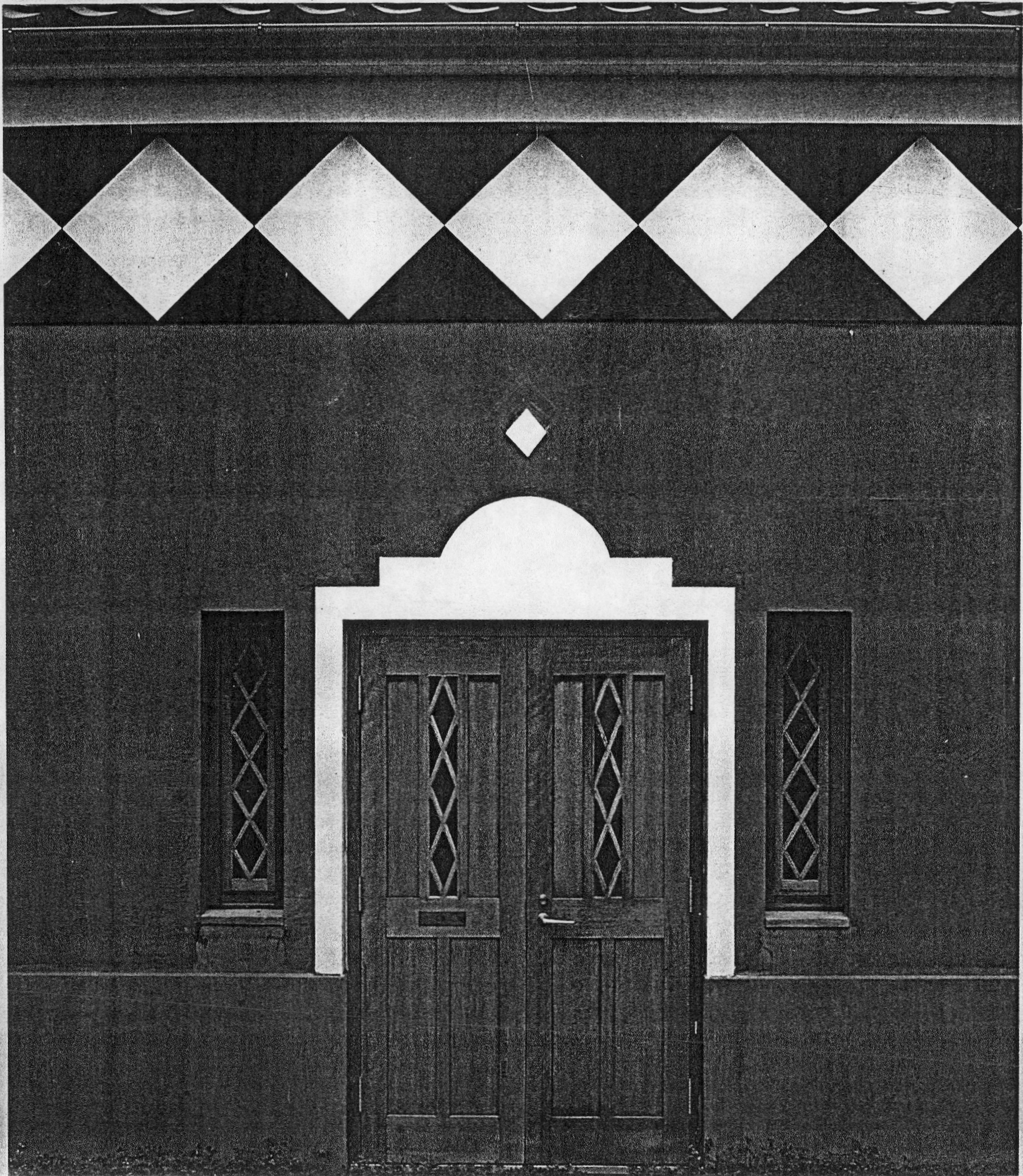
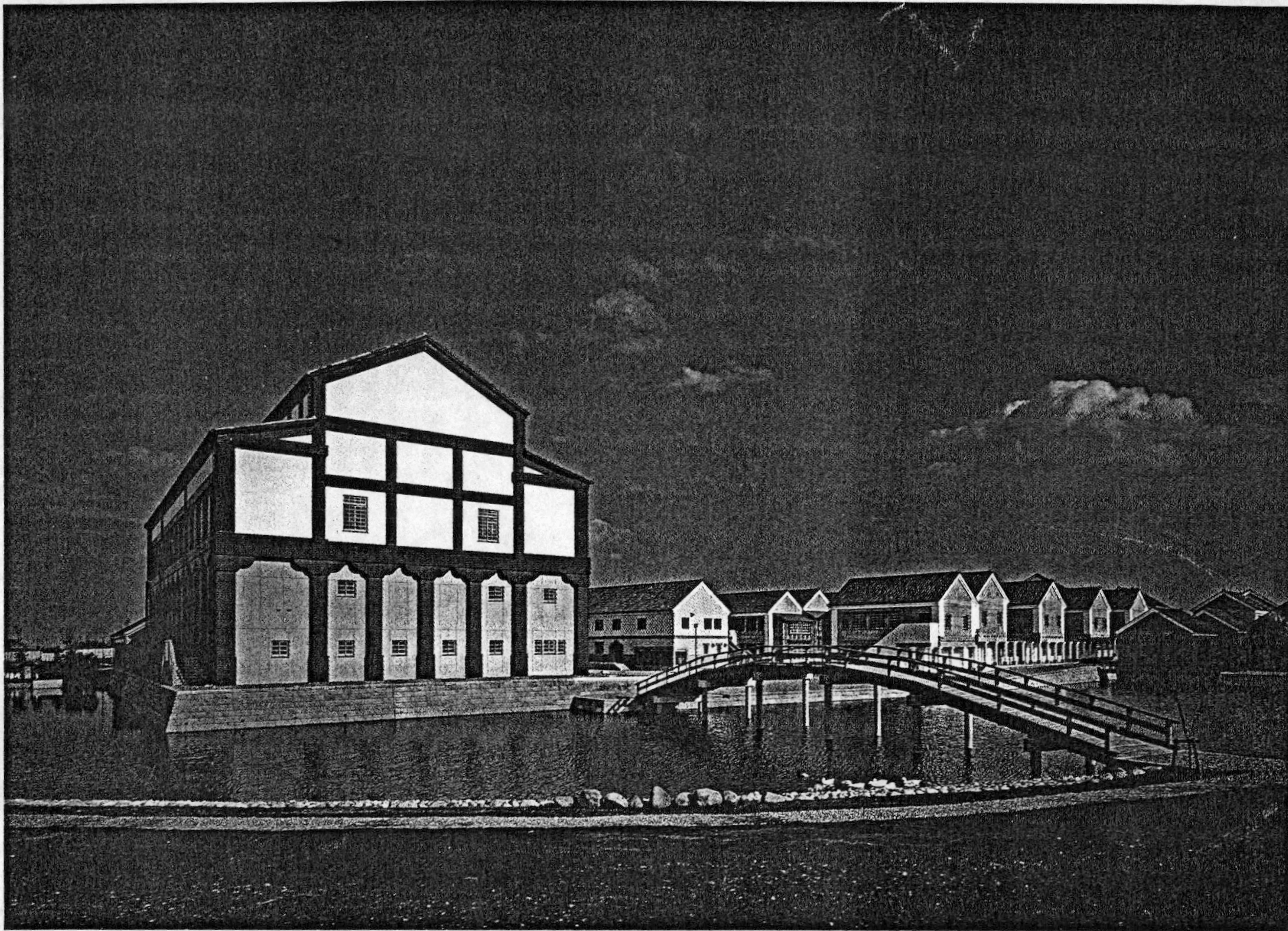


AJ

**CITY COOLS OFF AS
DOCKS WARM UP**
**ALEXANDER ON THE
SPOT IN JAPAN**





The greatest test of Christopher Alexander's *A Pattern Language* thesis is in his project for a High School on the New Eishin University Campus near Tokyo. In comparing it with another Japanese school by the architects Team ZOO, Richard Weston suggests the thesis doesn't stand up. Alexander's principles may have been followed to the letter, but then letters are mere prose. What was expected from this 'guru of the Design Methods Movement' was poetry.

POETIC PATTERNS

Christopher Alexander does not have much time for architecture as it is now practised. Describing his aspirations as a designer, he has spoken of 'the possibility of making a building that is like a life lived rather than some abstract, architected, formal object'.¹ His disenchantment set in during his initiation into the rites of Modernism under Leslie Martin at Cambridge and fuelled the research which produced *Notes on the Synthesis of Form*. Although Alexander renounced the approach of the *Notes* many years ago, until recently it has been all too easy to dismiss him as a wordy teacher/theorist—after all, those who can, do. But he now has several buildings to his credit and is active as a practising designer and building contractor.

User patterns compared

The campus of the New Eishin University, a combined college and high school near Tokyo, the school buildings

of which have recently been completed, is his largest realised project to date, 10-17. It was designed on site with active user participation and employed a 'pattern language' developed from *A Pattern Language* which Alexander and his colleagues at the Centre for Environmental Structure at Berkeley published in 1977 after 10 years of research.

The Kasahara Municipal Elementary School, with which the New Eishin campus will be compared here, was completed in 1983 to designs by Atelier Zo, members of the group of architects and designers known collectively as Team ZOO. Like Alexander, Atelier Zo believe in user involvement in design and are committed to making 'places that live'. Their architecture celebrates the activities it both houses and helps promote and, although it is not designed using Alexander's patterns, it overflows with many of the features he describes—indeed it is difficult to think of many

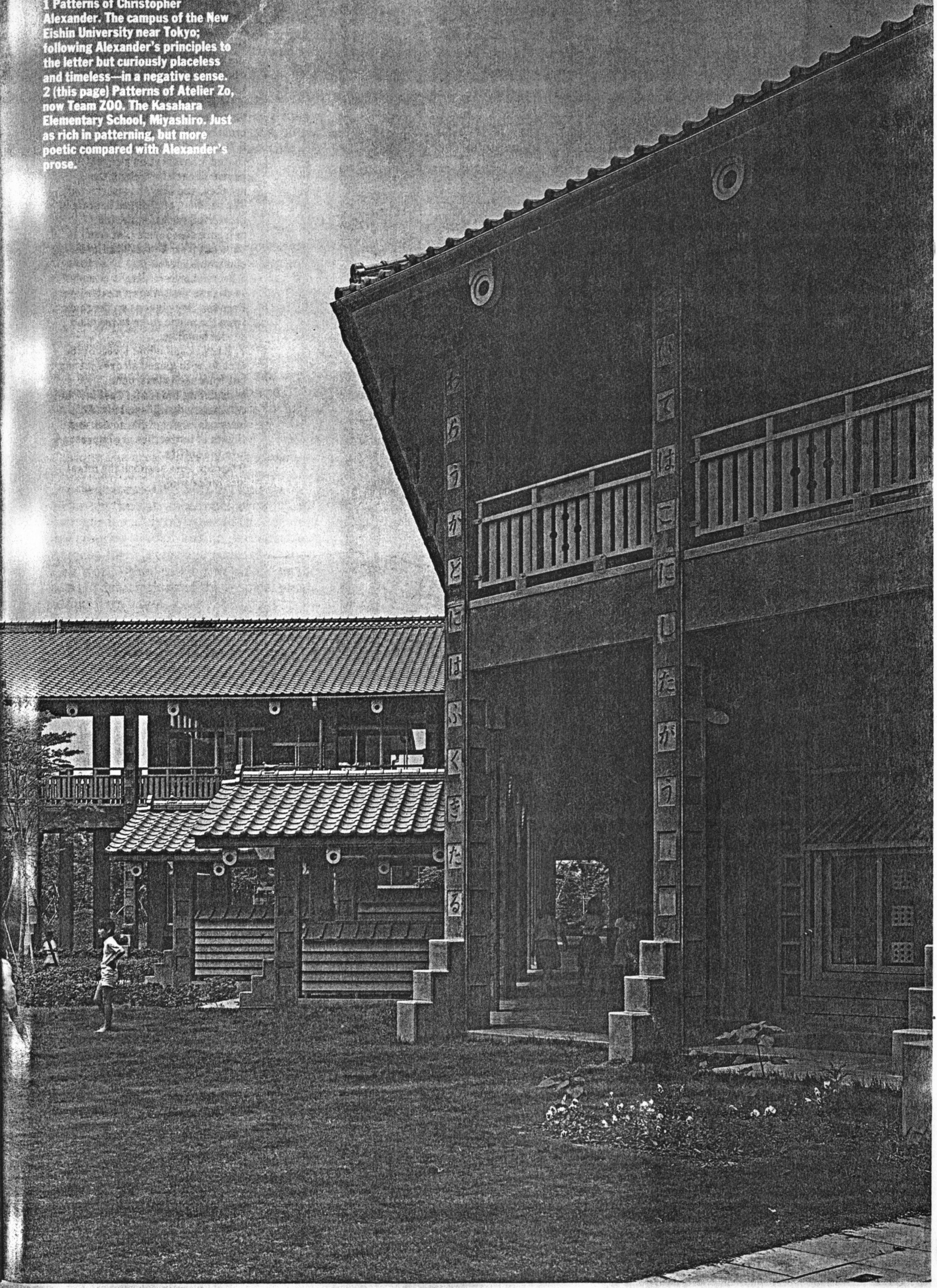
contemporary buildings which better illustrate the qualities that, he believes, animate traditional architecture.

