

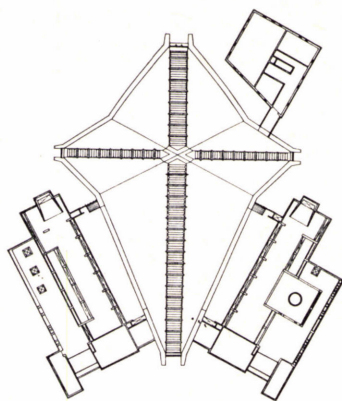
A CRUCIFORM WINDOW ONTO HEAVEN

In his latest, completed work—a monumental, Roman Catholic cathedral in Tokyo—Kenzo Tange creates “a majestic space in repose.”

BY ROBIN BOYD

It almost seemed as if the creative potential of the plain old hyperbolic paraboloid had been pretty thoroughly explored in every contortion and combination by 1960—especially in ecclesiastical architecture. Thus the prospect of a big cathedral of 1965 using eight hyperbolic paraboloids may not seem especially exciting. Yet Kenzo Tange has shown before that he can inject new life into forms and techniques which have become hackneyed or even tiresome in the hands of others; and this time he has produced something much more remarkable than exciting. He has made of the eight warped planes a majestic space in repose.

At the base, the plan is the shape of a kite with blunt corners, but each straight sidewall

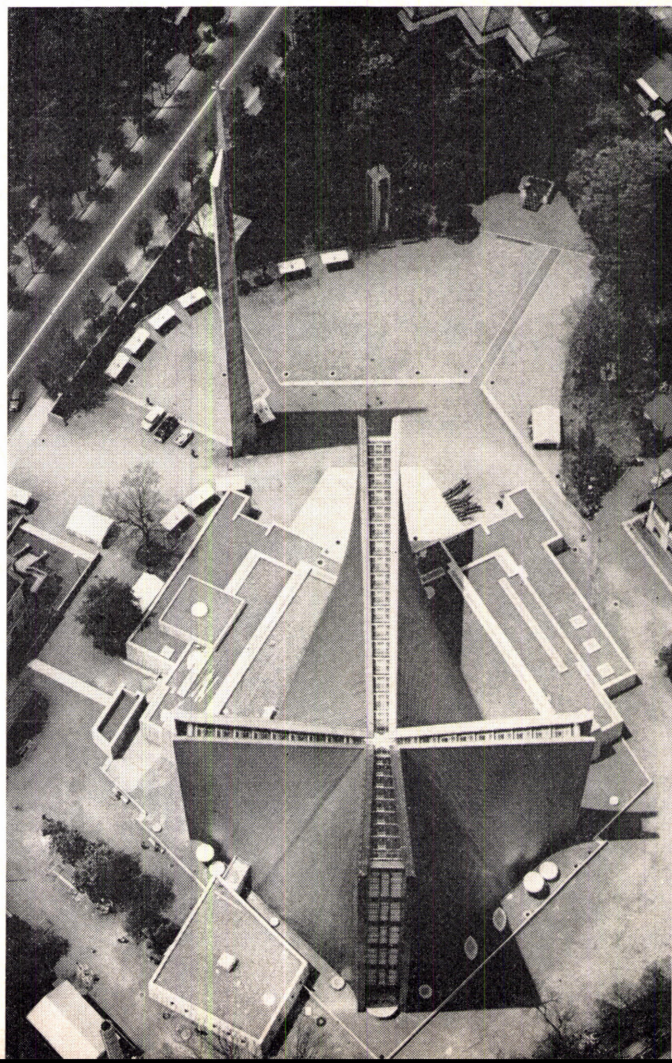
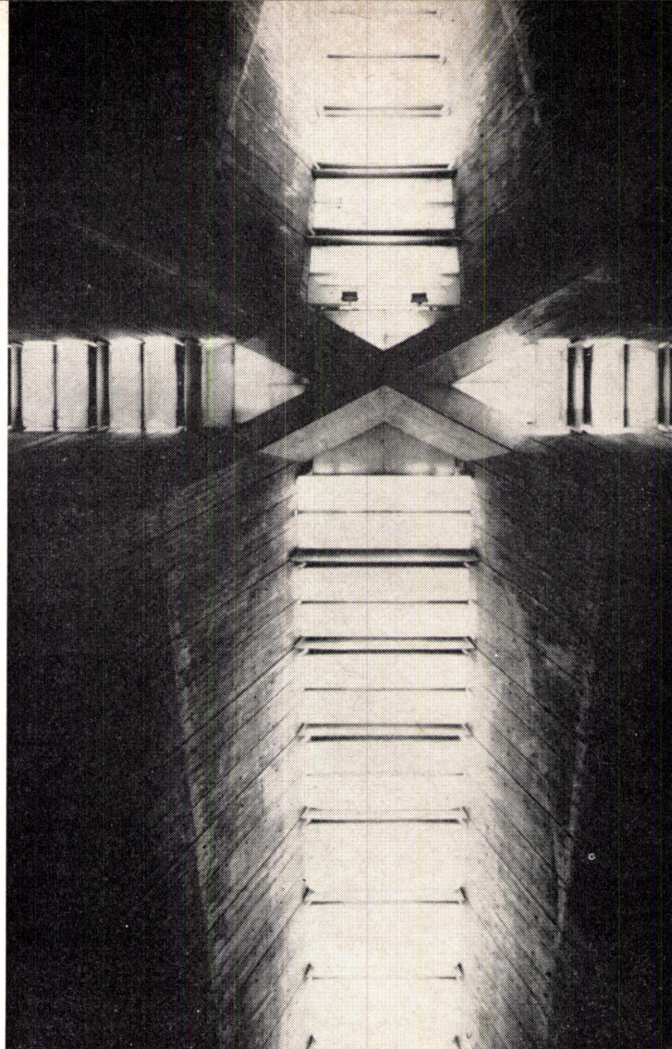


