



陳其寬先生在《葡萄園》第 20 期(52 年 11 月 2 日)的〈路思義教堂設計及施工簡述〉說：「教堂設計始於一九五六年秋，設計之初，考慮諸點」，「教堂乃全校精神之所寄，為易於由全校各處皆能視及」，「位於校之中心」；「教堂容四百五十人，為全校師生之半數，座位在堂之東，神壇則位於西端，晨曦自東窗而入，朝會時，神壇浴於晨光之中，當亦有助於神思」；「教堂之形式」，「期能在此建築中，反映吾國之文化傳統，揭示基督博愛犧牲之旨義，且兼具此時代之創造能力與精神。」

「當初設計曾根據以上各點，製模型擬議十餘種，其後研究所得，以六角形之平面，內部予人以親切感，視、聽、二設計因素皆較理想，與座席及神壇易於配合。為免除堂內通常之柱列有礙視綫起見，決定用一大跨度之結構，最初曾有以磚砌造，自六角形之西邊向上堆砌，會於屋脊之議，屋面與牆面合而為一，仔細視之係由四片曲面組合而成，類似倒置之船底。」

其下大上小之形狀，予人以穩定之感，在減少風力及地震影響二方面甚為有利，經再度研究，以採光問題及明確表現結構起見，四片曲面完全分離，于是屋脊部份分開，遂有天窗，具『一線天』之意。中部遂有邊窗，使神壇方面光綫異增神秘。其後為使前後曲面合於屋脊部份之結構，易於處理起見，於是後部二曲面高於前部，呈重疊之狀，後部高出之部份亦恰為內部神壇之地位，外觀適足以表彰其內部之重要性。」

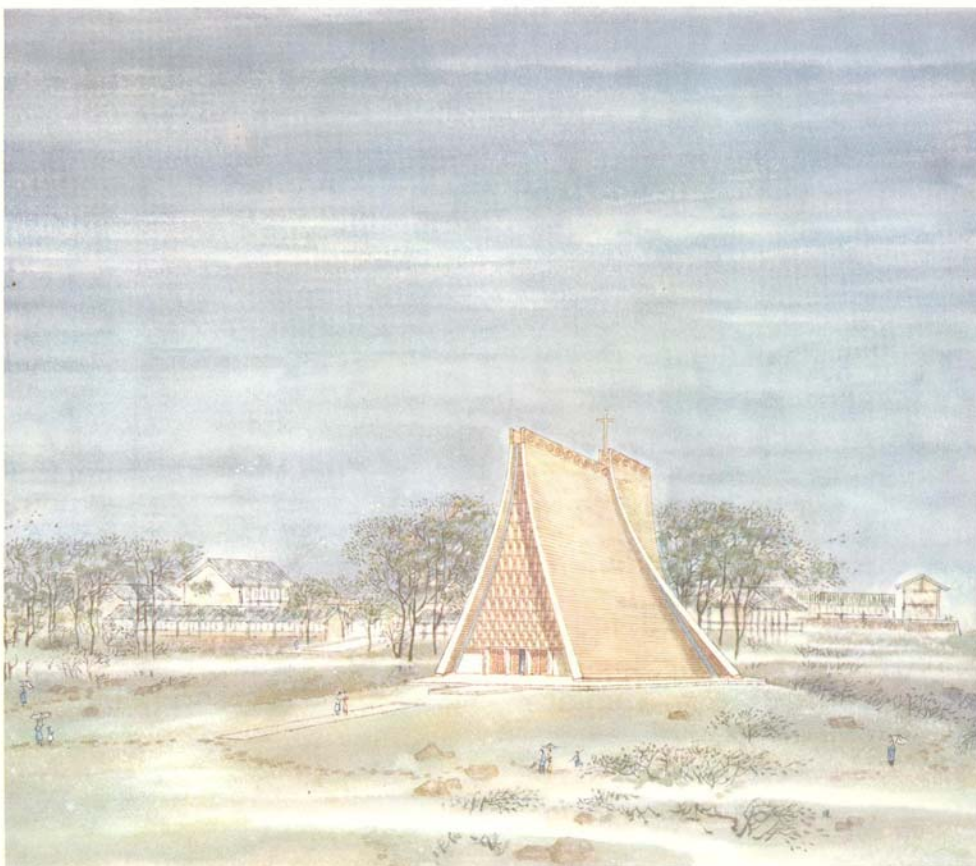
「結構材料，最初擬議磚砌牆面，其後改為木造，與西方各國木屋外牆結構辦法相仿，以易燃，易腐，易蛀，不能經久諸缺點而放棄。最後決定用鋼筋混凝土，此種材料具有可塑性，應用于此種曲面結構，相得益彰。」

「教堂屋面外部用瓷磚瓦，保護水泥屋，面兼防水去垢之利，其色澤更增加建築物之美感，曾考慮中國建築傳統所用屋面色澤，藍、綠、黃三種。藍、綠二色，易與天空及綠樹相混淆，加以色重吸收大量幅射熱，黃色則反是，且富有吾國宗教建築傳統性質，因遂採用。瓦為菱形，與內部交叉樑所成之形狀相呼應，瓦分二種，每隔一層，瓦上有凸出之釘頭裝飾，以得水平綫之印象，曲面之曲度借此更趨明顯。」

「四片曲面間置前後窗，天窗，皆用銅槽鐵鉸接而成，其與屋面相接處，有伸縮接頭，蓋因牆面遇有溫度變化，或受風力及地震時，有伸縮之現象。玻璃則用茶色防熱玻璃，以免日曬及反光。鋼面框梃，皆經計算，以抗最大颱風為準。」