Kasahara Elementary School

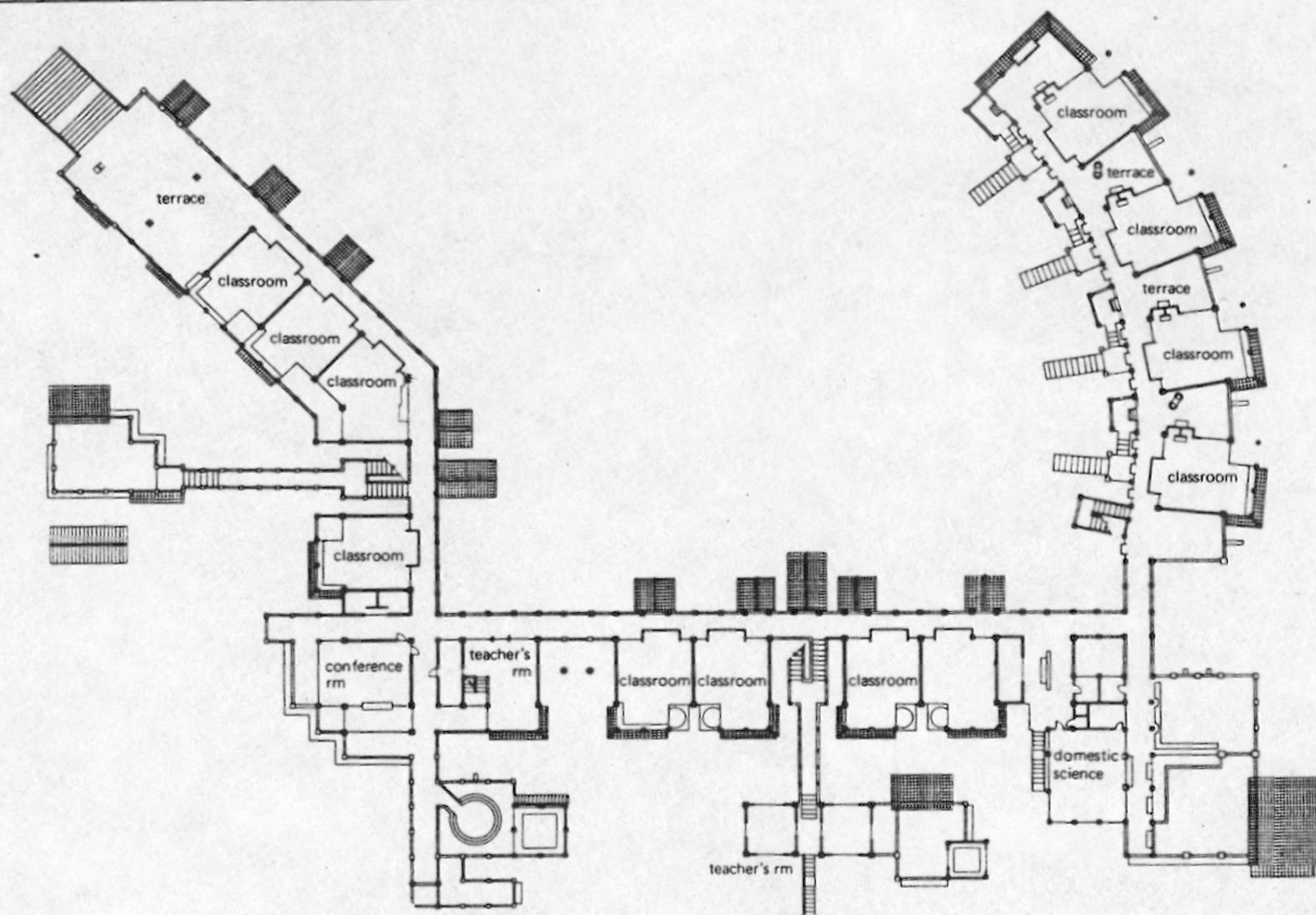
The school is situated at the edge of Miyashiro, a rural town in the centre of the Kanto Plain now considered within commuting distance of Tokyo. The classrooms are arranged around a central garden and linked by an open arcade at both ground and first floor levels, 3-9. The infant classrooms form a shallow crescent and the junior accommodation is in long straight wings, behind which are the hall, library, science labs, and music and art rooms. These create a series of small outdoor spaces and their roofs are also developed as gardens, on which the children can play and look back to the town. A curving wisteria trellis and steps run along the open side of the central garden and form the edge of the sports ground.

In their account of the project, the

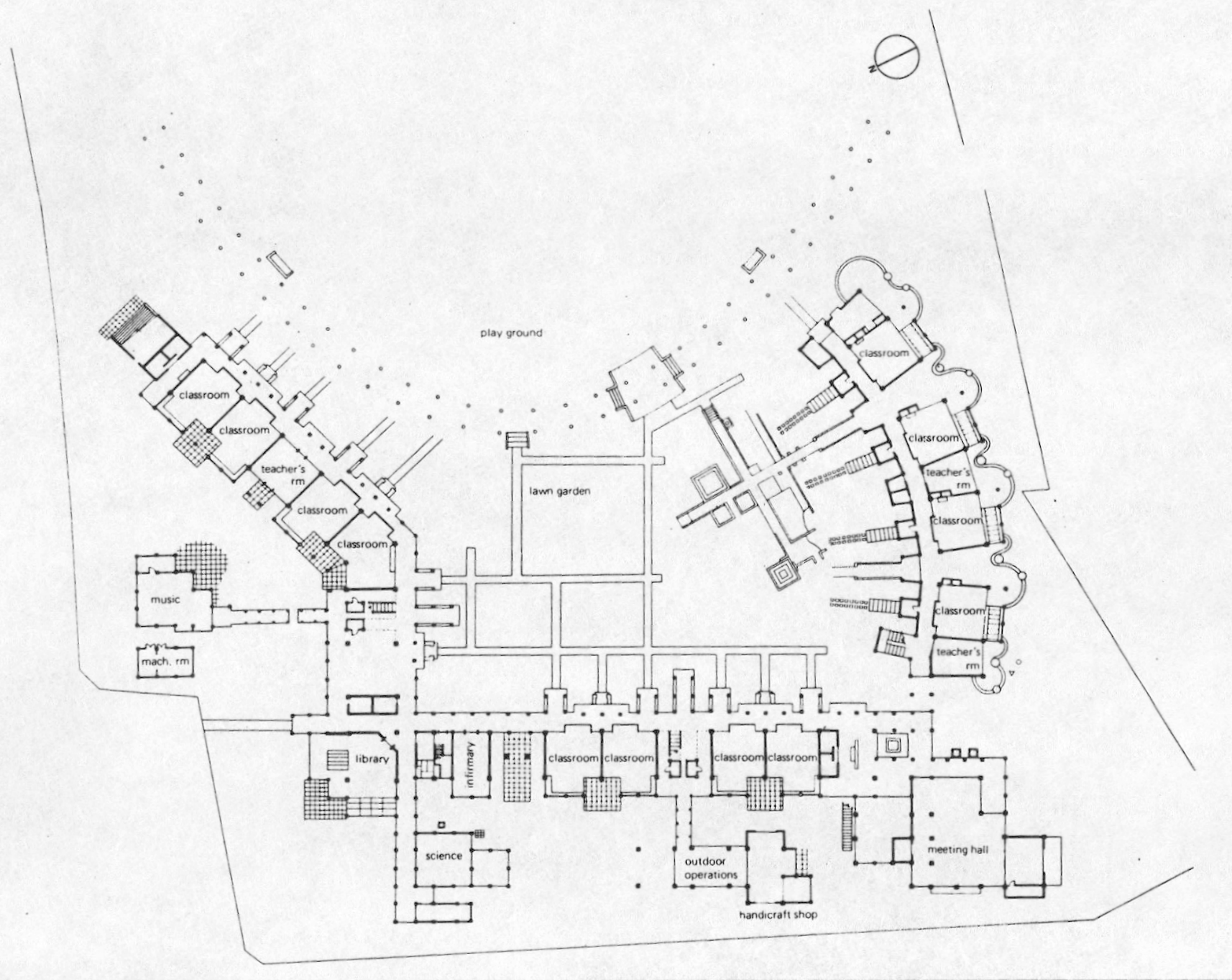
1 Patterns of Christopher Alexander. The campus of the New Eishin University near Tokyo; following Alexander's principles to the letter but curiously placeless and timeless—in a negative sense. 2 (this page) Patterns of Atelier Zo, now Team ZOO. The Kasahara Elementary School, Miyashiro. Just as rich in patterning, but more poetic compared with Alexander's prose.



