



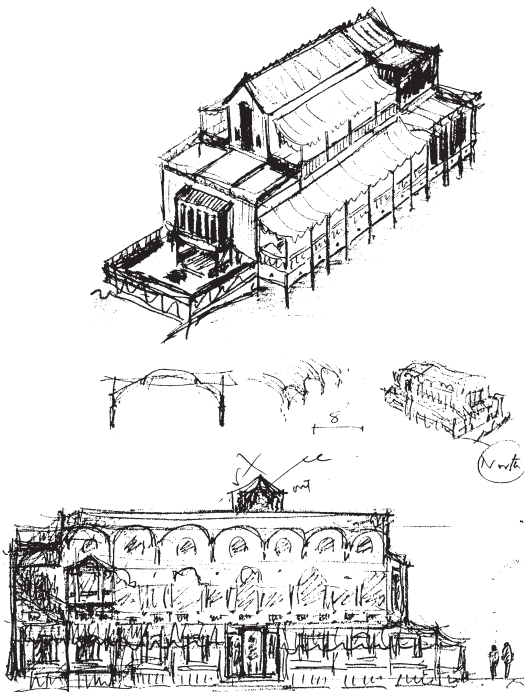
## 4 / THE APERIODIC GRID

Another way to express what I have been calling “brutal,” is to say that there comes a time in the evolution of a building form when we must forget the context, the plan, even turn our back on these things, and focus only on the pure beauty of the structural order, the building as a thing of beauty in itself.

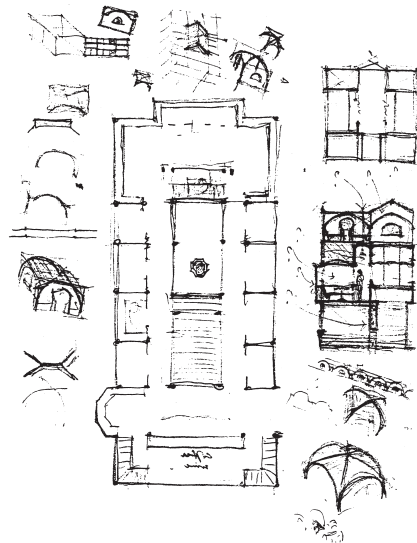
That means that for a time we become almost irresponsible, we forget practical matters temporarily, and we focus on the structural order—walls, columns, beams, vaults—as a three-dimensional object which evokes feeling through its geometric order alone, almost as if it were pure sculpture. It is the arrangement and shapes, of the structural order alone, which comes to the fore—and we focus on the question, whether this structural order, in itself, is beautiful enough to move us, as a whole, purely by virtue of its geometric force.

This is focused on beauty. It is brutal, only because, to do it, we must forget our responsibilities and the subtleties of site and function, and enter the play of pure forms with as much emphasis on feeling, art, and structure alone as we can.

This geometric substance that I call the brutal order comes, in fact, from the need to allow a certain regular rhythm of members to arise within an irregular envelope, because it is fitted to irregular circumstances. In the sequence of development, once we have a rough idea of plan, shape, size, and volume, we must then “grow” from this rough idea a regular packing of columns, walls, beams and structural bays which is regular enough to be a sound engineering structure, to have good horizontal behavior, good disposition of loads. And, inevitably, from this need, we will arrive at a system of rectangular

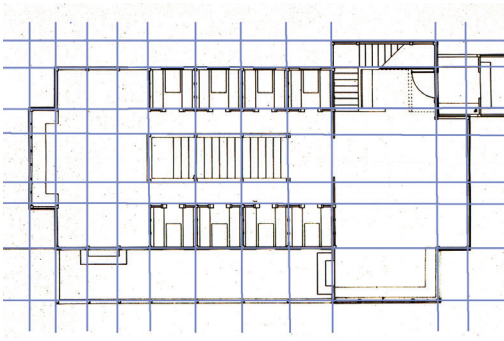


First sketches



More sketches

My early sketches of the Linz Café, 1980.



