which might be removed from them. This apparent "style," this particular sort of geometry, is a particular kind of structure. It is that structure which *follows directly from the use of living processes*.

That statement is, in the end, the talisman which allows us to see what we are doing in good architecture. I state it so definitively because I know that it is only when people begin to see and feel the actual geometry of living structure for themselves, that their ability to create architecture begins to flourish.

The dream of a universal style, mentioned often by architects of the early 20th century, can be found at last in the results of living process. It will not be found among the machine-age products of the world, not among the gigantic image-conscious buildings which resemble strangely made boxes and commercial advertisements, but among a quite new class of buildings which, in ultra-modern form, will very slightly resemble the most ancient buildings of the past — not in their outward style, but in their inward essence. They are new, and dramatic, and unknown. Yet they are part of the human archetype, and therefore known, even when they have not been seen before.



#### 4 / CENTERS AND SYMMETRIES

In the preface, describing the evolution of centers in St Marks Square, I referred frequently to the fact that each local center, as it was being created, was, in effect, caused by the creation of local symmetries. Many (not quite all) of the local centers in the finished St Marks Square are also local symmetries (pages 6-7). Similarly, each step in the process of creating the archway of the Mexican low-cost housing project created one or more local symmetries (page 10). Each step that created the drinking glasses created local symmetries (pages 8-9).

If you look over the examples of this book, you will see that most of them have the character that their evolution was accompanied by stepby-step creation of local symmetries. And this is true in general. When centers are being created, a high proportion of them are locally symmetrical. Living process is, in part, a process of creating local symmetries.

This is typical in nature; and it is typical in architecture. In the early part of Book 2, I have commented on the unfolding which occurs typically, in nature. This unfolding, associated with bifurcations and sequences of bifurcations in morphological theory, often consists of a process which establishes local symmetries one by one. But the question is, of course, *Which* symmetries — and which centers — do the most to extend and preserve the living quality of the evolving structure?

In architecture we may ask this question in a highly personal way. Faced with any particular moment in the evolution of a building form, which next action will most intensify the feeling? Differently stated, we may ask, Which new local symmetry that may be introduced into the emerging whole, *does the most to intensify the feeling of the whole*? The unfolding of a building form is to be understood as a sequence of local symmetry-creation in which each symmetry is introduced, injected into the emerging whole in a careful way that creates the maximum feeling, creates links to the whole, makes the larger structure more harmonious and more connected, internally, in its feeling.

As we have seen, that is the origin of living process. The production of feeling is the origin, even in nature, of all living structure. The shortest statement of what one is trying to do in architecture is to obtain the field of centers by introducing one center at a time into the whole, so as to extend the whole and preserve structure. I may restate it. We are always trying to get the maximum feeling from



Hand-painted dolls I carved for my children and painted in gouache. The green doll is the tiny one, second from the right.

the thing as we design it. To be making centers, our simplest path is to be making symmetries. Thus we may imagine a process of making a series of symmetries, one at a time, always the most profound symmetry that is consistent with the wholeness that exists, but do it in such a way as to create the greatest feeling possible in the emerging thing.

When done right, this is not only going to create living structure. It will also generate the unconsious, archetypal character that emerges from the directness and lack of sophistication present in the process.

## SYMMETRY PRODUCTION EXAMPLE I, DOLLS

I remember once working with a journalist who was interviewing me about my buildings. I found

it hard to talk to her, not easy to explain things, and difficult to answer her questions.

At a certain stage I picked up a small green doll that I had carved. A tiny doll, no more than about two inches high, only the rudiments of a head, a skirt, feet, arms. It was painted green with, as I remember, small red spots. I told the interviewer, "Everything I know is encapsulated in this tiny doll."

She took the comment as too off-hand and did not take it as a serious comment about buildings. But I did mean it seriously. The doll is rudimentary. But what is in the doll is *only* what is needed to make it have its feeling, *and nothing else*. There is nothing else there. I started with a bit of stick. First I made some cuts to separate and shape the head — just a slight rounding near the top of the stick so that it has a flat top. That made two symmetries. Then two notched cuts



The green doll.

on either side to make the dress a triangle. Then a notch cut between the feet to separate the legs. Then a bit of wood (internally symmetrical each time) cut away above each foot, to distinguish the foot from the leg. Then a very slight cut to make the arm stand away from the body, a shallow groove on each side. A very small series of symmetries, introduced one by one, to make the doll.