BUILDING FEATURE



3

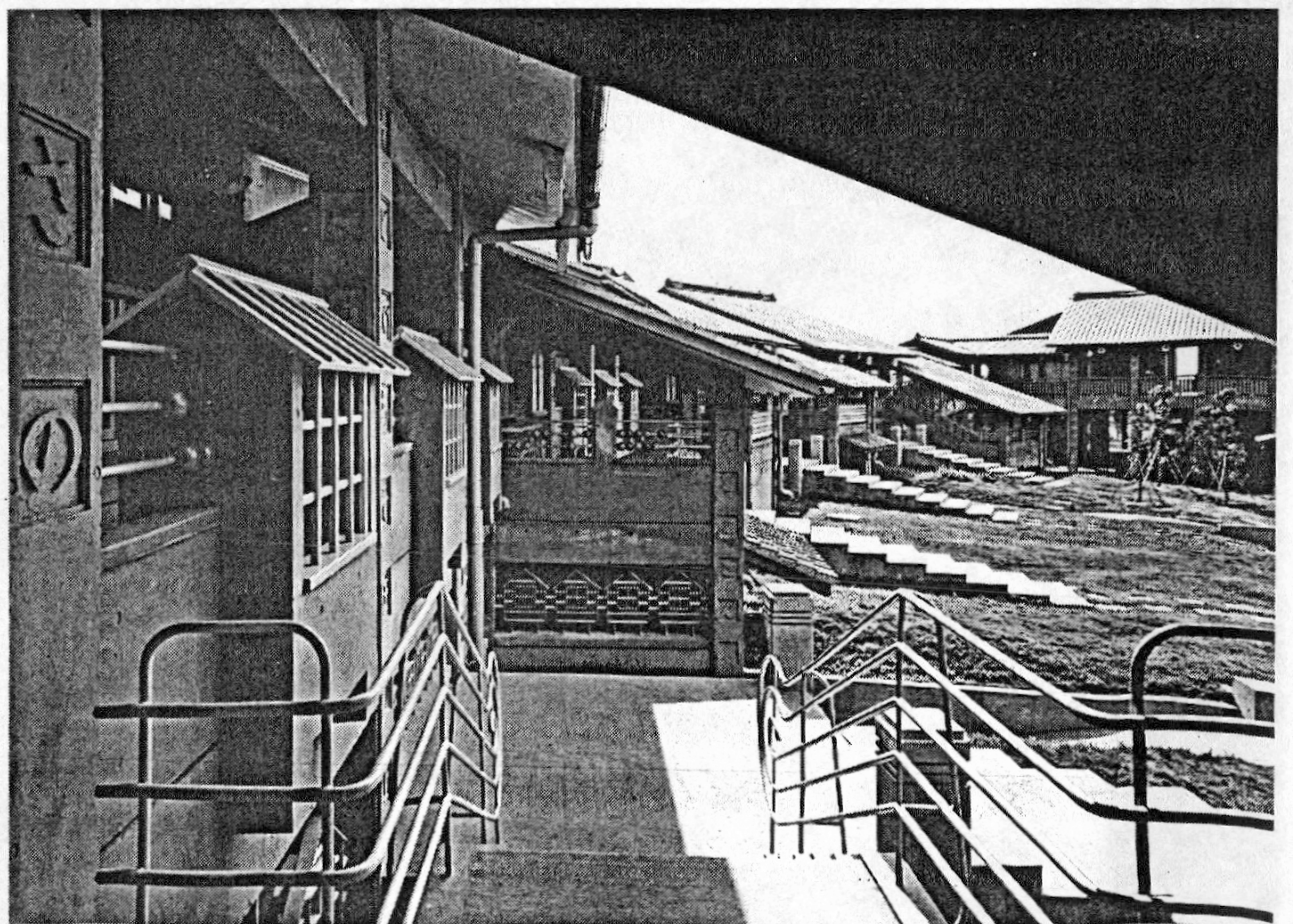


4

3 First floor plan, Kasahara Elementary School by Atelier Zo.
4 Ground floor plan, deriving from the characteristic spatial form of the traditional Japanese village, in other words they generally have no focus in terms of a public square or market place. They are frequently linear, concentrating more on creating 'oku'—inner space.
5 The infant wing. Note the tiny roofed 'conversation alcoves' in the centre of each bay, along the arcades, and the 'abacus' railings. The handling of changes in scale is masterful, for example, the entrance roof forms that seem to slide out from beneath the main classroom roofs.
6 Everywhere are details intended to engage the children's attention. Here the clay pigeons on the route from the music room to the main school building.
7, 8 Lower and upper levels of the arcade, with glazed alcoves jutting out from each classroom articulating the route. Cast into the column are 'kanji' symbols. At intervals, signs of the zodiac and flights of butterflies are impressed into the soffits.
9 Garden area between the infant and junior wings.

architects describe the school as 'a little city within a big city'²—the allusion to Aldo van Eyck's familiar metaphor is probably intended³—and the building is easily read as a small settlement. The site is enriched with metaphoric mountains, hills, ponds and roads—the miniaturisation of landscape features is a familiar strategy of Japanese gardens—and the overlapping roofs evoke the feeling of the edge of a compact town.

More specifically, its organisation can, I think, reasonably be interpreted as deriving from the characteristic spatial form of traditional Japanese villages. Whereas in Europe the village centre is typically marked by the church and other important buildings, in Japan, villages generally have no such focus. Frequently linear, stretching out along a road skirting the mountains and looking out over the paddy fields, Japanese settlements are organised to create *oku* or inner space: public and private



5

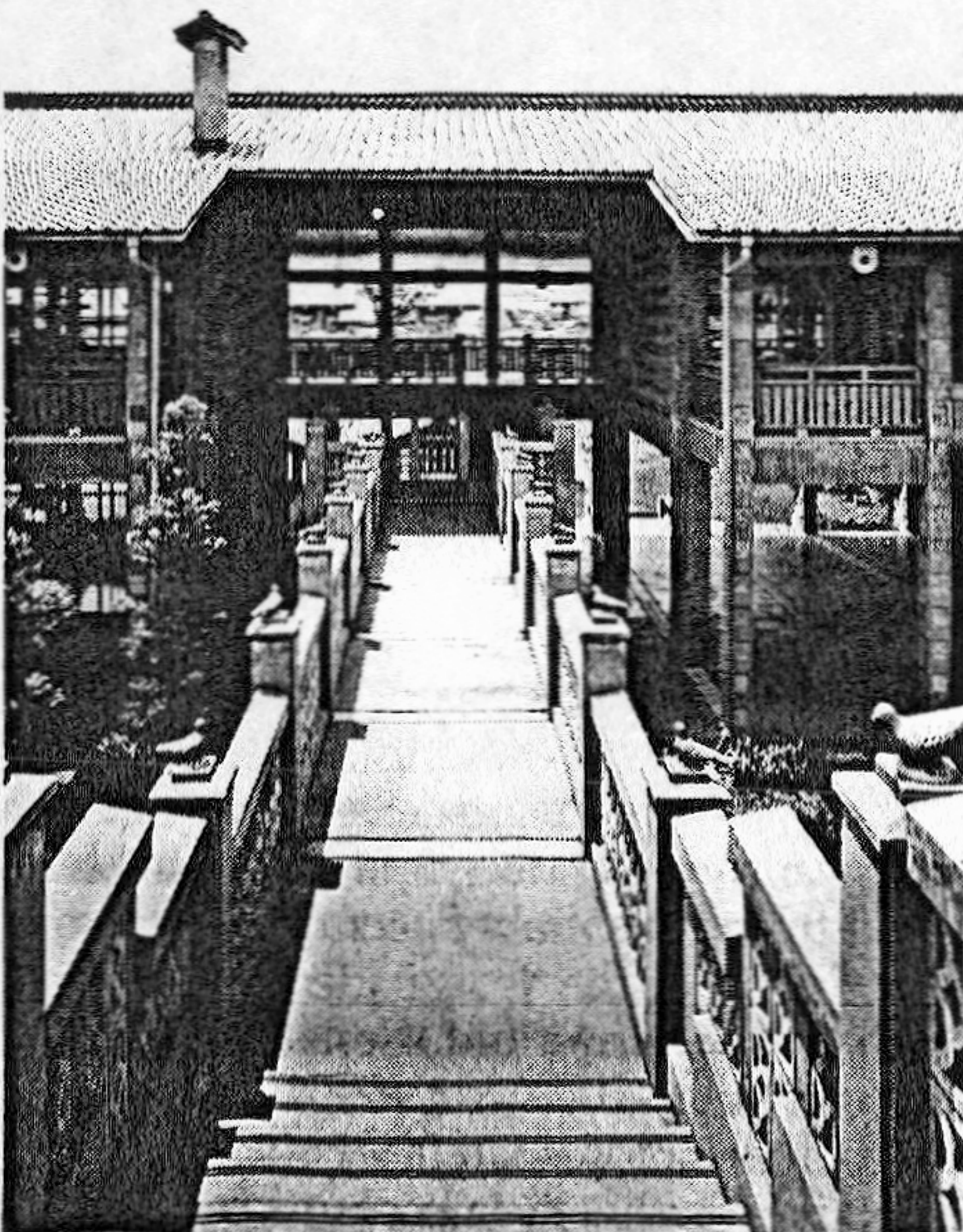
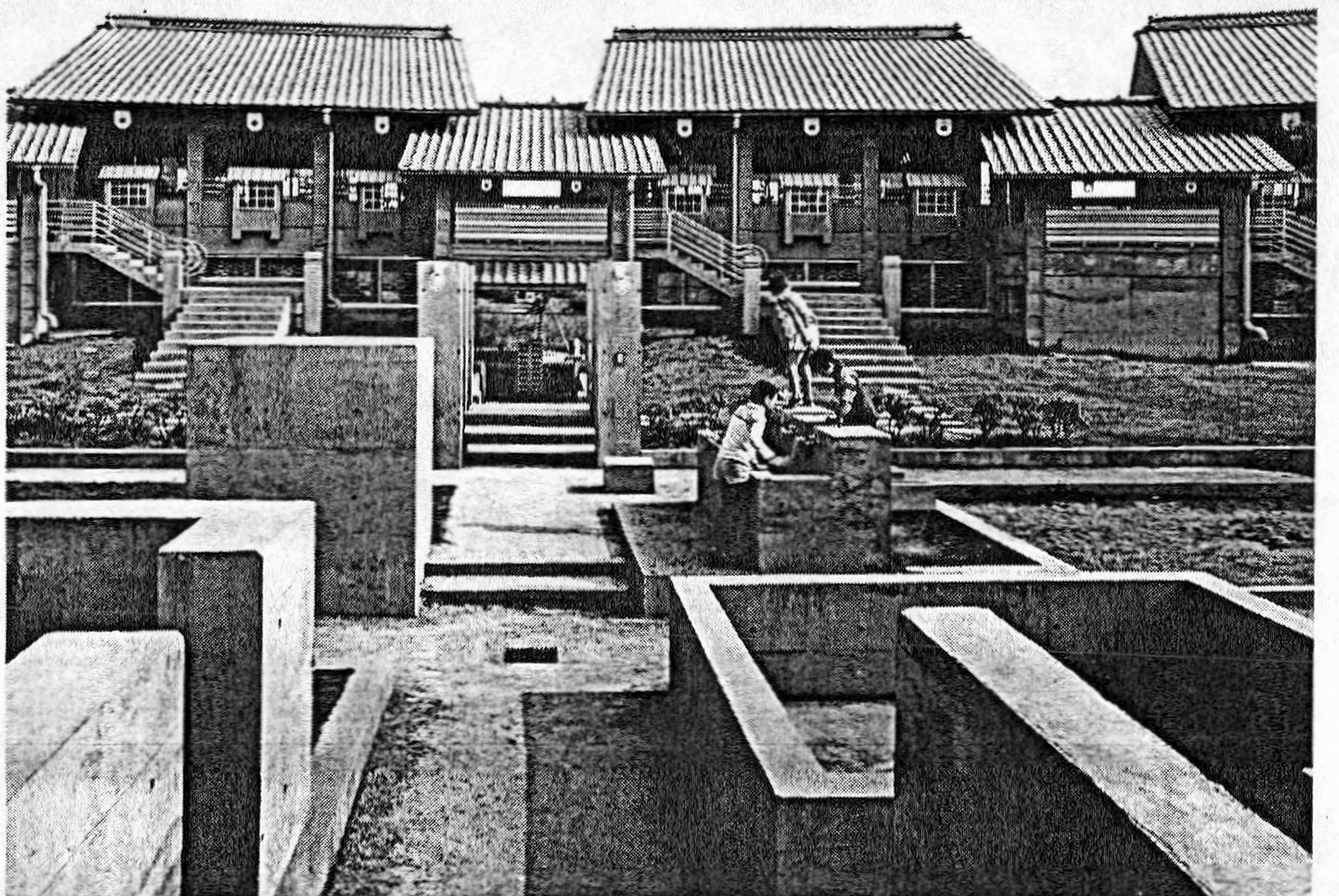
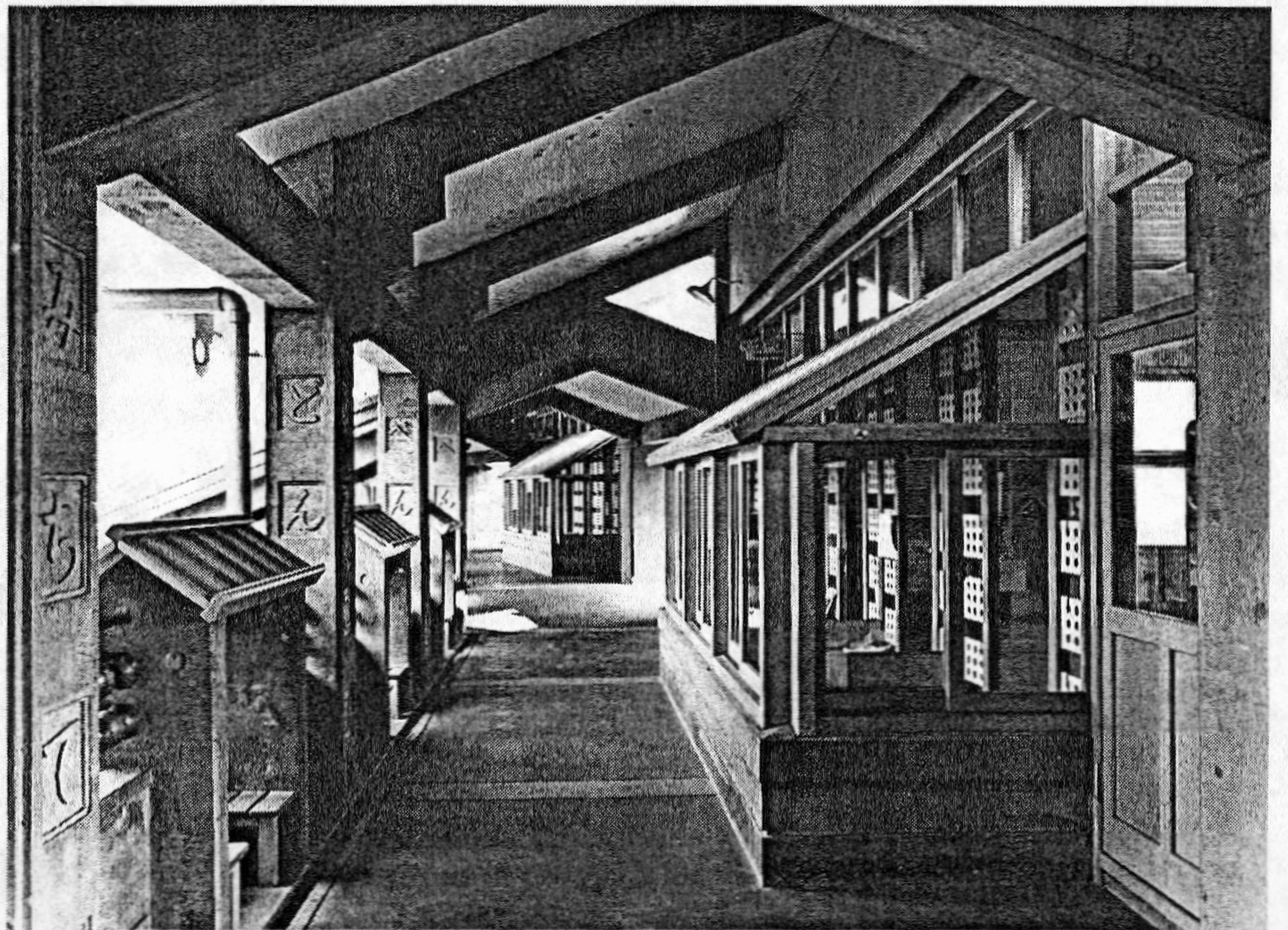
territories fold in to envelope a succession of inner spaces. In the school, the central garden is oriented towards the paddy fields of the Kanto Plain and the accommodation is arranged to create a multiplicity of spaces of varying scale in a manner that parallels a typical settlement. The designers describe the alcoves that run out from the classrooms as 'just like the narrow pathways that run between houses'.⁴

