

How day-lighting constrains access

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Philip Steadman

University College London, UK.

Abstract

The paper proposes that constraints on plan possibility imposed by day-lighting in turn place limits of a general nature on possible patterns of access. A typology of possible access systems is developed, all of which arise from two simple conditions imposed on day-lit 'strips' of accommodation: that all rooms be side-lit, and that all rooms be made accessible. The typology serves to formalise the various loosely-defined architectural terms used to characterise circulation systems: rooms in enfilade, corridor access, balcony access, staircase access. The paper goes on to classify the circumstances in which cycles can occur in the access graphs of side-lit buildings, focussing in particular on cycles created by courtyards and light-wells, whose sizes are related to considerations of lighting. It is argued that such effects should be allowed for in space syntax studies of permeability in buildings: otherwise there is a danger that what is due to the exigencies of lighting may be attributed to cultural or organisational imperatives.

j.p.steadman@ucl.ac.uk

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