Nothing more. A small series of symmetries made by the carver, each act as intensely chosen as possible to project the image of inner feeling which the carver has. It is made just to create, to project that feeling, that intense personal feeling. And it does work. The rudimentary head and arms, the green dress, and its red spots — these are just the things needed to create a feeling in that piece of wood as it began to unfold. No matter how small and unimportant, it came out with the intensity of a real thing.

## SYMMETRY PRODUCTION EXAMPLE 2, SAN JOSE

I had the habit, at one time, of going to visit the Julian Street Inn, the Shelter for the Homeless I built in San Jose, California. I used to go and sit in the forecourt and talk with anyone sitting there, just to see how things were going.

One day I had a long talk with a man who was staying there, and in the midst of our conversation he began telling me how much he liked the building. After listening for a while, I asked him if he knew I had built it. He said no, he had not known that, that he was amazed. He told me that the story was going about that the building had been built 200 years before by an elderly black lady, a great philanthropist. When he heard that I had built it, and realized that it had been built recently, he said to me suddenly: "This is the only building I have ever been in where everything — I mean really *everything* — is necessary."

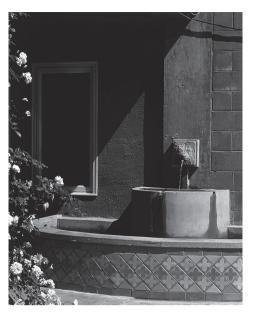
The remark struck me as odd at first, since there are decorative tiles on the walls, carved cast capitals on the arcade columns — in short, it is far from a minimalist functionalist building. He brushed that away. "Yes, I know that, of course I mean to include all that. What I mean to say is that what is present in this building is just exactly what is required . . . and nothing else."

He simply meant, I think, that each symmetry was put there because, for some reason, it had to be there. For instance, the seat, it is just what is needed to be a seat, to sit on, to lean back, there is no crudeness to take away from it, no extra detail that is not needed to make you comfortable. The fountain has just what is needed to be a fountain: sparse ornament, but a plain concrete basin, just in the place where the fountain needs to be.

He told me, too, that he had at one time been in a difficult state (many of the homeless who came to the shelter in those days were people who had been mentally ill). The fact that what was there was *only* what was necessary — nothing more and nothing less — made him feel grounded, more able to become whole. Of course, because in nature, too, there are just the symmetries which are required and no others. Is it too much to say that a building which has this quality is like the long grass of a meadow, and therefore has the same power to make us well?



San Jose: Everything necessary. Details on the capital of an arcade column.



Everything is necessary: fountain and roses.

# SYMMETRY PRODUCTION EXAMPLE 3, WEST DEAN

One of the most successful things I did in the West Dean Visitor's Centre was something that may seem hardly noticeable to a casual observer. It is the long curved bench that forms the sweep of the entrance and leads the visitor from the gate towards the entrance porch (page 666).

Originally, there was no idea of such a bench. Certainly it was not in my mind at the beginning. We had the gate at a certain angle coming straight in from the parking lot, and we then had the path leading towards the building entrance.

The entrance of the building was built and in position by the summer of 1995. By then, too, we had a rather clear picture of the curve that the path made, a curved sweep. Plotting this curve — walking it out according to the path that felt most natural to walk — had given us the position of the gate to within a meter or so, also by that summer. A month or two later, we had the gate dimensions clear to within a centimeter or two. At that stage we went ahead and built the gateposts. I began thinking that we should build two walls, one on either side of the curve, to lead the curve in towards the building and hold the space fixed, making the space more defined than it was at that time.

Our client did not like us spending money like this even though it was not an "extra," but was provided by us within our fixed budget, at no cost to him. He tried to argue that we should build a cheaper fence — a wooden trellis — on the outside of the curve. The more I heard this, the more I kept feeling its wrongness, the more sure I became in my own mind that what was needed was something really solid.

