

# Space Syntax Technic in Urban Design Process

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One of the major objectives in urban design is qualitative improvement of the environment for users. In urban design process, a scenario is defined using certain physical strategies in order to improve the relationships between human and environment.

Predicting the output of any physical strategy is important for both designers and decisions - makers. For this purpose, numerous methods have been used. One of these methods, which is created and developed during the last few decades, is the 'Space Syntax Method'. This method examines the structural and configurational relation of all spaces with each other. The theory of space syntax explains the use of spaces in relation to their configurational patterns. The results of the space syntax analysis are presented in graphic form as well as mathematical parameters.

This article, first elaborates on the theory and method in short, and then its application in urban design process is explained.

Yazd - a historical Iranian city - is chosen as a case - study, in which three stages of its physical development are analysed using the Space Syntax Method. The result of the study is promising and has shows that:

- Pattern of urban open spaces are developed based on a social and cultural spatial logic.
- Intervention on the layout of the city will change the spatial configuration, and would change its structural logic of spaces.
- Strucral changes in the city would affect the functional and behavioral patterns.

Analysis of spatial configuration with application of Space Syntax Method enables the urban design professionals to build predictive models for behavioral changes within the urban spaces. These models could be used in urban design process and create an interactive model that can improve the design process.