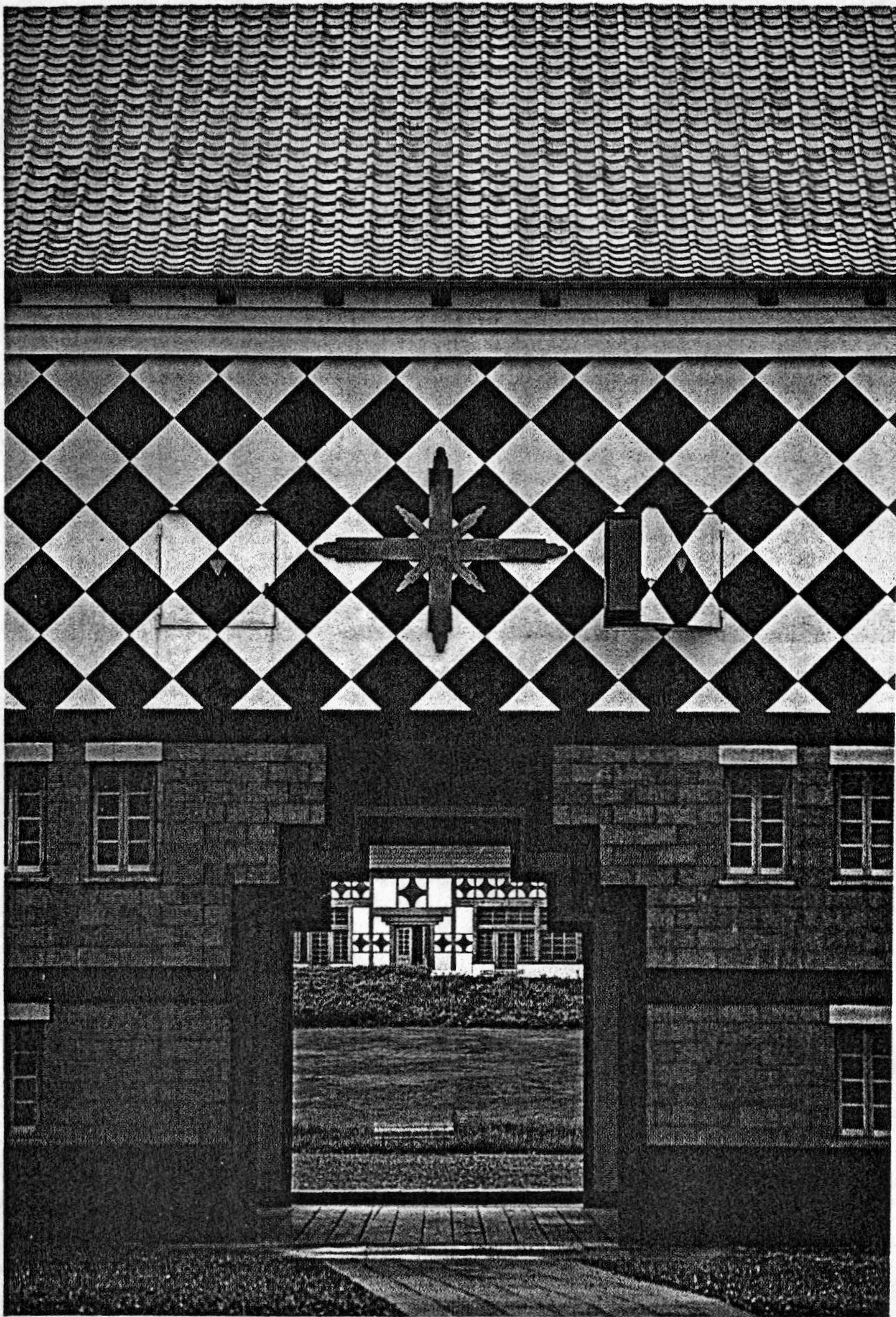
This range of spaces and scales is perhaps the school's most striking quality. In the infant wing, for example, the tiny roofed 'conversation alcoves' in the centre of each bay echo in miniature the form of the whole and the scale change is mediated by the roofs over the entrances that slide out from under the main classroom roofs. Similarly, the classrooms are articulated by means of glazed alcoves that jut out into the arcades—classic van Eyckian 'inbetween realms'—while on the opposite side re-entrant corners create sheltered outdoor teaching spaces and also help to define the art and craft areas internally.

Along the arcades a series of gabled roofs mark the entrances and provide covered storage for clothing and shoes. Between the entrances each class has its own garden and the bases of the columns are stepped to form sitting perches: the notched form is characteristic of Atelier Zo's work—they call it *giza-giza*, a term used in descriptions of the tropical plants of Okinawa where Team ZOO built its first projects—and typical also of traditional Japanese roof construction.

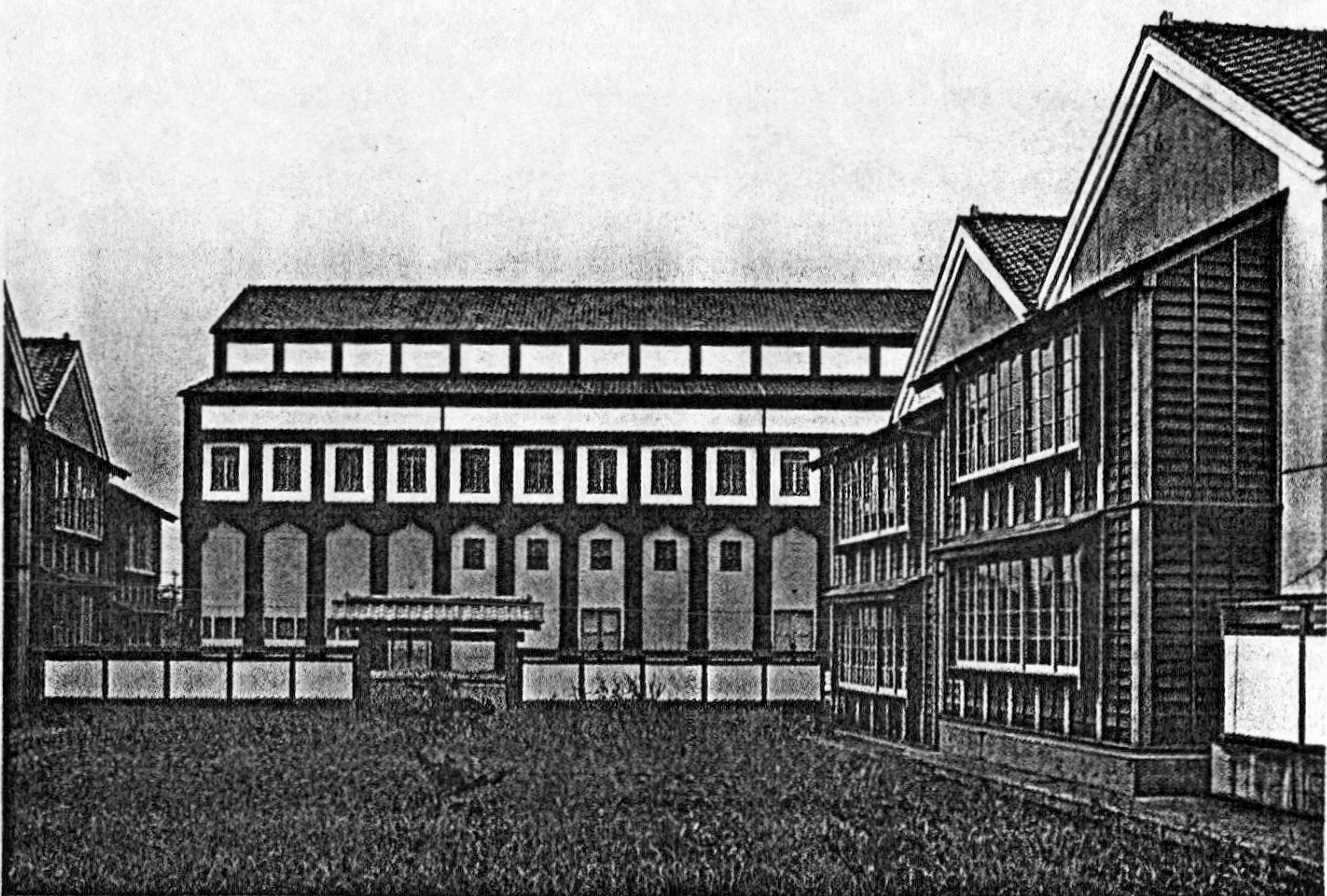
The arcades are designed both as circulation routes and places to occupy, forming part of a network of covered play areas and communal sinks for washing feet. Throughout the school are details intended to engage the children's attention and stimulate their imaginations.