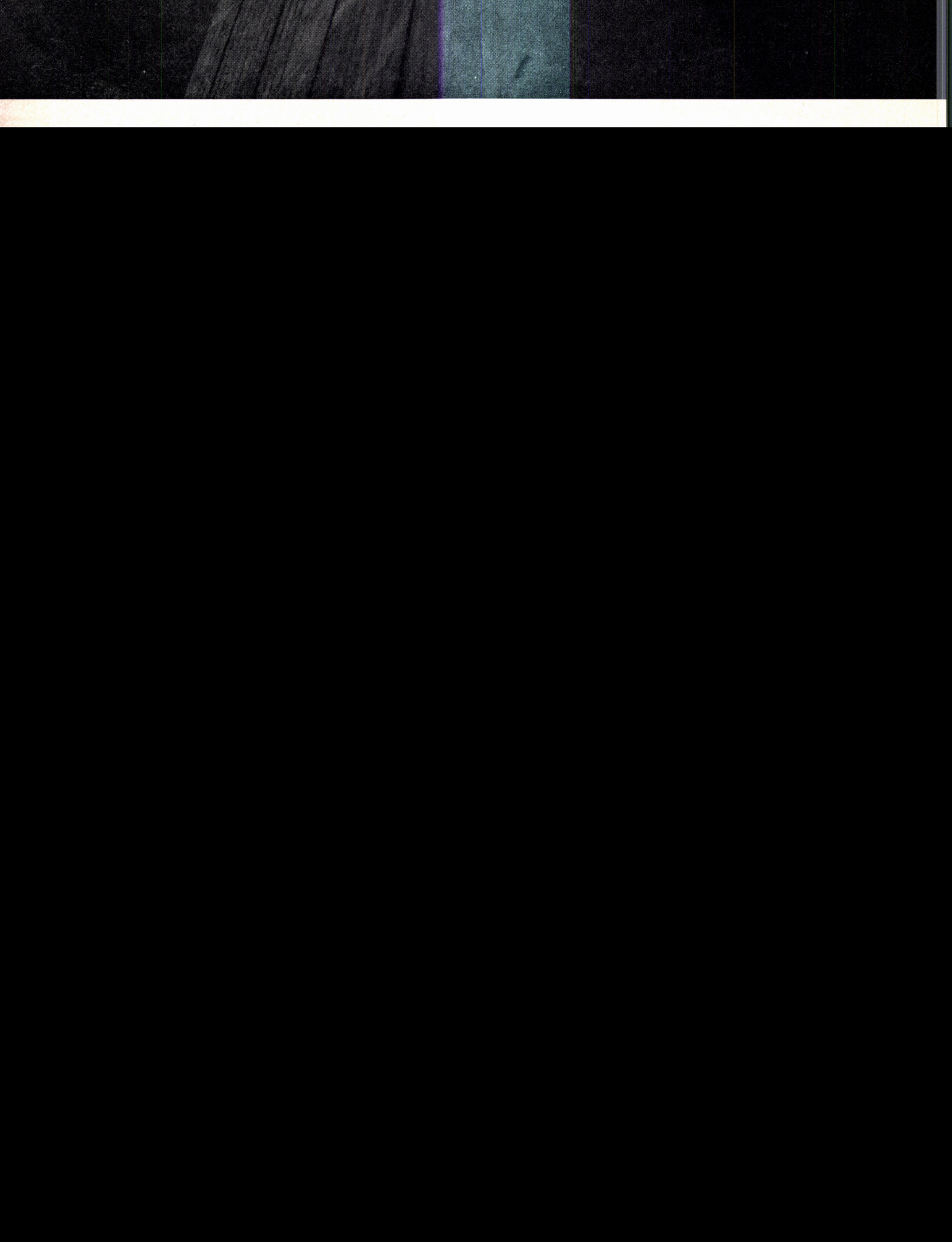
in fact consists of two hyperbolic paraboloids. As each wall rises its outer edges are vertical and parallel; but its centerline, where the hyperbolic paraboloids butt together, caves in overhead until (by the time it reaches the top) the wall has folded into a right-angle, pointing inwards. The four walls, between them, thus form a cross. It is in the conventional proportions of the crucifix, and it is glazed. It is a cruciform skylight: a window onto Heaven, you might say.

