

'The act of building is not and cannot be just a question of technique, for it is charged with symbolic meaning. This ambiguity is only the first of many that mark the profession of architecture. Any attempt to resolve the ambiguity is not the beginning of a solution – it is the first sign that you are giving up.'
(Piano, 1997, P.10)

I quote at length since not many architects have been so explicit. It would be easy to assume from these opening paragraphs that Renzo Piano's method of working is entirely based on intuitive leaps. On the contrary, Piano is very careful to describe the design process. He does so in terms that are highly analogous to the Popperian iterative sequence.

'Designing is not a linear experience, in which you have an idea, put it down on paper, then carry it out and that's that. Rather it is a circular process: your idea is drawn up, tried out, reconsidered, and reworked, coming back again and again to the same point.

'As a method it seems very empirical, but if you look around, you realise that it's typical of many other disciplines: music, physics, astrophysics too. I once discussed this with Tullio Regge and Luciano Berio, and the analogy was clear – one was talking as a mathematician, the other as a musician, but the essence was the same.

'In scientific research you have to deal with equations with too many variables. In nature, the variables are virtually infinite. So you fix some on the basis of an intuition that stems from your experience. At that point it becomes possible to solve the equation. Then you test what you have found. If it doesn't work, you start again. You formulate another hypothesis, you go back over what you've done, and so on. In the process, you narrow the circle, like a hawk closing in on its prey. Note that

circularity, in this sense, is not just methodology, and still less procedure. It is, to use high-sounding words, a theory of knowledge. Trying over and over again is not just a means of correcting mistakes. It is a way to understand the quality of a project, or of material, light, sound.' (Piano, 1997, p.18)

Piano is far from being alone in the clear way in which he describes the nature of architectural design. Edward Cullinan, working in London and sharing with Piano a belief in the significance of how buildings are made, has recorded his attitude in an interview with Edward Robbins.

'Some people who are struggling to become architects push pens and pencils up and down the page desperately looking for a solution, hoping that the drawing will produce the solution or the concept. But it never does. I think that one person or a group of people working together have to have an energetic concept of what it is they are trying to make in their heads or their imaginations, and that drawings are then, as it were, a test of the concept. And in our case, the doodle tends never to be plans, sections, or elevations. They're nearly always three-dimensional doodles. They are as much for individuals to clarify things for themselves as to one another. So they are used two ways: as a clarification for oneself and for spreading the notions . . . From very early on in our tests of notions we do things that look like working drawings. We do things that are very large, screw-them-together drawings, which is also a test of the idea. So some of these sort of finished ready-to-build-it working drawings go right through to the end of the project and some of them die with the idea. We embark on very thoroughgoing tests so we don't mind how elaborate the drawings are that get thrown away in the process. The first chapter is about doodles and then