'These are the things,' the architects write, 'that make up the memories of our younger years.'⁵





10



11

New Eishin University

The campus is organised into outer and inner precincts and the latter, which occupy about a fifth of the site, contain most of the buildings. An imposing gate at the outer boundary gives access to a walled path leading to the main gate. The paving slabs set between broad gravel margins and laid in three straight runs, cranked to take up the change in angle, recall the paved routes through temple complexes.

The main gate is a massive structure decorated with a diamond chequerboard pattern rendered in black and white *shikkui*, a traditional Japanese plaster. Through the gate is an open yard, edged on the right by the massive great hall and small music hall, and on the left by the administration building; ahead and over a small lake is the cafeteria. A passage past the school office leads to an alley between the faculty offices and the arcaded backs of a row of classrooms. The class bases or 'homeroom buildings' are arranged to form a series of outdoor spaces, part garden and part 'street', that lead to the central hall. Finished in grey with broad white bands at their corners, the homeroom buildings have naturally finished redwood galleries looking on to the street and on their outer sides they are linked by white-columned arcades.

Meeting places

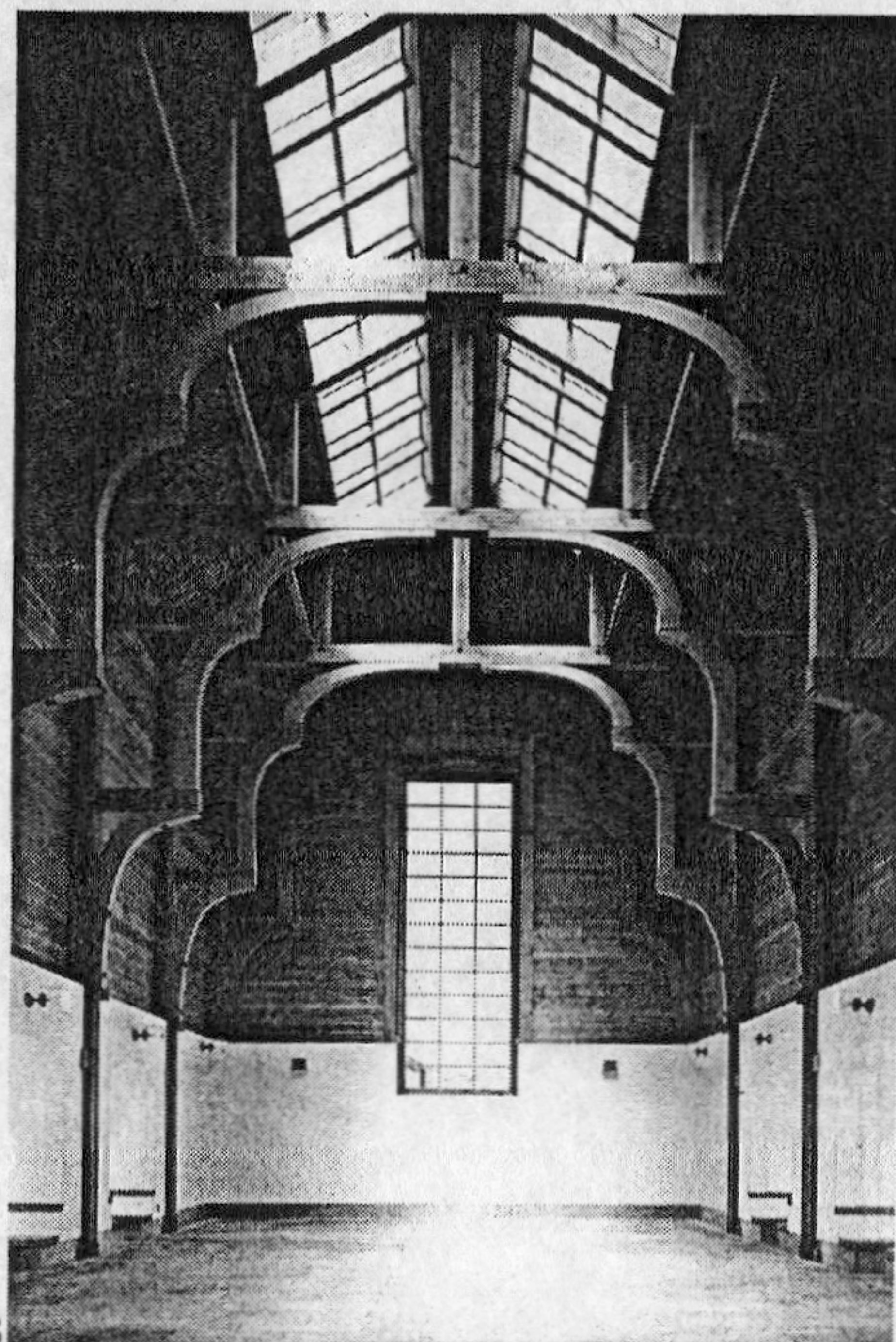
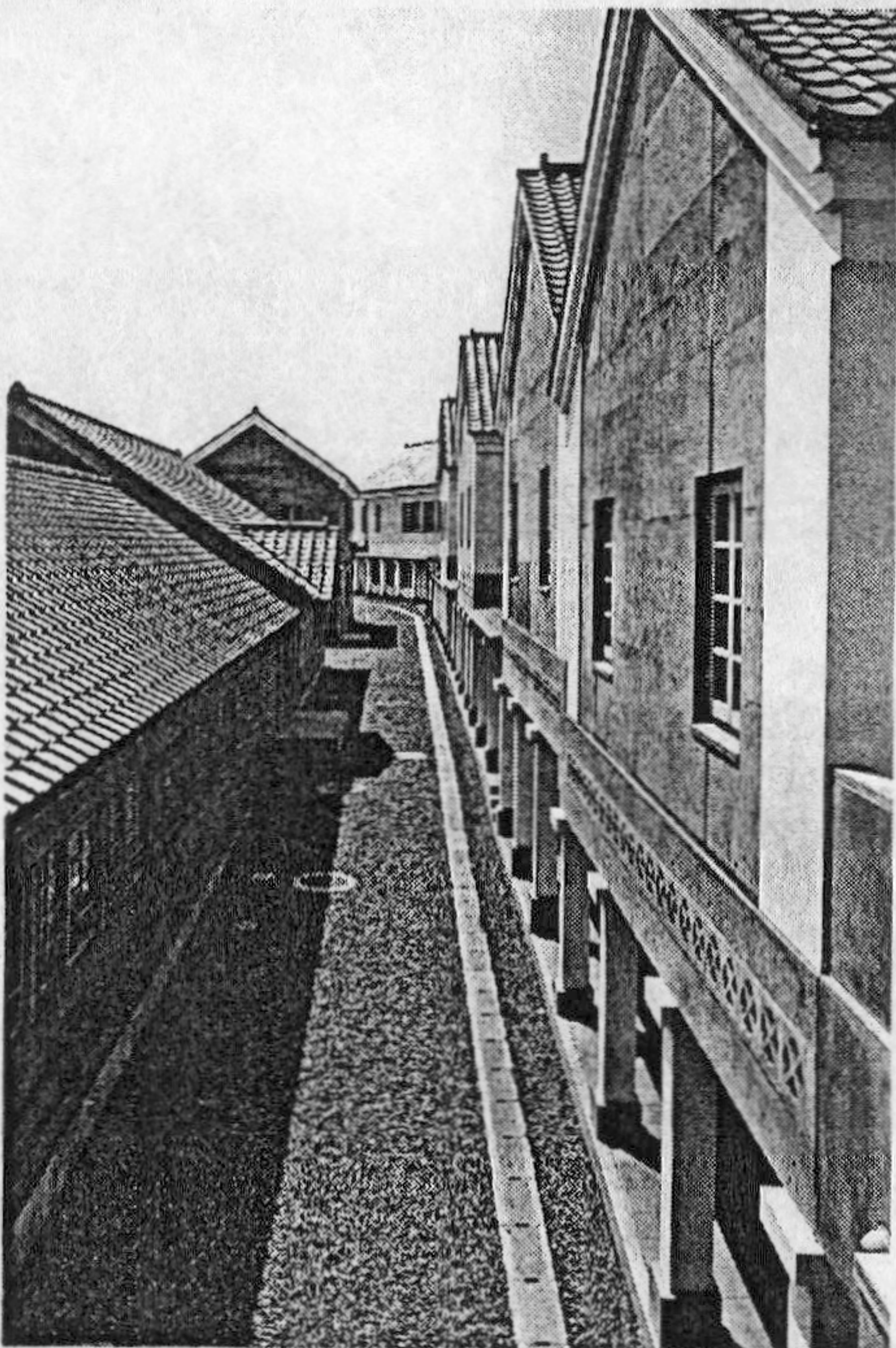
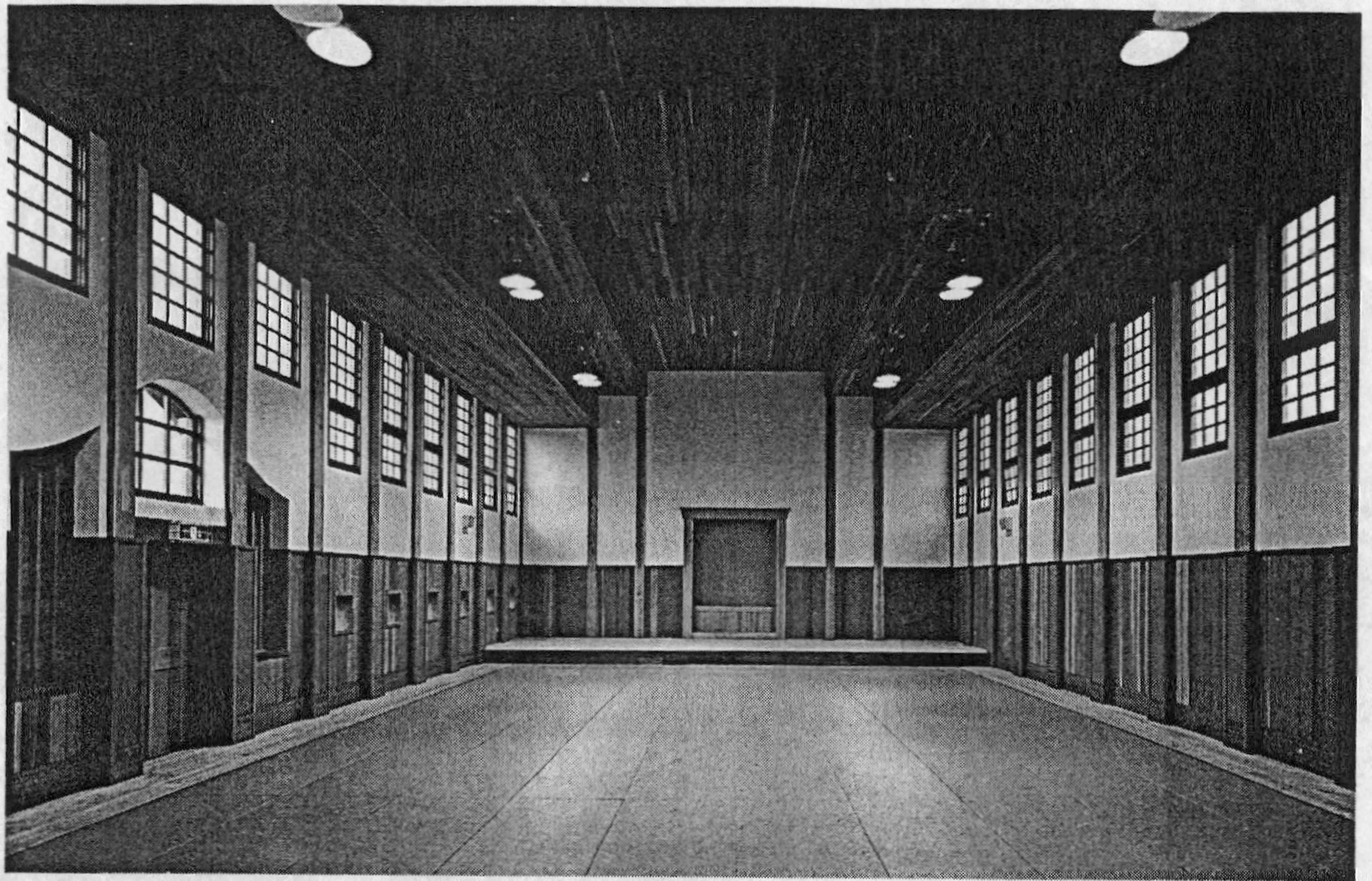
The central hall has 1.2 m thick *shikkui*-covered walls in which a series of arched openings with built-in benches are formed: open to the outside, they double as entrances. Above the walls, elegant rather medieval-looking timber trusses rise to support the roof which has continuous strips of glazing either side of its ridge. The floor and benches are finished with *Oya-ishi*—a common and relatively cheap limestone with a pitted surface—and the upper walls are clad in timber boarding.