Of course that's not all there is to it. Tange's statements nowadays are never so bald that they can be described easily in words. He starts with a strong concept, a regular form, and works it over, introducing sub-themes and unexpected erratic breaks. Sometimes these disturb the image, yet he seems to want this and he knows when to stop before the vision dissolves into confusion.

In his cathedral, the unexpected twists are, as usual, es-

Mr. Boyd, a well-known Australian architect and critic, is the author of the monograph on Tange's work, published several years ago by Braziller. Mr. Boyd is also a member of the Forum's Board of Contributors, and a frequent visitor to Japan, where he recently saw Tange's extraordinary new building.





essentially Japanese. The original concept of a kite underfoot transmuting into a cross overhead might be of a fairly universal sort of character. Something similar is the basis of Pietro Belluschi's design for a twin project on the other side of the Pacific: another St. Mary's Roman Catholic cathedral proposed for San Francisco (1). In Belluschi's case the final, formal image is,



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as one expects in our Western Style, an inevitable and logical consequence of the conceptual idea. In Tange's case there is nothing inevitable in the development from idea to image, and there are things which happen for no logical reason. Tange is determined not to let geometry rule him. He loves it but wants to master it. And he comes out of the conflict almost completely successful. In short, he gains mastery but loses geometry.

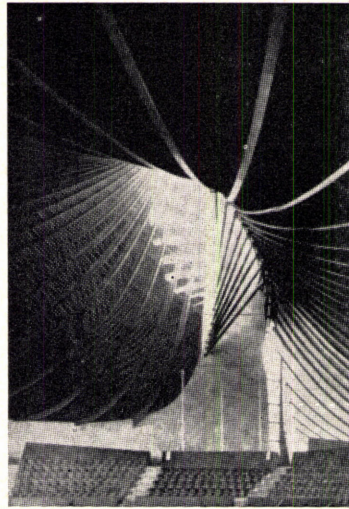
Tange has come gradually to this position. Very few living architects have had anything like the experience with the plastic form that he has gained during the last 14 years. He was in the forefront of that brave quest for engineered excitement in the 50's.