教堂經多年的檢討，於一九六二年十一月一日開工。一九六三年三月二十日，教堂下部基礎及樓面完成。一九六三年六月，完成模板架構及紮鋼筋工作。一九六三年六月二十日，進行灌注水泥工作，每一曲面平均約使用八個工作天，每日六十五人。一九六三年八月二十日，四片曲面水泥灌製完成，經二週的濕度保養及乾燥時間，一九六三年九月四日開始撤除內部模板。一九六三年十月下旬，完成室內地面及裝修，座席，神壇相繼置入。一九六三年十月底，外部庭園佈置就緒，十一月二日落成。

# Chapel for China



# CHAPEL FOR CHINA

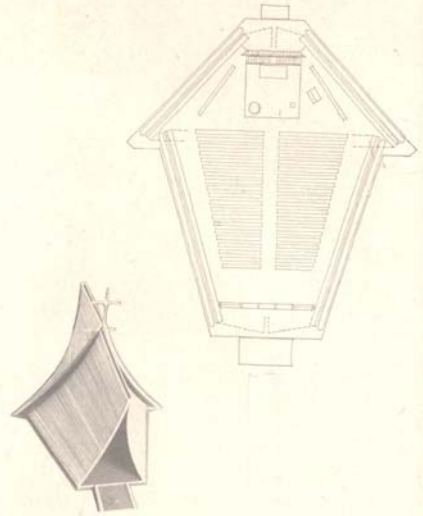
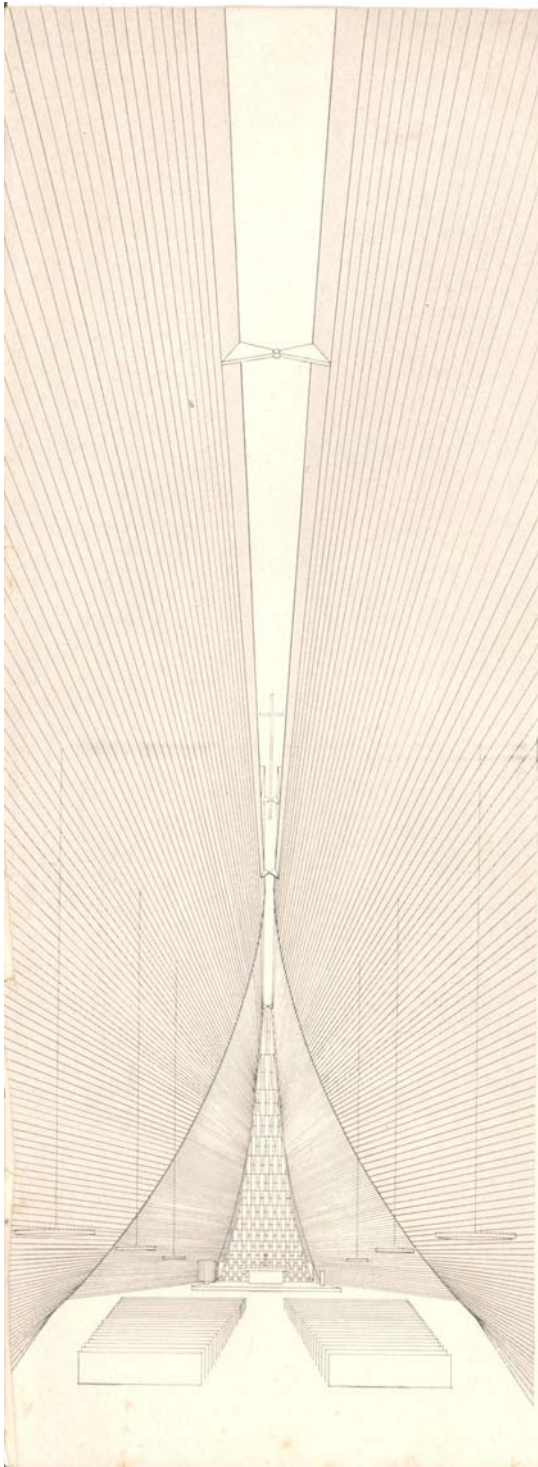
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On a dusty, windswept hillside above the Formosan city of Taichung, a shape of strangely delicate, sweeping beauty will soon rise from the center of the campus of Tunghai University, Free China's first Christian college. It will be a chapel enclosed by four warped planes resting lightly on the ground, barely touching each other across strips of glass at the top and sides. Here, probably for the first time, the geometry of the hyperbolic paraboloid will be laid on its side, springing directly from the earth to form a gently sculptured tent.

Inside, the curving shells will subtly mold the space, allowing it to billow out horizontally from the entrance to the widest point at the crossing, then in again to focus attention at the altar (see plan above). Overhead, the curves will sail upward, gathering the space below and projecting it to the infinite through a bright slit of light that runs the length of the ridge. This skylight, and the vertical sidelights facing toward the altar, will give sculptural modeling to the shells' curved cheeks.

Although the chapel's opposing shells appear to be leaning on each other, they actually need only very tenuous connections across the slot at the top, for the forces within the gently curved shapes are such that the two shells on the same side support each other. The shells will be rigid but able to "breathe"; each plane probably will be built in three sections with a core grid of 2 x 6's or 2 x 8's sandwiched between diagonal sheathing on opposite sides. Once in place the sections will receive a final layer of shiplap on both faces, forming a staunch five-ply structure.

Built for the United Board of Christian Higher Education in Asia, the 500-seat chapel is financed by a grant from the Henry Luce Foundation, which was established by Henry R. Luce to honor the memory of his missionary father. The design was contributed by Ieoh Ming Pei. Associates: C. K. Chang and C. K. Chen. Structural engineer: Georgio Baroni of Roberts & Schaefer.

Graceful interior is topped by a narrow skylight. At the end is a wooden grille.

Chapel stands 72' high, is thus a landmark at the center of the campus.