The central hall is flanked by specialised classrooms and to the west of the homeroom street the gymnasium stands on a small island in the lake. Externally, it is finished with a dull red metal roof and black render and, internally, like the hall, sports a timber roof structure made from a series of cross-braced hammerbeam trusses.

Grandeur still is the great hall. Basilican in form, the central three-storey nave is indirectly lit to promote a feeling of mystery; its massive columns are painted in various colours internally and, externally, the structure is rendered black, inevitably recalling half-timbered construction.

The New Eishin campus, like the Linz Café and Mexicali housing before, will be the subject of a book-length account.⁶ Although a detailed assessment must await this publication, it is still possible to sketch a reasonably accurate description of the design ideas using *A Pattern Language* and Alexander's account published in *Japan Architect*.⁷ But before doing so, a brief outline of Alexander's theory is perhaps required.

- 10 New Eishin University, the main gate with view to the cafeteria in the distance. Recreating the process of vernacular building production, but the result is unconvincing.
- 11 View back to the Great Hall. Perilously close to the 'neo-vernacular' of many a contemporary UK shopping centre.
- 12 The class bases or 'homeroom buildings' linked together on their outer sides at ground level by white columned arcades. On the left is the faculty office.
- 13 The central hall interior (see 16 for plans and sections).
- 14 The judo hall.



14

12

13

All embracing claims

In *The Timeless Way of Building* and *A Pattern Language* Alexander outlines a process that he believes produced all traditional buildings—the all-embracing claims are, of course, characteristic and, in my view, not supported by convincing evidence. He argues that traditional buildings and settlements share a common 'organic', 'living' or 'natural' order produced by the actions over time of countless individuals who shared a common 'language' embodied in local building traditions. This organic order emerges when there is a perfect balance between the needs of the individual parts and the needs of the whole and is characterised by a specific geometric structure that, he believes, underlies everything in the natural universe: this is no mere 'biological analogy'⁸.

Examination of traditional buildings has convinced Alexander that certain patterns recur again and again in different cultures and times and he

argues that they therefore satisfy fundamental human needs. These form the core of the published pattern language⁹ and describe human activities, building characteristics and building elements.

Each pattern outlines the general features required to solve a clearly stated problem in a given range of contexts: the approach is resolutely functional and the patterns are thought to resolve social and psychological 'forces' just as much as physical ones. The patterns are inter-related in a hierarchy to form a 'language' with which, in theory, people should be able to design and construct their own environments. Such, in bare outline, is the theoretical background to the 'language' with which the New Eishin campus was designed. How, we may now ask, did it determine its form?

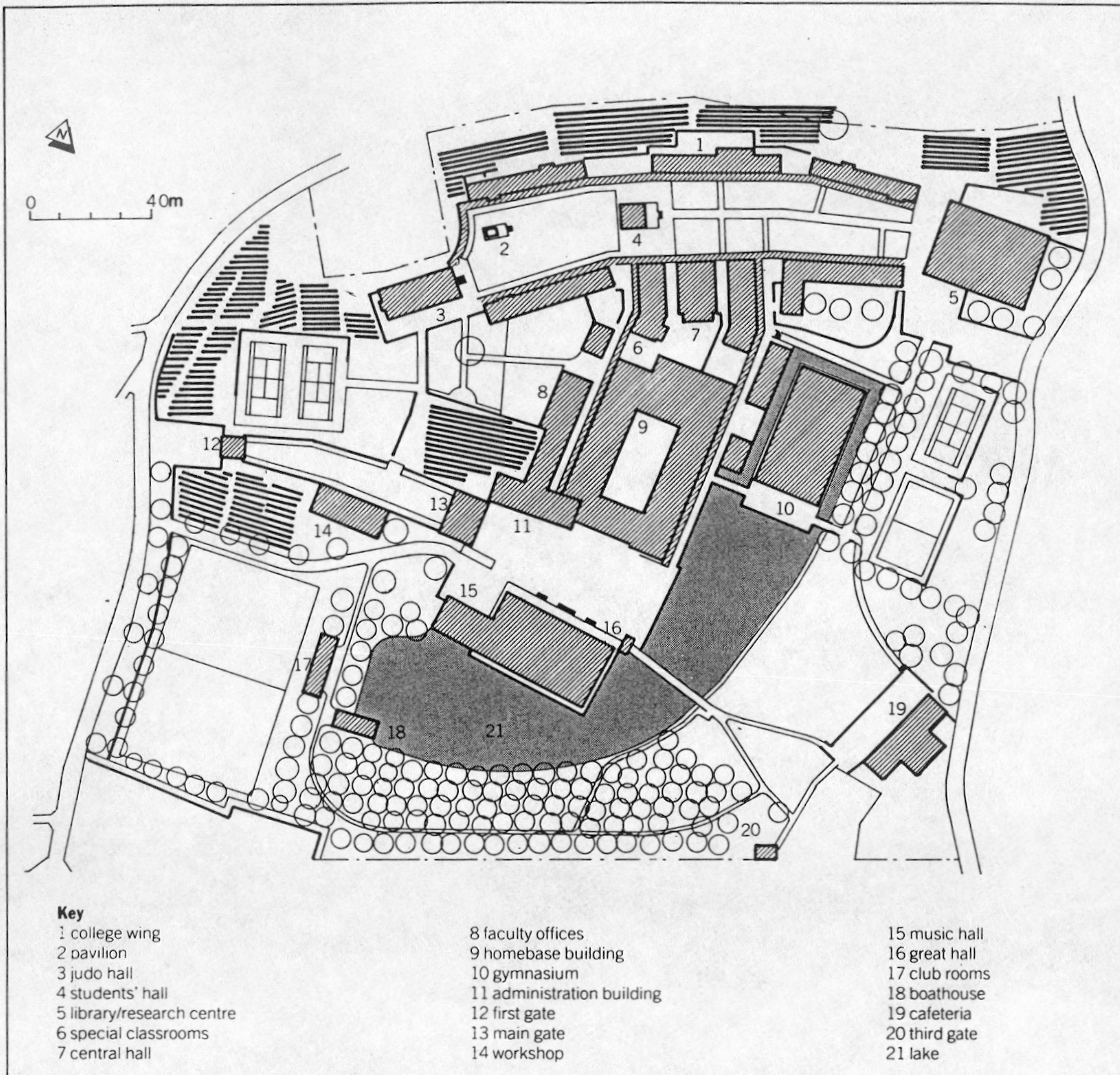
The published patterns related to education—'network of learning' and 'shopfront schools' among others—

describe a society with no institutionalised schools and recall the arguments advanced by Ivan Illich in *Deschooling Society* and elsewhere.¹⁰ Faced with a commission for a large school, however, Alexander doubtless began with 'building complex' which states that a building programme should be translated into 'a building complex, whose parts manifest the actual social facts of the situation' and which 'may take the form of a collection of small buildings connected by arcades, paths, bridges, shared gardens and walls'.

'Circulation realms' further specifies that buildings be laid out to form 'a sequence of realms, each marked by a gateway and becoming smaller and smaller' and 'main building' requires that the building which is 'the soul of the group' occupies a central position with a higher, visually dominant roof.

The campus follows these principles to the letter. It is laid out as a collection of small buildings and there is a clear sequence of circulation realms, from the entrance path with its substantial gateways, into the courtyard dominated by the great hall—symbolic centre of the school—from where a central route connects the fenced gardens between the classrooms, which are also linked by a continuous U-shaped arcade.

With the general distribution decided, 'south facing outdoors', 'positive outdoor space' and 'wings of light' help firm up the organisation. Each classroom is placed on the north side of its related outdoor space and the various buildings and fences are arranged to create a series of well defined external spaces. All the accommodation is broken down into narrow wings, giving 'light on two sides of every room'. Entrances are clearly identified—'family of entrances' and 'main entrance'; the upper classrooms are entered via 'open stairs'; 'alcoves' abound—all along the 'thick walls' of the central hall and as added 'window places' to the classrooms, for example.



15 Site layout. The narrow fingers of hatched area bordering the edges of many of the buildings are arcades (see 12). The darker toned area is water.

16 Plans and sections of the central hall (see 13) and plans and sections of the class bases or 'homeroom buildings', right.

17a-d First and ground floor plans plus cross and long sections of the Great Hall. Just as the 'pattern book' says, the 'main building' requires that the building which is 'the soul of the group' occupies a central position with a visually dominant roof. It certainly does that but, in the end, the overall effect is soulless. In Japan, the hot, humid and not infrequently rainy summer days demand the large, sheltered openings characteristic of their traditional architecture, but despite all the theoretical subtlety Alexander ignores this most fundamental native feature.