The more I thought about it, I became convinced that what was needed was a long, solid, flint structure with a seat, and behind it a very solid wall of brick and flint. Of course I felt it would be nice to sit there. It is a very obvious place, near the entrance, by the gate, an obvious place from which to see, and be seen — and it is in the sun, too. But far more important than that, I also knew that this solid mass was needed to contain and hold together the drop of space between the gate and the building, a space almost like a water drop which was formed be-



West Dean, sitting on the bench in the sun. A view from the building looking outward.



The egg-shaped space formed by the bench.

tween the entrance with its curving path and the building itself.

So I insisted. As built, now, this bench is soft yet dominant, it is one of the best things about the outside of the building, and yet so unobtrusive that no one remarks on it. But I know that the building works and that the space comes alive *because* this long, curved seat holds the space, defines it, orients it, comfortably.

What are the symmetries which generate the feeling? The small gate leading into the garden. The bench. A long, egg-shaped space between the bench and the building front door. The bench shaped to curl around this egg-shaped space. The form of the bench, the simplest possible consistent with this curve. The curve holds the space and makes a peaceful feeling, connecting someone sitting, both to the gate, and to the building door.

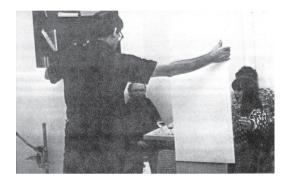
SYMMETRY PRODUCTION EXAMPLE 4, THE LINZ CAFE

While I was building the Linz Café, I made a row of alcoves inside the building. The form, the intimacy, of these alcoves was very important. To get them right, we set up a few chairs, some plywood, a table, some bits of cardboard, in the middle of our office in Linz where I was doing the design work. I adjusted the table, adjusted the

#### THE MORPHOLOGY OF LIVING ARCHITECTURE



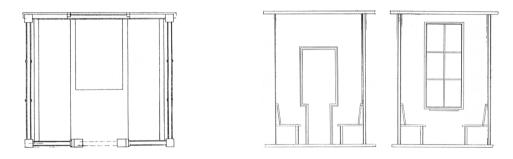
Taking measurements from the alcove while we were testing it.



In our office in Linz, making cardboard mockups of the alcove.



Interior alcove, Linz Cafe, Linz Austria, 1980. Hand-painted surface with color and flowers by Christopher and Pamela Alexander.



Plans and drawings made from the measurements in the experiment and used to build the actual alcoves in the building.

chairs. I made the table a little narrower, a little longer. I made some kind of rudimentary entrance to the alcove, so that once in, one was protected. I played, using plywood scraps, with the angle of the back of the seats, to make it comfortable to lean against.

All the time I was working with one aim in mind: to make the alcove as comfortable as possi-

ble. Not the comfort of the body, but the comfort of the soul (if I may put it like that without exaggerating). I tried to make it so that one felt at home, truly at home, one had a place for one's soul, leaning there, elbows on the table, with a cup of coffee from the small galley that the office kept.

When I was done, I knew I had been reasonably successful, because no one wanted to leave that place (the mockup, I am talking about, as photographed above — not yet the real thing). People — people working in the office — sat there for hours. It was the heart of the office, even though only a temporary mockup, so long as it still existed there. It was a place where people could sit, and sit, and sit. No one wanted to get up and go away from it.

To reach that state, I had to work at the geometry. It was all empirical. I did not use

theory. I just kept on, by trial and error, till it had this effect — on me, and on the others. Then once we had it right, I transcribed all the dimensions — of seat, table, seat-back, angles, lengths, heights, window-sill position, entrance, entrance width, all that — to the nearest centimeter or two — and then used these dimensions in the actual building when it came time to build it.

In the finished building, the alcoves did work very well.



5 / THE FEELING-SYMMETRY PRINCIPLE WITHIN THESE EXAMPLES



Buildings, layers of symmetry, the gray-roofed buildings of the Eishin campus, 1987.

Each of the four examples has a carefully worked geometry which creates a profound and subtle form of ease. And precisely that, too, is the morphological character of living structure — it is always the simplest thing it can be. It is *that* which creates the ease.

Each of these four examples has at its core the creation of some degree of feeling. Each one