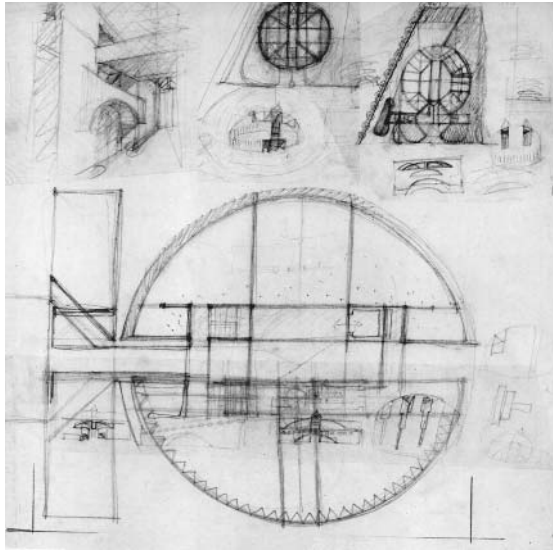


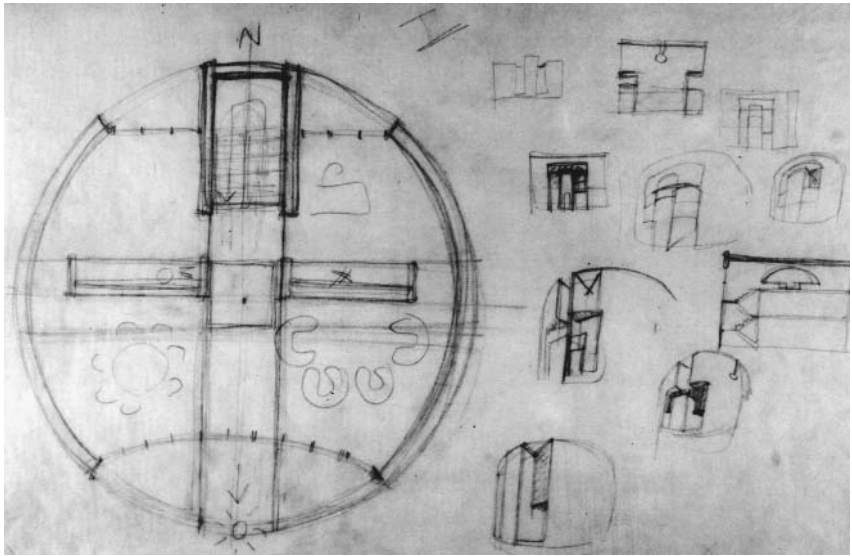
sketches we notice that, when first approaching a new design task, he often sketched a scheme that had the shape of a fan. We suggest that Aalto retrieved a dominant image from his repertoire, a fan-like shape, and represented it as a starting point for a new design because he knew that for him, this shape is readily manipulatable. Indeed, the shape was then worked and reworked systematically and only many a sketch later was Aalto finished with the process of transforming and changing what eventually yielded a new design. In his next project, however, he was just as likely to again start with the fan motif that would lead him on a different design journey each time.

The second example, also from the realm of architecture, concerns the “kit of tools” used by the architect Mario Botta. In an interview with the curator of an exhibition of his work, Botta was asked about the dominance of axiality in his plans (Wrede 1986). He replied that he had often wanted to break with axiality, but it seems stronger than his will and keeps coming back, to Botta’s own surprise. There is no ideological reason for the pre-eminence of the axis in Botta’s work. Rather, it is one of the strongholds of his compositional repertoire, a principle that is flexible enough to support many different design solutions for various types of buildings. We often find circles superimposed on an axis in Botta’s plans, practically independent of the size and type of building in question. Figure 9.2 shows plans for two very different buildings – a crafts centre and a private house – both based on axial circular plans. According to Trevisiol (1982) “All Botta’s work is directed towards the continual refinement of a number of simple, elementary forms” (*ibid.*, p. 82). To actually refine those simple forms, Botta has to draw them time and again, transforming them as he progresses from one sketch to the next. Like Aalto, Botta imposes a representational device that creates the kind of order that he can work with and develop. We postulate that both Aalto and Botta use representational means to organize the materials of a new design problem such that those materials would readily fit into the context and format that the designers feel comfortable with, and for which their competences are hewn. Thus representation plays the role of an important adjustment tool that helps to transfer specific problem situations into the cultural (or micro-cultural) design world in which the designer can confidently act.

Not every designer practises a somewhat obsessive work-mode of the kind we discern in the cases of Aalto or Botta, but designers do have personal representational preferences. Personal preferences pertain to the amount and nature of sketching (whole versus detail, small versus large scale, abstraction and incompleteness, quality of line, repetition and over-tracing, the use of written notes, and so on). Bugaisen (2000) has demonstrated that architects can be shown to use different characteristic patterns of representation in terms of the use of types (diagrams, orthogonal projections, axonometric and perspective views) and categories (free, overall and detail sketch, and hard-line) of drawings. Such preferences can be plotted into a matrix that reflects their frequency; over several projects a personal “profile of preferences” of an architect emerges. Interestingly, designers of the same generation, or those who share the same ideologies, do not necessarily have similar representational preferences. There is, however, some evidence that designers whose built works of architecture share common traits also tend to have similar profiles of representational preferences (*ibid.*). This interesting finding requires further study.



a



b

Figure 9.2 Mario Botta, preliminary studies. **a** Crafts centre, Balerna, Switzerland, 1979. **b** First-floor plan of private house, Stabio, Switzerland, 1980. Reproduced with the permission of Mario Botta.

This is the place to stress that, despite historical variety in representational modes and preferences among designers, all graphic design representation is essentially based on the system of orthogonal (or parallel) projections that was developed in Italy at the beginning of the 16th century. This development is attributed to Raphael who needed an analytical method of representation to solve the complex design problems he was faced with in his practice.