

## EVERY BUILT FORM HAS A NUMBER

## 57

---

**Philip Steadman**

University College London, London, United Kingdom

57.1

**0 Abstract**

An 'archetypal building' is proposed, whose purpose is to represent in a schematic way the forms of many actual buildings. Space enclosed within the archetype is of three types: potentially sidelit, potentially toplit and necessarily lit by artificial light. The archetype can be conceived of as a three-dimensional array of cuboids whose dimensions can be expressed as x, y and z vectors. By setting selected dimensional parameters to zero, parts of the archetype may be suppressed. Suppose a distinction is drawn between a parameter taking some positive value, or taking the value zero. These possibilities can be encoded by the binary digits 1 and 0. This opens up the prospect of describing and cataloguing undimensioned built form configurations as binary numbers. The positions of 0s and 1s in these numbers carry meaning, about configurations of daylight facades, numbers of courts, and overall plan shapes. This paper explores such a binary representation for small built forms, each consisting of a part (or the whole) of a single sidelit courtyard. Applications are illustrated to a sample of English public houses. The paper concludes with some speculations about computerised catalogues of built forms, in which configurations with specified properties might be found by simple arithmetic operations on the binary numbers. Some preliminary work on a computer system will be demonstrated.

*keyword: building morphology**Philip Steadman  
The Bartlett School of Graduate Studies  
(Torrington Place Site)  
University College London, Gower Street  
London WC1E 6BT, England**tel (44) (0)171 380 7777**fax (44) (0)171 916 1887**email p.steadman@ucl.ac.uk*