



Construction detail, West Dean Visitors center

with conventional mortar, but with a kind of polymer glue-mortar like tile-setting compound.

And in West Dean (these two pages) I tried making enormous walls with an integrated poured combination of bricks, concrete, flint, stone, and massive blocks and insulation work-

ing together as a single structural wall because of the interlock of the different elements with the poured concrete. I like that one very much; it is almost two feet thick, all works together, looks beautiful, and is built like a tank. All these are experimental but not too hard to try.



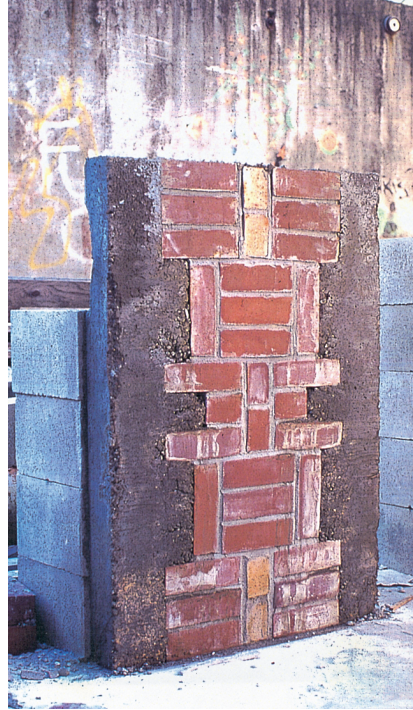
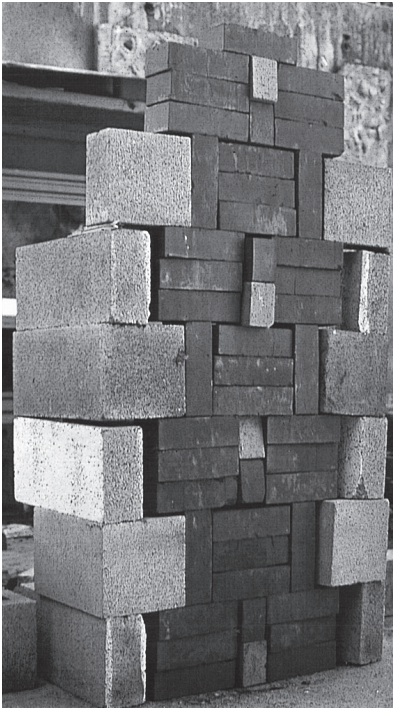
8 / SOPHISTICATED MAY MEAN ADVANCED
OR IT MAY MEAN PRIMITIVE IN APPEARANCE BUT
ADVANCED IN CONTENT

I hope you see from these few examples the idea which I am putting forward. The necessities of the fundamental process ask us to change construction techniques, profoundly.

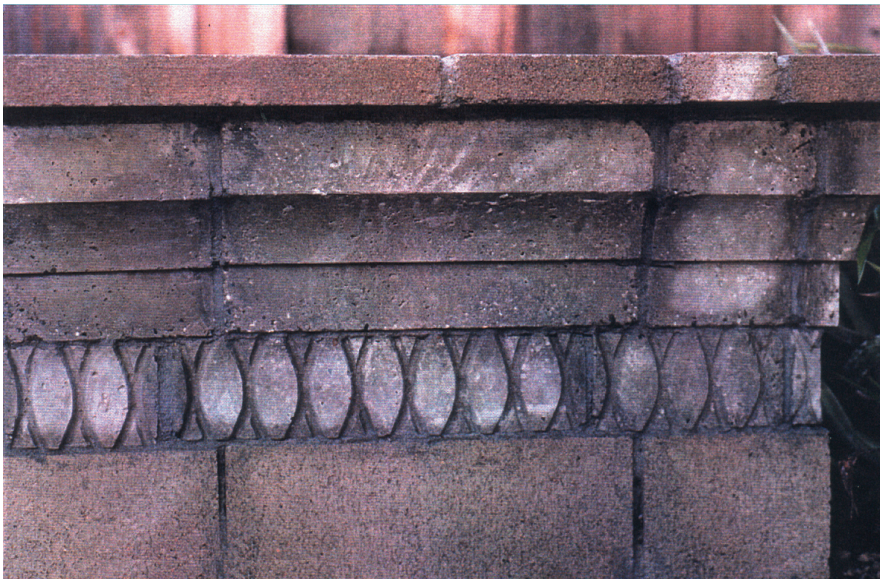
If we are to build a living world, we need a way of building that allows centers to be shaped and locally determined by the whole; that means that materials and techniques are chosen so that

components can vary subtly in infinite but not extraordinary ways to fit the living structure of the context.

Ways of doing this can be very advanced. In some cases they may also be nearly unknown or newly invented and of necessity ultra-modern. Many of the examples I have given are techniques that are technically sophisticated,



*Left: and early mockup in our yard of a new kind of wall construction for the four-story Frankfurt apartment buildings.
Right: Another mockup in our yard, more developed, of a new kind of brick-concrete mixture in a wall construction for the four-story Frankfurt apartment buildings (plans shown on pages 86-92).*



Special cast blocks to be used with normal concrete blocks. Eileen Tumlin, 1996

purely of the late 20th century. It is not feasible in this age to re-create old building techniques

of another age. The problem with such re-creation is that it usually has the wrong labor

CONTINUOUS INVENTION OF NEW MATERIALS AND TECHNIQUES



Left: An unusual bay made with standard concrete blocks, together with some modifications. Right: Another wall made with standard concrete blocks, and modifications.



*Shops for the Fresno Farmer's Market, to be built in innovative block techniques, some shown above and opposite.
Christopher Alexander, Kleoniki Tsotropoulou, 1982*

factor (the percentage of construction cost spent on labor). It may require labor-intensive meth-

ods which were suited to one economic era, but are impossible in ours; costs do not make



Lightweight Hebel blocks which can be hand cut and shaped with woodworking tools, being used in construction of a small factory.

sense; it is not appropriate to our era. The techniques will therefore *have* to be ultra-modern so that speed, technique, type, material all come from our unique time. But what is *done* with these materials, if they are capable of making parts that are beautifully fitted to the whole, will be unlike the insensitive and

mechanical repetition we mainly knew during the 20th century. In the near future it may include use of concrete, glass, steel, aluminum, plastics, fibers, fiber cements, mud, sand, and polymers. Whatever it is and in whichever era it may come, it should be truly something of the 21st or of the 24th century.



9 / SMOOTH UNFOLDING OF CONSTRUCTION

I should like to add to the purely technical inventions embodied in many of the foregoing pages by drawing attention to a feature many of these techniques have, and indeed *must* have, if they are to be useful in an adaptive process.

In present-day building techniques, the process of construction is not smooth. One works with a drawing of the building, a drawing which shows how each part fits together, and this shows where each component, and each contractor, are supposed to fit in.

One of the reasons for the complex drawings of our time is that these different techniques and subcontracts need to be coordinated. It is vital to coordinate them accurately. If the drawings do not show where each part goes, it cannot be done.

But *unfolding* — the unfolding of a living process — is not like that at all. If one makes a traditional mud hut in the Cameroon, the sticks are placed in the ground in a circle; then they are bent towards the center and tied. Then wattle is woven to make a basket for