*Tartan-like or “aperiodic” grid. This is a rough sketch of the aperiodic grid from which I generated the Linz Café*

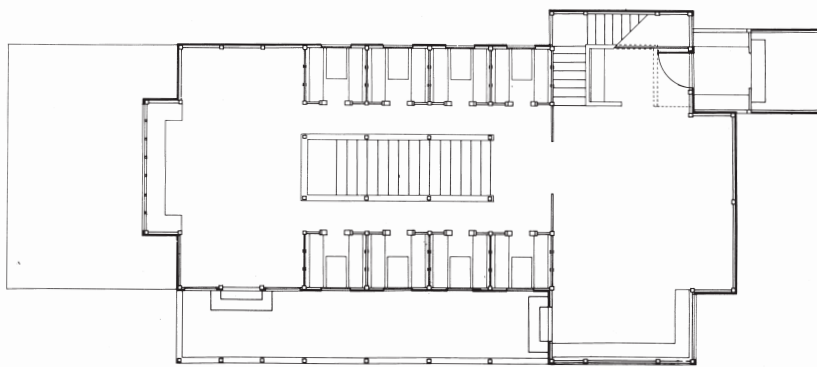
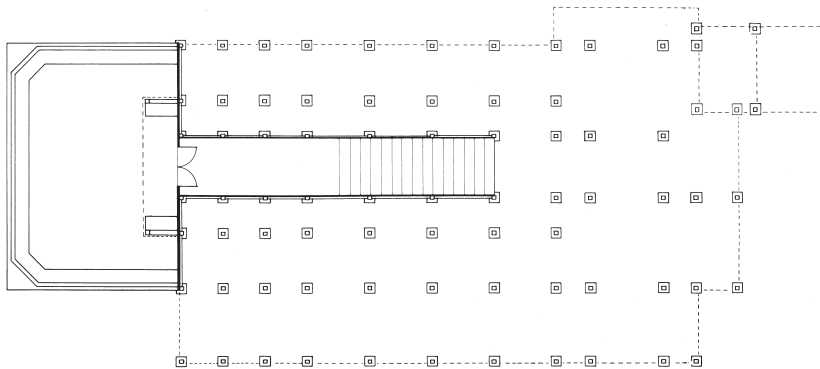
bays, more or less regular, yet imperfectly so — more or less repeated — yet fitted to the irregularities of site, variation of room size, and quirks of individual position. This cannot be done by an additive process. It can only be done — as a practical matter — by trying to cover the whole plan as accurately as possible with a *nearly* regular grid, squeezed, distorted just enough to cover the

peculiarities and necessities of plan. It usually looks like a tartan (left).

The work starts with the attempt to find grid lines (not spaced with perfect regularity, but spaced to fit the usual imperfections of plan) pushed into slight variations that fit the irregularities, so that the grid as a whole has an overall simple coherence. The resulting regular-irregular, tartan-like grid is what I call the “aperiodic” grid.

The gist of the process, what I call the formal or *brutal* process, lies in the use of very simple geometry, first introduced with force, after one makes sure that the inspiration has arisen from the place, and from the introduction, then, of just enough syncopation into the order, so that it truly fits the necessities of site and place and time, without doing violence to them.

We may see this phenomenon easily in a small example. On these pages, I show the plan of a small café I built in Linz, Austria, years ago.



*The Linz Café, floor plan*



*Interior, showing the effect of coherent structure on the feeling*



*The Linz Café, Austria, exterior view, 1981.*

The building was inexpensive, and had, within its volume, various complexities of space. As one sees in the drawings on page 408, the rough sketch of the building had various conceptions of rooms. Then it came time to make a structure of this semi-regular arrangement. To do it, I drew

a grid, shown in the freehand sketch on this page. In order to fit the structure to the spaces I had conceived, this grid had differentiated spacing of the grid lines. Some were wide, others narrow. And this happened in both directions, in the long direction and in the cross direction.





