practitioners is rather different. They speak less of clearly defined routes and rather more of their own individual interests, approaches and strategies. Our earlier examination of some maps of the design process suggested that, whilst many seemed quite logical, none were really all that useful. The writings of practitioners confirm the view that there is not one route through the design process but many. However, it is not enough to rely entirely on designers' accounts of what they do. If we could accurately describe what goes on in our head when we design, then there would be no need for any books such as this!

Begin at the beginning

We know that the process starts with some sort of problem and finishes with some sort of solution, but how do designers get from the first to the second? We have explored maps of the design process and generally found them wanting, since they are neither accurate nor helpful. So just how do designers begin their work?

We know that design problems are rarely, if ever, fully described at the start of the design process. We have also seen empirical evidence suggesting that designers use what we might call solution rather than problem-focused strategies. That is to say their emphasis is more on reaching a solution rather than on understanding the problem. Our examination of the nature of design problems and solutions perhaps now shows this to be rather more logical than it might have at first seemed. We saw that design problems cannot be comprehensively formulated and that solutions cannot be logically derived from them. However, most design problems are also far too complex for the designer to hold all the factors in mind at once. So where do designers begin and what sort of strategies do they employ to proceed?

The brief

Conventionally a design begins with a brief, which we may imagine a designer is given by a client. However, since design problems cannot be comprehensively stated this begs the question of what is in the brief and what is not! This itself can vary considerably. The brief may be quite complete in a design competition. In, for example, architectural competitions there may be a site, a

schedule of accommodation and a set of requirements all laid out quite explicitly. This is necessary in the case of the competition where the designer is probably allowed little or no contact with the client before submission. In the more normal design process our question is not so easy to answer. A common complaint from designers is that their clients do not involve them early enough in the process. Perhaps clients feel that they must have a clear definition of the problem before they commission a designer, but this is not so. In a study of architects and their clients, most of the architects argued that they preferred to be involved with the project from the very beginning (Lawson and Pilling 1996).

Some clients are experienced at their job, and may even be acting in that capacity professionally. It is also increasingly the case that large clients for buildings may take on their own architects to help them develop a brief which may later be given to quite different architects. However, many clients for design are less experienced at preparing design briefs. The architect and interior designer Eva Jiricna tells how, in her experience, 'we never, ever get a brief from a client which we can start working on' (Lawson 1994). Now this might seem problematic for designers, but when asked about this most of them are quite happy to receive briefs which are very brief indeed! The Malaysian architect Ken Yeang, even prefers to start with what might be called a 'mission statement' of just a few sentences. (Lawson 1994). The view expressed by Michael Wilford describing his work with James Stirling, is reflected by many architects and designers:

We have found over the years that the ideal brief is probably one or two pages even for the most complex project. Many clients think they have got to produce something that is two inches thick before an architect can even put pen to paper. We prefer it the other way round, we prefer the thinnest possible information so that we can get a grasp on the whole thing and gradually embellish it with detail later.

(Lawson 1994)

Protocol studies

To find out how the design process actually begins to develop the brief and formulate a solution we need to turn to some of the many studies on design process protocols. These protocols have been gathered under a wide range of conditions, but all share in common a rather more controlled environment than the design studio normally provides. The process studied usually has quite a short duration measured in a few hours and often is completed