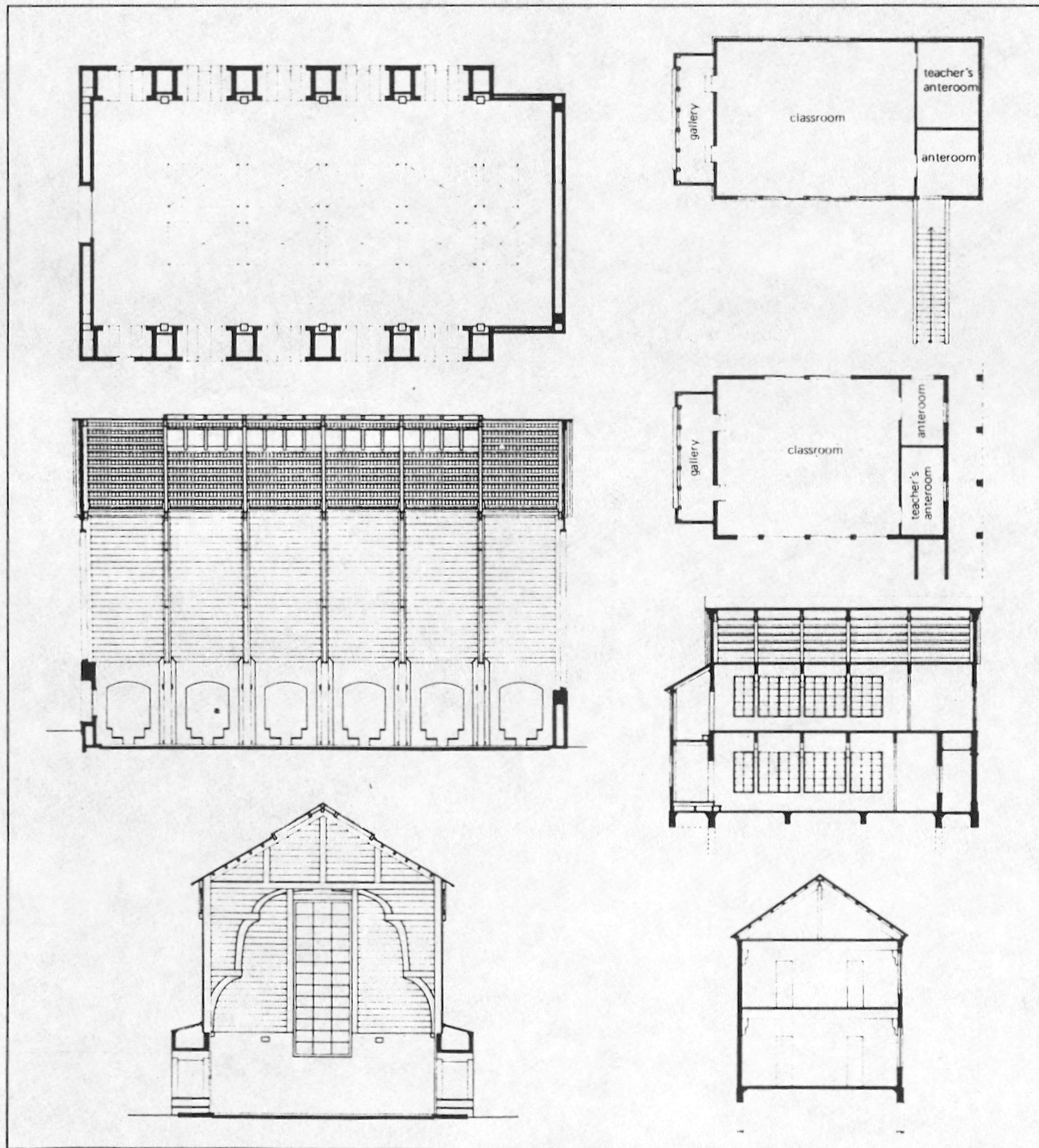
Key

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|---------------------------|----------------------------|---------------|
| 1 college wing | 8 faculty offices | 15 music hall |
| 2 pavilion | 9 homebase building | 16 great hall |
| 3 judo hall | 10 gymnasium | 17 club rooms |
| 4 students' hall | 11 administration building | 18 boathouse |
| 5 library/research centre | 12 first gate | 19 cafeteria |
| 6 special classrooms | 13 main gate | 20 third gate |
| 7 central hall | 14 workshop | 21 lake |

photo credits

Photographs 1, 2, 12, 13, 14 courtesy of *Japan Architect*; 5-9 by Mitsuo Matsuoka, courtesy of *Japan Architect*; 10, 11 by Richard Weston.

