

## **Urban form correlates of daily travel; report from a study examining urban form and non-motorised transport by combining “space syntax” and GIS-based methods**

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During recent years, approaches ranging from preventive medicine to carbon emission cut have shed critical light on our car-dependant societies and pointed out a need for focusing on non-motorised transportation. This paper is based on a research project related to future development of the Brøset-area in the city of Trondheim, Norway, and presents methods of analyses as well as results concerning urban form correlates of daily travel, particularly focusing on walking and biking. By comparing empirical data of peoples' daily travel routes with analyses done by recently developed space syntax based software, this research project illustrates the potential of combining space syntax methods with GIS and provides knowledge about the applicability of new space syntax parameters such as “choice” and “angular change”. Further on, in order to shed more light on what influences modes and amount of daily transportation we are carrying out an extensive statistical modelling looking for correlations between daily travels of 5000 peoples in Trondheim and a set of urban form variables that according to recent research should be decisive to daily travel behaviour. Thanks to extensive surveys provided by the local authorities of Trondheim's, socio-economic and others confounding factors are also taken into account. In addition to present useful methods of analyses, our study points out explicit features of the urban physiognomy that is important for non-motorised transportation.

**Keywords:** urban form; space syntax; travel behaviour; walking; biking.