

exists and to enliven it. To the extent that it exists, our task is to find that one.

I show, on page 155, a pump-house building built by Otto Wagner on the bank of the Danube about 1900. His building, in the foreground here, is bold, simple, unpretentious. But it fits the situation perfectly. It creates something new, yet leaves the fabric of the city untouched, extended, enhanced.

This relationship of the new volume to the

existing structure is almost like the molecular lock-and-key relationship that exists between certain sites in a protein and incoming molecules; they have to fit very exactly, and the fit is very complex, so they are very specific. Whether they fit or not is very definite, though very subtle. What I am talking about has that kind of complexity. It is defined by highly complex features of the wholeness, that is to say, of the system of centers which exists in three dimensions.



4 / THE MILLENNIUM CHURCH

On this page and the next, I show a case of a very large building — the Church of the Holy Trinity — that I was asked to design on the south bank of the Thames. I looked at the site (shown below), from across the river, and tried to imagine what would help the river and what, if it was built there, would help the City of London.

The new church was to be massive, capable of holding 500 people, and capable also of making

room for a new approach to church services in which large gatherings alternate with small group seminars. It was to be built on the south bank of the Thames, between the railroad tracks leading out from Victoria Station and Chelsea Bridge. The photograph below shows the site as it looked in early 1997.

Preparing for an early discussion with the client, and after absorbing the briefing I had



View of the building site as it was in 1997, looking south across the Thames



Sketch design for The Church of the Holy Trinity, as seen from across the Thames, in fog. To sketch the building I put the photograph of the site in my computer, and drew directly on the photograph, using a program which encourages formation of centers and structure-preserving transformations. I kept adjusting it, until it seemed as appropriate as I could make it to the site, so that the view across the Thames becomes better, and the Thames is made greater by the presence of the church. Drawing made from the north bank of the Thames near Chelsea Bridge, seen here after 200 iterations. Christopher Alexander, 1997

been given, I stood on the north bank of the river, looking across at the site, trying to imagine what kind of large church would both be a great and inspiring monument and would, at the same time, complement, enlarge, and extend the beauty of the site and its position in the overall scheme of things in that part of London.

Thinking about that, I began to see a high building, with many spires, forming a single mass.

To make clear to myself what this was, and what would be structure-preserving in that place, I made a computer image of the photograph below, and drew in the computer, using a simple tool which I had then just recently created for step-by-step unfolding. The resulting sketch (this page) shows, in some degree, what it means to make a thing whose form, and the form of the space which is created, are consistent with, and grow out of, that place.

The sketch process was an informal structure-preserving process, carried out almost

as one might carry out a doodle . . . a small line is drawn, one looks to see if this line helps the site, moves, adds another line, . . . is it preserving the structure of what is there. Does it fit? Does it extend the whole. Does it make the landscape better, more harmonious than before? Where to put the next line? What kind of building, what shape, size, high, low, long, thin, would help to make the land better, if, indeed, I put it in that place? Again we search. The mind races through fifty or a hundred different ways of making that volume. I consider it as five stories high, or as two stories high. I consider it as long and thin, or massive and squat like a cube — then again higher, deeper, further away from us as we are standing. Again, I am aware as I go mentally through many, many cases, that most of them do not help, they make the city worse and less harmonious. But gradually, as the process goes forward, I get a glimpse of the fact that if the new church is high, it will have the effect of

intensifying that one place — which was not much of a place before. That is the way to get the first glimpse of the right building volume.

Whatever I think about, I ask if—genuinely—the latent centers in the site can be preserved. This is not so hard to do when the latent centers are fairly small, say 100 or 150 feet across. But sometimes it is possible to find a way of introducing the new volume, so that it not only strengthens a small center like that, but also, at the same time, some much larger latent center—in this case the river itself, perhaps 500 feet across—is made more beautiful.

This is the kind of action which is really powerful in bringing the configuration to life. But to do it, you can't just sweep everything away. As you introduce the new volume, and make the highly complex three-dimensional configuration more alive, you have to protect and preserve all the small centers—lawns, buildings, walls, seats, trees, bushes, paths, spaces that are loved—all the centers formed by groups of things. Whatever new centers you inject must not cut across these existing centers or destroy them.

How can we specify this nearly lock-and-key relationship of the new volume to the existing configuration? There are no simple rules for finding the best volume. There is not, as far as I know, any algorithm for it. But I would summarize like this: Look at the centers in the configuration. Some are latent, weak, not yet complete. Try to shape and place the new volume in such a way that all the important centers that exist now—especially the larger ones—are preserved; and try to do it so that some of these latent centers are made more beautiful.¹

The effect of the fundamental process is that the site and volume become intertwined, since centers in the mass and centers in the space are developing together.

If the site is mainly natural, then what matters is the way this building sits in the land, complements the lines, contours, hills, trees, dips and hummocks of the terrain. If the site is urban, then what matters most is the way this building

continues and completes the urban structure, sits in and makes harmonious the extended urban flow and character of the street or square where the building is to be located. That means that all the latent centers in the city, at that place, in an area perhaps hundreds of feet all around, are to be improved, made a little bit better by the new building.

In both cases, we have the task that the wholeness now existing is somehow to be made more complete, more beautiful, because of what is being added to it, injected into it. That is what we are trying to do.

In my experience, this work must be done on the land itself. One must imagine the building, when standing there, waiting, really, for the form and volume and position of the new building to come to the mind's eye, as if it were already there, and as if you can see it, just by standing there. Usually, after seeing it in this way, we also flag it or mark it with flags or poles or strings, so that we see it more clearly.

In its first moments, the process has a particular visionary and dynamic character. To start with, we look at that land with the eyes of lovers. We see the land, appreciate its good qualities, love what it is; no matter how derelict, still we love what is best in it. And then, as lovers of it, we have to imagine that by putting a building there, we can make the place better. This is often hard to imagine. In a natural landscape, is it really possible that the bushes, the buttercups, the small blue flowers on the hedge are made *better* by putting a building somewhere? But I persist. Very fast, like a chess player considering moves, I run through twenty, fifty possible places where I might put the building. Most of them I pass by in an instant because I can see that they do not make the place better. But with one or two I begin to see a glimpse of the way that the whole land might become better if I put a building there. There, for instance, a building *this* long and *this* high, will repair this street. So for the first time, I get a glimmer of an idea that this land can actually be *improved*, made better, by placing a building in just that one place.