

seem odd to some readers that I say relatively little about the finished work of some of these successful designers. The fact is that much more has been written about their designs than their processes so I make no apology for saying very little about product here and concentrating on process.

If I were to start writing this book from scratch now I would probably do it differently. Since I first published this book I have written two others on related matters, *Design in Mind* and *What Designers Know*. The latter is actually a companion book to this one. I have revised this fourth edition in the light of more recent research but also in the knowledge that *What Designers Know* is now also published. Effectively both books taken together represent my latest thinking. This fourth edition has two totally new chapters at the end. The chapters in the third edition on designing with drawings and designing with computers have been removed. Both of those essentially looked at the way design knowledge is transferred between the human mind and some external representation. The main ideas that grow out of that study can now be found in a much more developed form in *What Designers Know*. The first new chapter here discusses the idea of design as conversation. Not only has this view of design grown in popularity over the time this book has been in print, but it now offers a way of thinking about many of the important issues concerning the ways the designers work in teams, with drawings and with computers. The second new chapter rather rashly tries to summarise the range of activities that I believe make up the design process. It also incorporates and summarises some of the lessons only recently available to us about how really expert designers work and how this might be different from the way novice designers work.

There are therefore now three points of summary in the book. The model of design problems which is developed in Chapter 6, the intermediate conclusions of Chapter 7 and the final summary of design activities in Chapter 16. I very much doubt that this is the end of the story. I am sure that many people will tell me that it is not and that we shall continue to have the same interesting and fascinating debates that I have been lucky to be part of for so many years.

I have researched the design process for over four decades now and met with most of those who contribute significantly and repeatedly to the field and I have greatly benefited from discussion with all the people involved. The Design Thinking Research Symposia and the Creativity and Cognition Conferences have offered particular inspirations. I have supervised many research

students and benefited from collaborating with them. I am greatly indebted to all those who have helped me to form these fumbling ideas as we grope towards an understanding of that most magical of all human cognitive endeavours, designing.

Bryan Lawson