unlikely to yield great design or move ideas forward. However, it may well prove a valuable tactic in identifying a range of possible forms for all or parts of a design.

Iconic design is even more conservative in that it effectively calls for the designer to copy existing solutions. Speculative house builders seem to work this way by reproducing their standard house types irrespective of the local conditions or external constraints of the site. Whilst this is unlikely to appeal to the creative mind, such an approach does have it's value and supporters. The commercial psychologist, Conrad Jameson (1971), has been critical of architects for beginning their design process with a blank sheet of paper as if each problem were entirely new. By using iconic techniques designers might begin with existing solutions and modify them to meet the new conditions. This might lead to a greater stability and avoid the commonly found errors in which designers miss the clever way in which vernacular designs solved problems, although it is also possible that such a technique could perpetuate errors.

Canonic design relies on the use of rules such as planning grids, proportioning systems and the like. The classical architectural styles and their Renaissance successors offered opportunities for such an approach, and we have already seen how Vitruvius and later Alberti laid down such rules. More recently Le Corbusier's 'modulor' can be seen as an attempt to produce canonical rules that allowed for more iconoclastic designs. Even more recently, system-building relying on modular co-ordination and standard components has typically generated rather dull results using this method.

Analogical design results from the designer using analogies with other fields or contexts to create a new way of structuring the problem. As we shall see later in this chapter this is based on a widely recommended generic technique for creative thinking. Certainly there are clear examples of significant use of analogical thought in design. The use of organic forms in architecture which offer ways of generating beautiful and also efficient structures are characteristic of the architect/engineer Santiago Calatrava whose work we shall hear more of later in this chapter. His design sketchbooks include many drawings of parts of the human body from which he frequently draws inspiration in terms of the way it can flex into many alternative structurally stable configurations to take on different loading patterns. Analogies may be used to give integrity to ways of constructing parts of design solutions. A very good example already quoted in this book (see Chapter 11) is that of Richard MacCormac describing the upper floor worship space in his Fitzwilliam chapel as 'floating free' of the structure below. From this the team described the chapel as a

vessel and were eventually to detail its construction in a remarkably boat-like way. Indeed analogies from natural and organic form have often been used in design at all scales, even that of urban design (Gosling and Maitland 1984). In a more contemporary vein, the architect John Johansen has described how he uses an analogy with electronic circuitry and he even talks of the 'chassis', 'harness', and 'components' of his buildings:

> I wanted to borrow the underlying ordering principles and their systematic logic and use them as a model for architectural methodology.
> (Suckle 1980)

Telling a story

Broadbent himself seems to suggest that the 'analogical' methods are the most promising of these four tactics for form generation. This leads us on to another very popular device for helping the designer to generate form, that of narrative. In a way this can be seen as an extension of Broadbent's 'analogical' method, but can go much further than the use of a simple analogy. In what we might call 'narrative' design the designer, or more often design team, tell a story which can be used to link together the main features of the design. To the outsider this may seem a little childish or even quite ridiculous but there is considerable evidence that this technique is quite widely used and genuinely seems to help some designers.

In some fields of design, the story is already effectively there. Most obviously theatre design actually requires the designer to interpret a story of some kind. So in many cases does graphic design, particularly when applied to advertising. However, the idea of narrative has also become popular with architects. In some cases the architect may tell a story about the 'characters' who form the users of the building and the 'roles' they play and the 'rituals' in which they are set. At this level architecture almost becomes a kind of real-world theatrical set.

However, architects do not just restrict themselves to stories about their users, they even tell stories about the very practical construction of their buildings. Kit Allsopp has been using an urban metaphor for the design of single buildings. In particular he has used the 'familiar aspects of everyday urban life' to imagine how his buildings might be organised and, even, constructed (Fig. 12.1). An example of this can be seen in his Law Court building at Northampton (Hannay 1991) where the idea of 'streets, trees, and sky' gave direction to the overall form of the building and the detailing of the structural system. As can be seen from his design sketches the