15



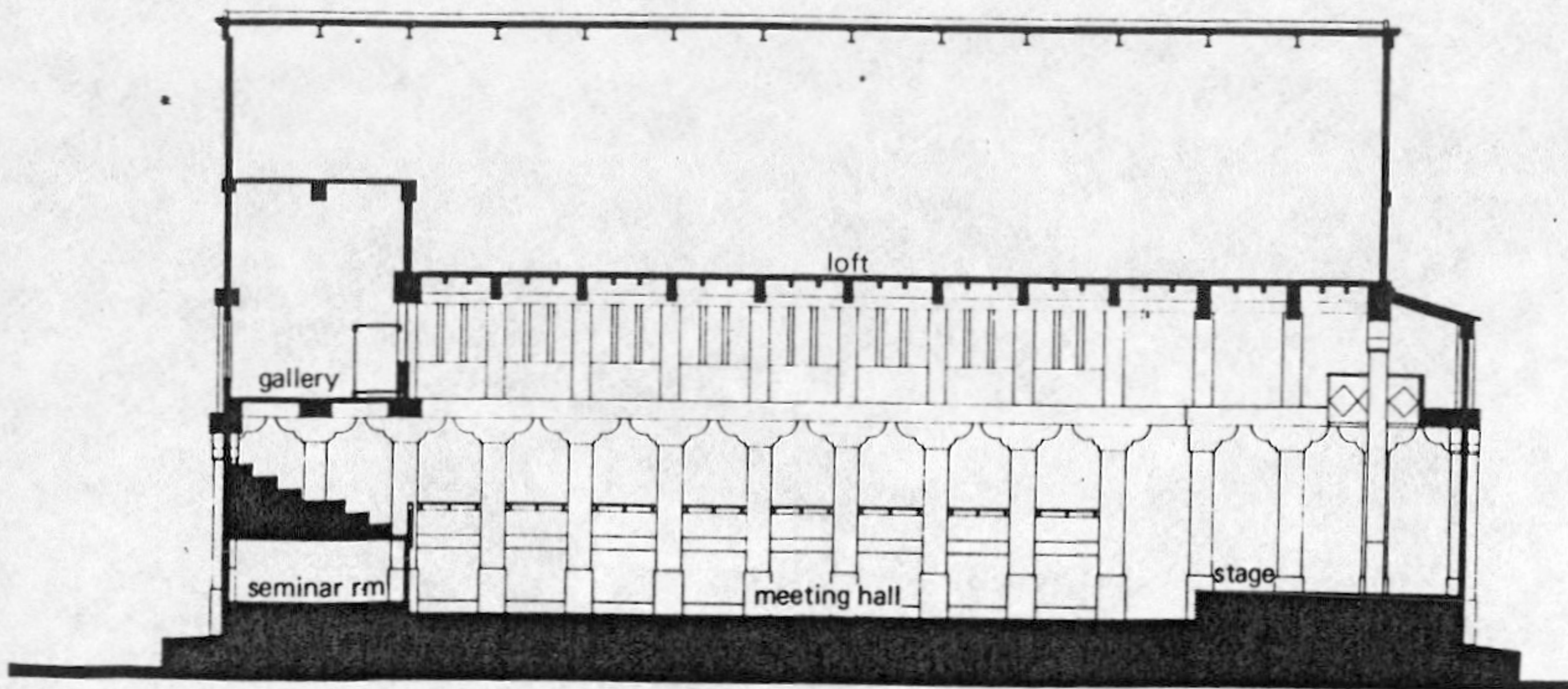
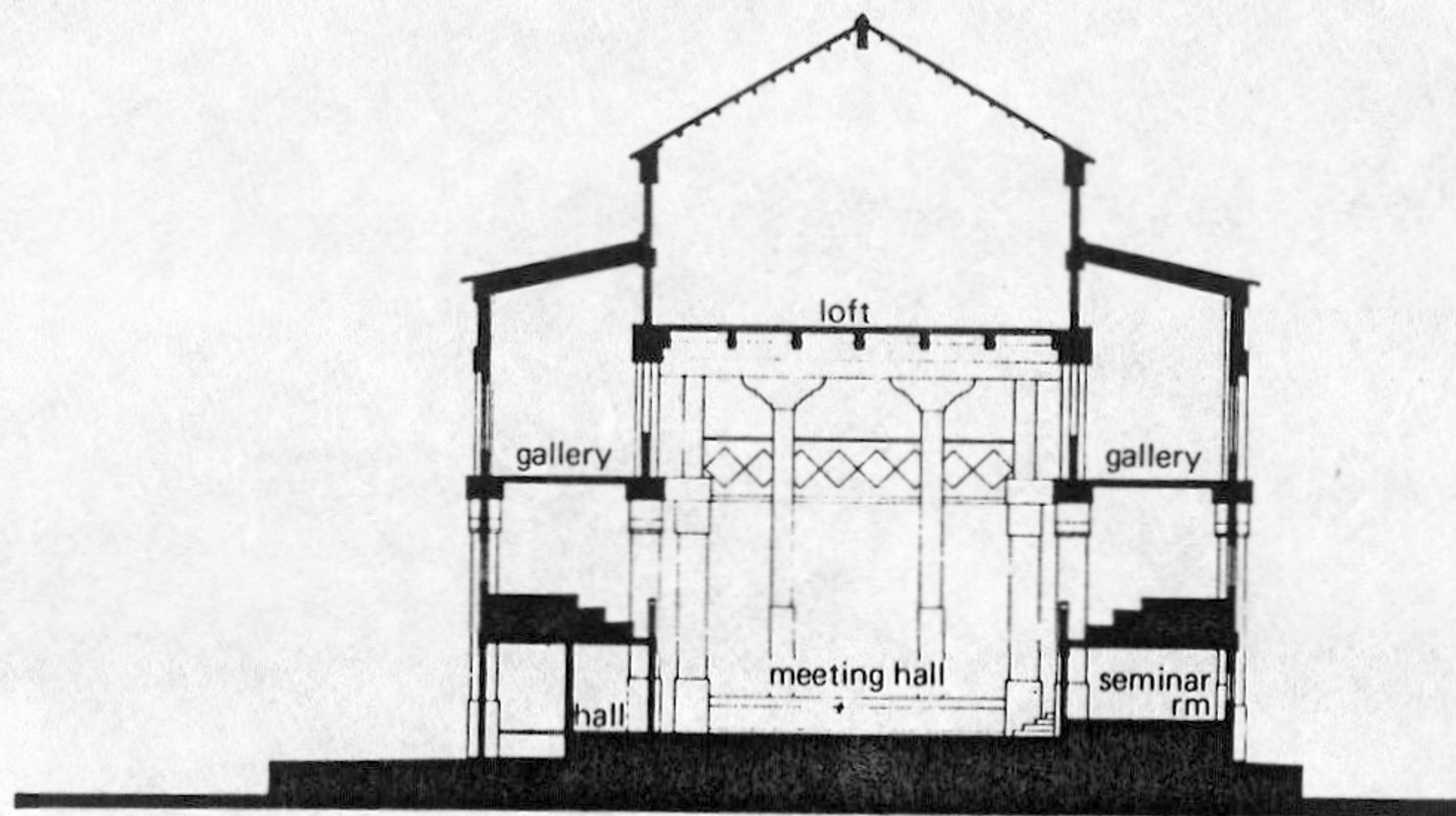
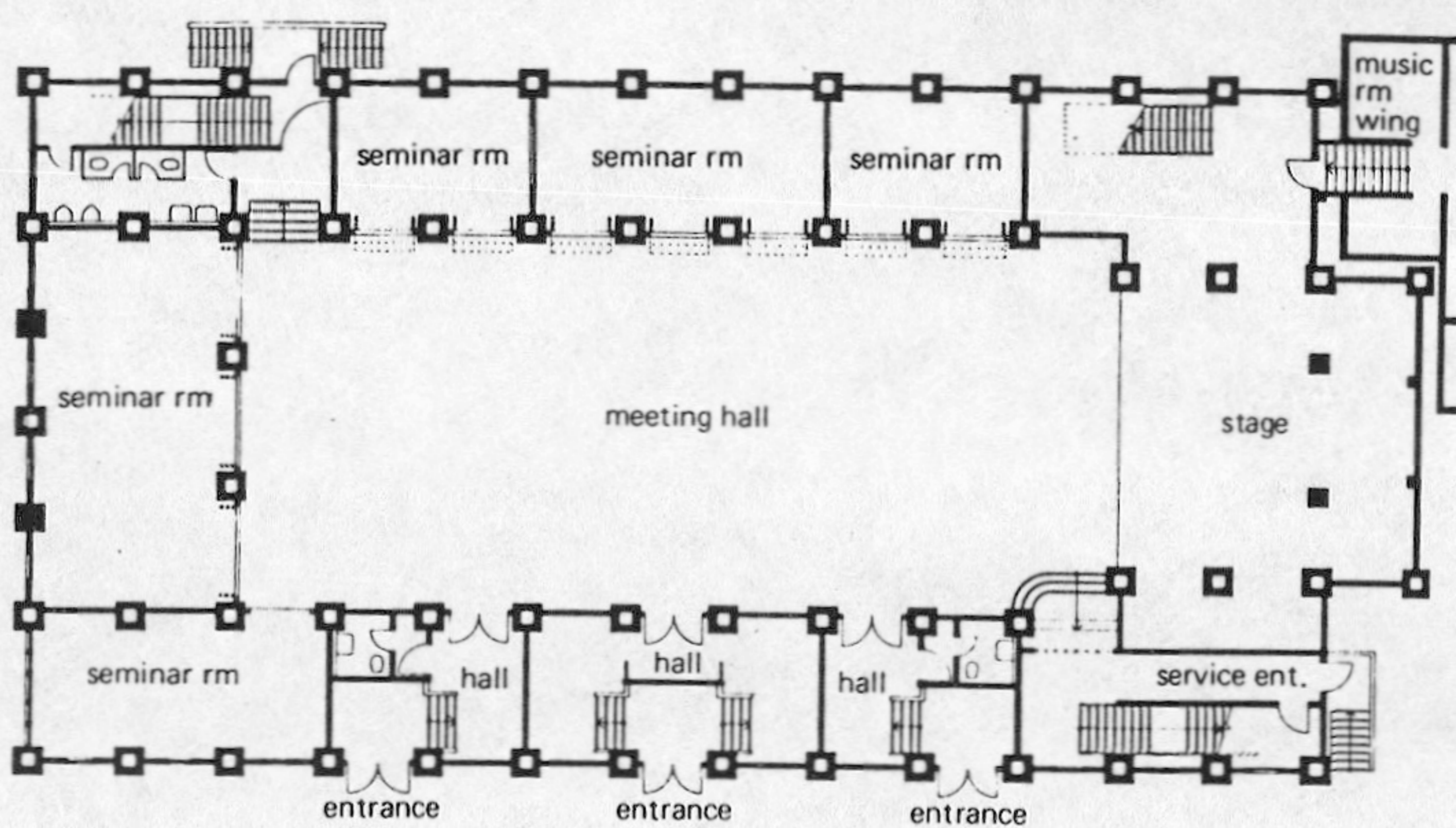
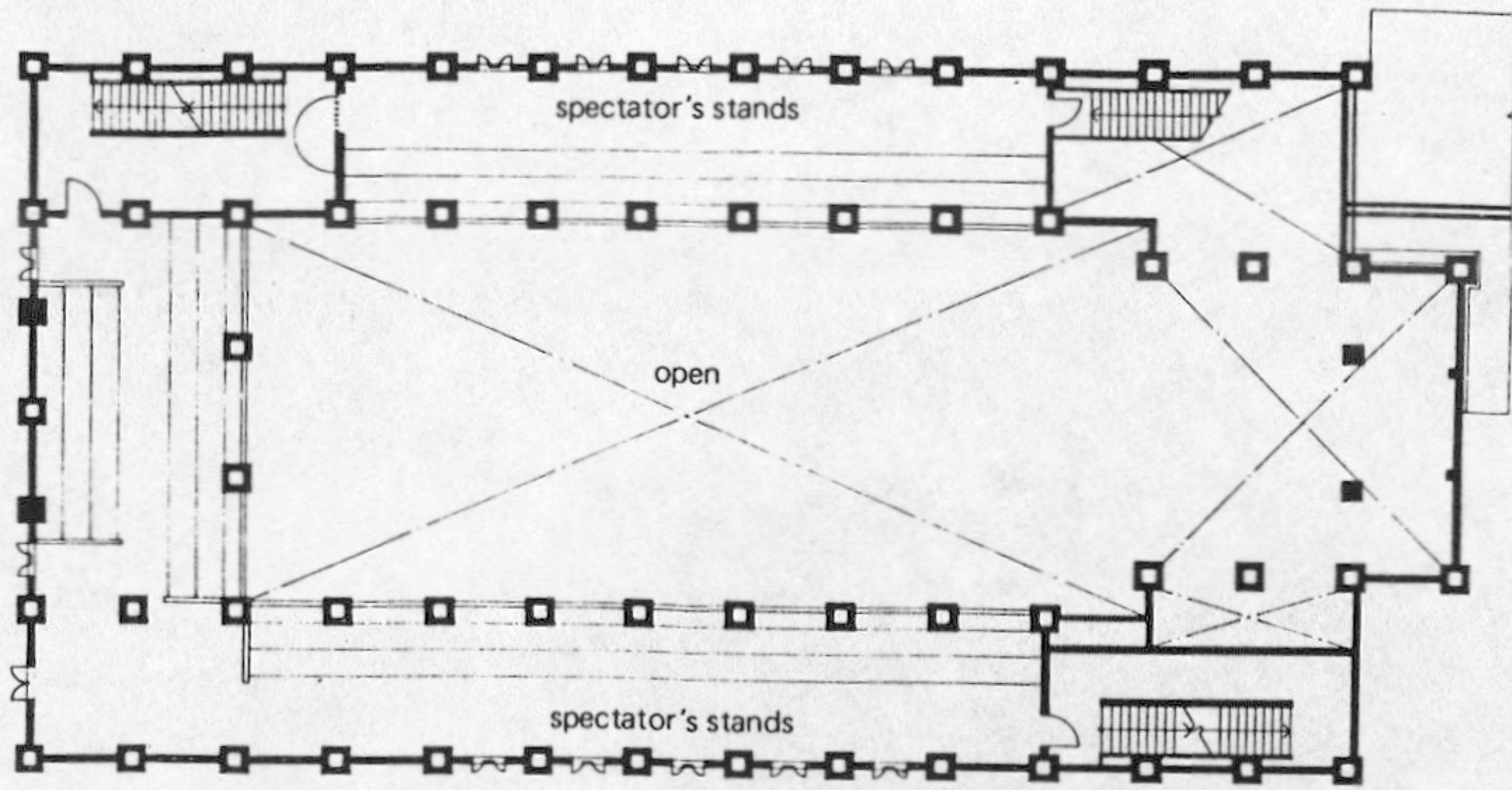
Missing patterns

Nearly all the patterns discussed so far apply to the Kasahara School, as can be readily confirmed by examining the plans and photographs. But just as striking as the patterns that are present in Alexander's project are those that are not, or at best only weakly, and yet abundant in the work of Atelier Zo.

Consider, for example, 'building edge' which states that the edge of a building should be treated as 'a "thing", a "place", a zone with volume to it, not a line or interface which has no thickness' and advises making 'places that have depth and a covering, places to sit, lean and walk'. It is difficult to imagine a more appropriate description of the richly articulated edges of the Kasahara School with its 'arcades' that form a 'galleried surround', stepped column bases ('column place'), roofed entrances ('cascade of roofs' and 'entrance transition'), bay windows ('window place'), abacus beads and 'conversation alcoves ("child caves")', 'classroom balconies ("six foot balcony")', and layered windows ('filtered light').

The edges of the New Eishin buildings are, by comparison, abrupt and impoverished affairs. Most puzzling of all, given the requirements of 'sheltering roof' and the Japanese climate, are the predominantly shallow eaves: hot, humid and not infrequently rainy summer days demand the large, sheltered openings characteristic of traditional Japanese buildings.

16



The relatively undeveloped edges of Alexander's buildings are, I think, only the most conspicuous example of a general problem encountered in using his patterns.

The introduction to *A Pattern Language* concludes with a 'note of caution', pointing out that the language can be 'a medium for prose, or a medium for poetry', the latter requiring that the patterns 'be compressed as far as it is possible for them to be'. The New Eishin campus offers a rather prosaic stringing together of patterns compared with the poetic compression of the Kasahara School confirming, perhaps, that there is after all no substitute for the skill and imagination of talented designers.¹¹

Placeless and timeless

More disturbing than any specific shortcomings, however, is the curiously placeless and timeless—in the negative sense—feel of the New Eishin buildings. Although some of them recall indigenous Japanese building types, and elements such as the fences and entrance path follow traditional forms, the campus also evokes memories of European—especially German, perhaps—and Scandinavian timber buildings. This doubtless results from the detailed patterns, with their emphasis on visible structure and legible construction, rather than any conscious imitation of formal prototypes.

Alexander is attempting to recreate the processes of vernacular building production, not merely the appearance of vernacular buildings, but the result is unconvincing, a very long way from the 'sleepy, awkward grace' that he extols in *The Timeless Way of Building* and perilously close to the 'neo-vernacular' of many a contemporary shopping development. The rich and varied forms of the Kasahara School, on the other hand, are unified by a coherent architectural language and give convincing formal expression of a commitment to the making of authentic buildings that are 'like a life lived'. ■

References

- 1 Grabow, S. *Christopher Alexander and the Search for a New Paradigm in Architecture*. London. 1983. p220.
- 2 'Atelier Zo'. *Space Design*. November 1985. p96.
- 3 Van Eyck, Aldo, following Alberti, used the house/city analogy in describing his celebrated orphanage (now under threat of demolition). Atelier Zo acknowledge the influence of van Eyck's ideas.
- 4 loc cit.
- 5 ibid.
- 6 Alexander, Christopher. *The Linz Cafe*. Oxford. 1981 and *The Production of Houses*. Oxford. 1985.
- 7 Alexander, Christopher. 'Battle. The history of a crucial clash between World System A and World System B. Construction of the New Eishin Campus', *Japan Architect* 1985. No 8. pp15-35.
- 8 Collins, Peter. *Changing Ideals in Modern Architecture 1750-1950*. London. 1967. pp149-58 and Steadman, Philip. *The Evolution of Designs*. Cambridge. 1979.
- 9 In *A Pattern Language*. Oxford. 1977. Alexander identifies the patterns which he believes to be 'invariant' with two stars.
- 10 As, for example, in *Tools of Conviviality*. London. 1973.
- 11 As the title of the article suggests, Alexander experienced considerable difficulties implementing his ideas, but these do not seem to me to invalidate these criticisms.