*The main building interior, where the regularity of the array is visible, and dominates*

The result, once smoothed out, and made more carefully, is a perfect grid, but one whose spacing is fitted organically to the nature of the spaces in the building. Because of its regular and semi-regular character, it arises *from* the arrangement of spaces as conceived in the land.

We see, then, in the plan of the Linz Café, just how the use of the aperiodic grid works as the basis of a generating process. First we see a very rough plan laying out the kinds of spaces, and sizes, and their positions. One then tries to construct the simplest grid which could encom-

pass these spaces, unchanged, making allowance for all the variations of scale. The largest space in the middle, the small spaces on either side, the syncopated alternation of large and small — all of these happening in both directions, of course, making a design almost like a Scottish tartan.

At that moment the order is essentially

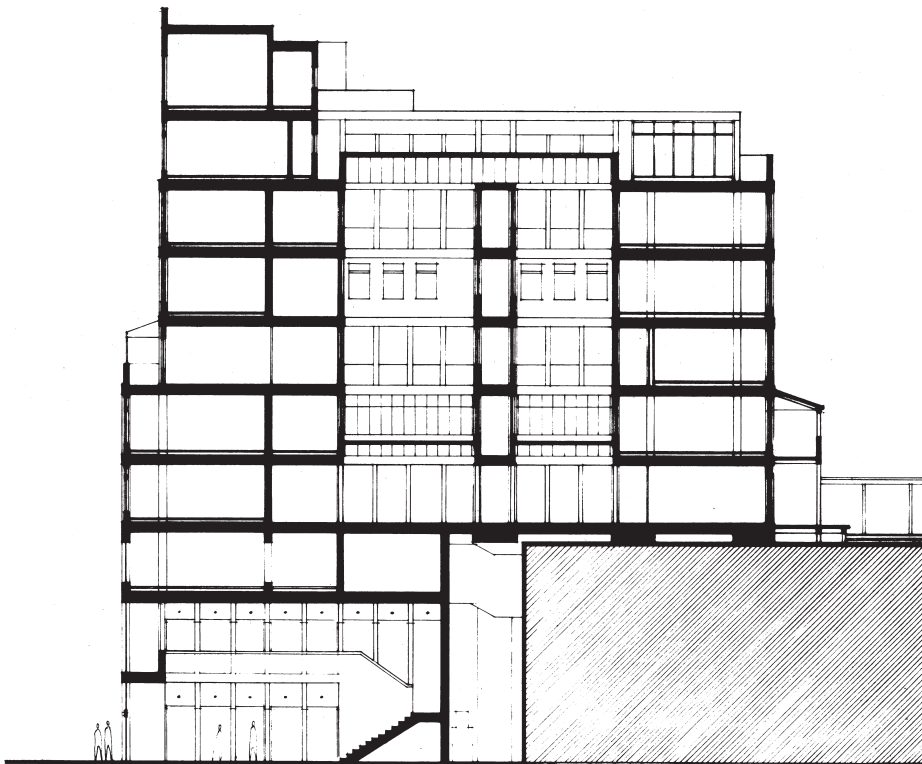
fixed. We have only to place columns at all the grid positions, recognizing that to some extent beams and columns will vary from floor to floor: The structural order of the three-story building is all but complete. The formal beauty of the interior is now almost assured, and comes in very large part from this array.



5 / THE SAPPORO BUILDING

Look here, at the example of Sapporo, a ten-story building which was to have been built in downtown Sapporo, on the northern island of Japan. This building, of concrete-encased steel, was to be built over an existing clinic. Because the existing clinic was hard to remove, and needed to stay in operation, I conceived the idea that the back part of the whole building would

stand on massive legs, straddling the old clinic. These massive legs gave rise in my mind to a structural conception in which twenty truly enormous column clusters (see pages 415–16) ran all the way through the building from top to bottom. At the bottom they are indeed solid and massive, and visible as legs. Higher up, they are pierced — indeed they are so large that they con-



*Sapporo ten-story apartment building, Longitudinal section, Christopher Alexander and Ingrid King, 1984*