approach, and we will show how this design practice enables designers and others to deal with very open, complex, dynamic, and networked problem situations.

3 CREATING FRAMES

The slippery notion of a "frame" is central to the designer's ability to shift problem situations, and will naturally be taking center stage in this book. In this section we will investigate the nature of frames, and explore the ways in which designers deal with frames and the process of framing.

The first question should be, "What's in a frame?" Let's start with the example of Richard MacCormac's acclaimed chapel at Fitzwilliam College in Cambridge (Lawson and Dorst 2009). The original brief was to design a modern chapel to be built in one of the courtyards of Cambridge University. The flow of ideas led the team of very experienced architects in the direction of creating a round worship space that would look as if it were suspended in a square enclosure. This caused an acute set of problems for the design—how does one connect these very different forms? What is the nature of the relationship between these forms, and how can that be expressed through the detailing of the connection? After many fruitless hours of trying possible positions, formal solutions, and construction principles, one of the designers realized what they actually were creating could be seen as a "vessel" (a boat!). This key framing statement created a number of implications that the architects and construction engineers could fruitfully pursue. The relationship between a boat and its surroundings (the quayside) is, of course, one of a "mooring"—and it is easy to imagine which shapes would help articulate that "mooring" relationship between the suspended chapel and its enclosing building. The idea of a boat contains a very rich language of shapes (e.g., railings) and construction principles (e.g., beautifully curved wooden hull) that have been exploited in the final design. As this example shows, a frame is an organizational principle or a coherent set of statements that are useful to think with. Although frames can sometimes be paraphrased by a simple and elegant statement (as in the example above, using the metaphor of the boat), they are actually quite complex and subtle thought tools. Proposing a frame includes the use of certain concepts, which are assigned significance and meaning. These concepts are not neutral at all: they will steer explorations and the perceptions in the process of creation (Lakoff and Johnson 1980). Creating a frame is the result of a broader intentional action, which the frame then rearticulates with a new and interesting focus (Tzonis 1992). Frames should therefore be actionable—that