Exploring Functional Urban Structures

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Human place descriptions are conditioned by people's mental spatial representations acquired by e.g, locomotion, in which references to Lynch's (1960) elements of the city form occur in an integrated manner (". . .*Bahnhofstrasse connects the train station to the lakeside.*"). The accessibility of individual spatial objects is paramount in the formation of these representations. In contrast, spatial data are stored in homogeneous datasets based on dimensionality and thematic categorization. Consequently, the functional relationships between spatial objects are lost.

We explore these functional relationships by formally defining Lynch's elements of the city form and their combinations in function of access. We then investigate their contributions to the cohesion of the city and identify common patterns for the description of functional urban structures, in order to facilitate

(a) the comparative study of urban environments;

(b) the generation of place and route descriptions, especially in multimodal contexts.