

decisive. They would certainly involve the client, cost consultants, planning authorities, legal building control officers, fire departments and most likely local community organisations and conservation groups. Each test would be different and specific and some would be contradictory.

Very few schools of architecture set design projects which are done collaboratively by architectural students, with students of different branches of engineering and of building cost analysis. The kind of design team which is formed in practice for any project of any size does not, therefore, exist in schools to provide some of the earliest error elimination.

In the office as well as the school, the  $P_1$  to  $P_2$  sequence is iterative. There is, as a rule, an attempt to improve the design, to answer some criticism, until a deadline is reached; sometimes very nearly beyond, as in the all-night sessions in the studio or in the office before a competition submission, which are part of the legend of being an architect.

The length of time spent on the various stages of any project is very different in a school and a practice. The major effort in the school studio is on the first stages of design, in the office on constructional drawings and site supervision. This colours the approach of much decision making; it may especially influence the choices made between innovation and continuity in the average practice.

The implications of the  $P_1$  to  $P_2$  sequence extend beyond project work into verbal thinking and particularly into the teaching of history. If  $P_1$  and the subsequent  $P_2$  are always related to a particular time, then perhaps architectural history is a series of hypotheses and not some kind of Darwinian rising curve of evolutionary progress. The Parthenon on the Acropolis cannot be said to be less good – or better – than say Ronchamp, to take another ecclesiastical building on a hill, just because of the time difference between them. It can be argued that there has been a progressive increase in the capacity to create greater and

greater clear spans, but architecture is not judged – and should not be judged – by the dimension of its biggest span.

The inevitable emphasis on non-verbal thinking has given rise to two suggestions: the first, that architecture is not a subject that has a place in universities; the second, that architecture needs to become more like other university subjects. Both are profoundly misguided and show a lack of understanding of the architectural process. To start with it needs to be remembered that if the assumption that the design activity follows the  $P_1$  to  $P_2$  sequence, then it is akin to the research activity in many sciences, both physical and social. Design forecasts

Right  
**Jørn Utzon**, Own house  
 in Majorca; the essence  
 of house and reality  
 expressed in diagrammatic  
 plan and section