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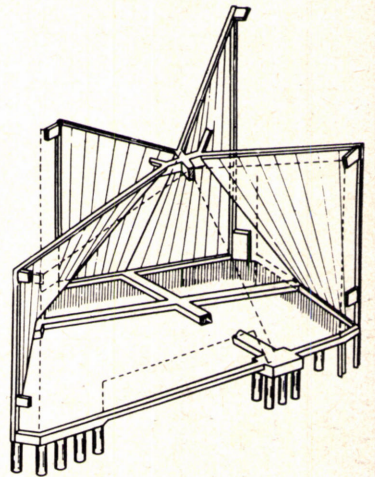
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His very first building to be completed, the charming, dilapidated Children's Library at Hiroshima (2), designed in 1951, had the pure and simple geometrical concept of a trumpet-bell sprouting from the ground, a curtain wall dropping from its rim. His Ehime Convention Center (3) of the next year played around more with its circular geometry, and in the Olympic Games stadia of 1964 he carried this personal contest with geometry to its strongest conclusion so far (4). In those mighty metal tents

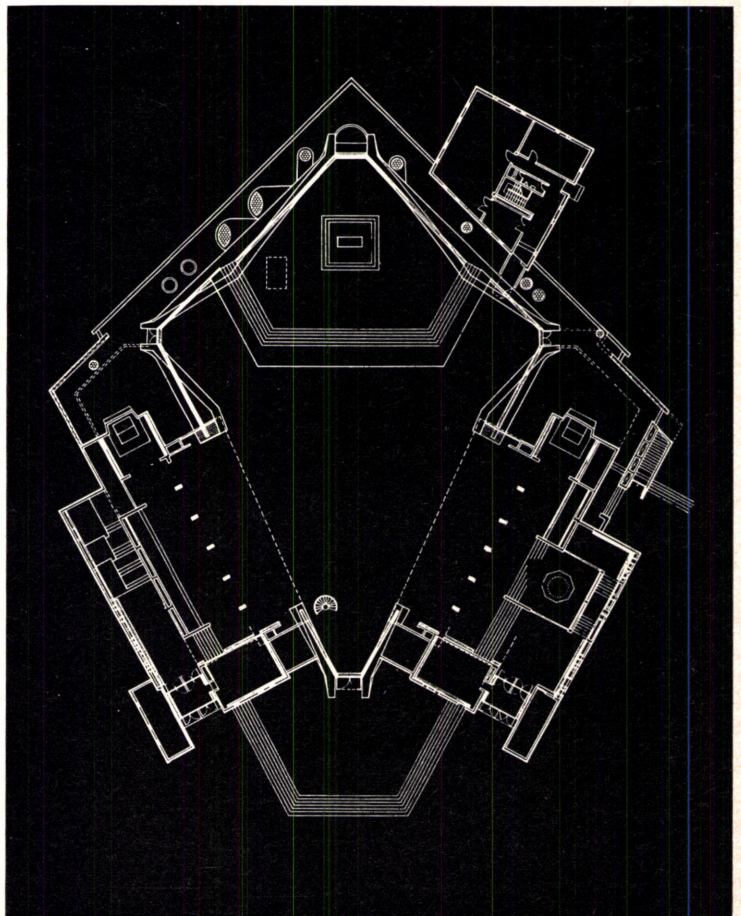
—surely the most creative tension structures yet erected—he achieved characteristically Japanese forms spontaneously, without compromising modern architecture.

The Tokyo Cathedral is much less obviously constructional, and the twist given to the geometry is just at the finish, in the oblique cuts to the tops of the warped planes (5). These unexpected angles cause the skylight cross to be depressed in the middle and to soar nobly in the corner behind the altar.

