the criteria need not be enumerated. The second difficulty is that it is extremely difficult, if not impossible, to establish a direct correspondence between a set of verbal and numerical statements and a set of forms. It is only possible if the form exists and we simply describe the known form in verbal and numerical terms; we are thus back to the first problem.

The third difficulty, which is certainly equally crucial, is that we can never be sure that we have enumerated all the criteria on which a solution is to be based. To say that we have selected the most important ones immediately introduces a set of value judgements and questions as to who is to decide which are the most significant and how do we determine what is important. The theory is not as neutral as it might at first appear.

There is also a general problem as far as all aspects of determinism are concerned: is there free will? In the case of functionalism, one manifestation would be: do we have any visual choices? If we accept that the building design emerges from a series of points established in a programme by the client and by society, and also from another series which exists within a culture, it would follow that if these points are thoroughly analysed and understood, one and only one solution should result. The moment we allow personal choices, the theory is undermined. We know from the most cursory observation and from personal experience that we are continually making visual choices which are in no way related to the programme. They stem from quite different roots. To deny such roots and to label all visual choices 'formalism' is to negate experience and to attempt to establish some form of rationality which is spurious and certainly suspect.

Both typology and functionalism have their roots in the use aspects of the building. Both say nothing about appearance even though style may eventually become a distinguishing aspect of each theory. Despite their common root, the two design theories lead to opposite results: typology favours continuity, functionalism is more likely to lead to innovation, it may

even denigrate continuity. What becomes obvious is that theories are not only explanations of the design process but can – and often do – also embody specific values.

Typology and functionalism stem ultimately from the sciences; from outside architecture. The view that there is a language of architecture which operates on the basis of a discoverable *grammar* through an understanding of past architectures is a more recent development which we owe to Christopher Alexander at the University of California, Berkeley. Christopher Alexander and others produced *A Pattern Language . . .* in 1977, the second in a series of books in which *The Timeless Way of Building* is the first. It contains 253 patterns, each defining some 'atom of the environment' and ranging in scale from independent regions and the distribution of towns, to ornament and furniture. Each pattern carries a specific recommendation, an architectural answer, which is seen as the correct outcome of the analysis of the problem. The eventual combination of answers is hinted at but not specified. The illustrations in both volumes suggest very strongly that the timeless way is to be found in traditional vernacular architecture. The strong impression is thus that continuity rather than change will produce the most relevant architecture for society.

One of the inevitable doubts which arises is that grammar in language is something that exists and is in fact extracted from the language as used to provide rules for sentence structure. The other immediate unease arises because grammar provides generating principles but says nothing about content. Even nonsensical sentences can be grammatical. The claim that is, however, made by Alexander and his collaborators is that it is they who have devised a grammar. Judging by the illustrations which accompany the patterns, it would seem that the grammar is most evident in buildings of the past and that innovation is unlikely to conform.

Clearly any single building would not emerge from following every one of the 253 patterns. It therefore becomes