

THE SPACE SYNTAX METHOD AND NATURAL MOVEMENT IN A POPULAR BUILDING: A CASE STUDY OF THE HOLY MOSQUE, MAKKAH, SAUDI ARABIA.

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ABSTRACT

Space syntax, which was developed by Bill Hillier in the 1970s, is known as a method and technique to help to understand and analyse the architectural environment. Space Syntax analysis provides valuable knowledge by predicting possible movement patterns within an analysed setting. This prediction might be affected by several factors which attract pedestrians from one lane to other and disturb the pedestrians' natural movement. The Space Syntax method applied through the Axial Line model provides spatial analysis and builds an analysis model which gives a wider view of the movement pattern that easily reflects the result.

This paper aims to test the predictive ability of the Space Syntax method and technique in a large scale building which attracts millions of people every year during several religious' events at the Holy Mosque in Makkah, Saudi Arabia. In addition, it will build a comparison between the axial line model of the Holy Mosque, Makkah, Saudi Arabia; and with the actual usage of the building access gates, which will draw an understanding of the predicted movement pattern and the actual pattern of the building. Moreover, the paper will address the worshippers' choice of access for entering or exiting the Holy Mosque and will discuss the possible reasons that influence these choices.

The possible similarities and differences in the comparison between the axial line model and the actual usage of the building gates will be addressed and discussed, which may help to improve the accuracy of the Space Syntax method and technique.

Keyword: Space Syntax, Holy Mosque, natural movement, religious.