This corner is further accen-

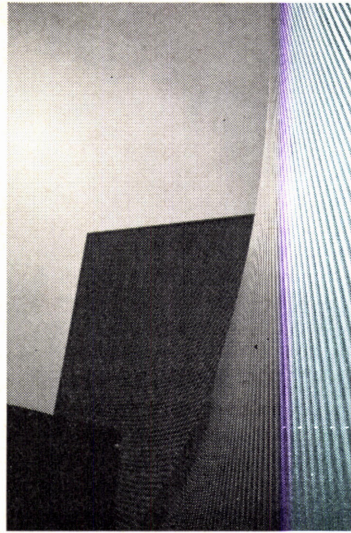


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tuated by being "glazed" with a coarse translucent marble that glows dull gold. All the shapes are arbitrary. They were sculpted by Tange on study models. The erratic dip in the center of the skylight system extinguishes the effect of a cross when viewed from below—except when viewed from directly under the center.

The result once again is a triumphant combination of modern international technology and Japanese feeling. It has not, of course, a hint of the precious *shibui* or Japonica, or any sort of tradition mongering, all of which are anathema to Tange. Except for the fugitive cross in the sky, the Cathedral is also, at the present time, quite innocent of any iconography, although some stained glass is proposed. No doubt this is inevitable, but it is quite unnecessary. Tange, who is by no means a Catholic, has made a Catholic space, as well as a Japanese space, by means of great height and a basic severity of form and finish, tempered by sensitivity at every turn and in every detail. The whole is as serene a blend of old and new, of East and West, as the face of the Japanese nun in the black and white coif



6.

who met us at the door.

The hyperbolic paraboloid may have a special fascination for Kenzo Tange because of its in-built, resolved inconsistency of curves and straight lines. While it is a universal and pure form it also has a touch of the perversity which marks many Japanese traditional forms. Its blending of straights and curves echoes faintly but clearly a repetitive theme in Japanese building: the line of the pagoda, of the lintel over a temple gateway,

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of the optimistic uptilt at the ends of the shrine roof.

Externally, the shell concrete of these twisted walls has been given a rich covering of stainless steel (6). The trays of the steel are in comparatively short lengths and are lapped. The cover pieces, about a foot apart, are in single lengths reaching 100 ft. and more to the top, accentuating both the height and the straight-line components of the warped planes. But internally the immaculate concrete of the shells is left naked. Its grey even texture is in keeping with the familiar austere idiom of modern Japan; and the texture reflects a grading of light that reveals the curved surfaces of the same warped planes.

The uniform greyness of stripped concrete links the nave to the other interior spaces. Long, wide corridors lead down from either side and round the corners of the kite to an irregular space in the crypt, which in turn leads to open-ended chapels. The windowless darkness is stabbed now and then by a flood of light from an invisible source spilling down a far wall. This is in fact daylight claimed from outside the walls of the cathedral overhead by a variety of snorkles that break through the roof of the podium.

Externally, the building complex consists of three independent elements, and rather too clearly independent. In the foreground of the approach is a free-standing campanile, splay-sided, tall and tapered, in bare concrete (7). Behind this is the podium housing the crypt and offices, faced with heavily pebbled pre-cast blocks. Above the podium rise the steel roof-walls of the cathedral itself.

The monumental form of this major element is an uncomplicated complement of the interior. It is understated and unexplainable. It poses mysterious questions and promises answers to be divulged inside—in the best cathedral tradition when, as here, the promises are fulfilled.

FACTS AND FIGURES

St. Mary's Basilica of Tokyo Cathedral, Tokyo, Japan. Architects: Kenzo Tange & Urtec Team; Structural Engineers: Tsubohira Laboratory, Tokyo University; Acoustical consultants: Ishii Laboratory, Tokyo University; Contractor: Taisei Construction Co. PHOTOGRAPHS: Courtesy of Professor Kenzo Tange

