

**PP - (20970) - FRONTIERS OF INVESTIGATION ON PERCEPTION AND EVALUATION OF URBAN STREETS SPACE**

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**Research or practical problem and objectives**

Based on the background of global sustainable development, it is of great practical significance to construct friendly urban street space for promoting urban sustainable development. In the past, the subjective perception evaluation methods were mainly used in traditional urban street space perception and evaluation researches, but the authenticity and accuracy of the results are questionable. This research adopts the eye-tracking technology. It can make the research results reflect people's perception more truly and accurately, and provide a new perspective and quantitative basis for urban street space research.

**Methods and process (for empirical research)**

Firstly, analyzing the existing research results and methods. Secondly, as there are many problems in the use of stimulus materials in eye-tracking experiments, a comparative experiment on the selection of stimulus materials for eye-tracking was carried out in order to select the experimental stimulus materials suitable for this study. Finally, analyzing the eye movement data obtained by eye-tracking experiments and drawing a conclusion.

**Main results preview and importance (or main arguments in the case of critical reviews)**

The subjective perception evaluation methods commonly used in the past are deficient in meeting the authenticity and accuracy of research results. Human factors engineering technology represented by eye-tracking can effectively remedy this shortcoming. Through comparative analysis of four kinds of commonly used eye-tracking experiments stimulus materials, such as real-environment materials, video-scene materials, silence-scene materials and sound-scene materials. It is concluded that video-scene materials should be used instead of real-environment materials in this study. While ensuring the authenticity and accuracy of research results, it also reduces experimental errors caused by huge amount of experimental data and special adaptability of equipment.

**Palavras-chave : Street Space, Perception and Evaluation, Eye-tracking, Eye-tracking Experiments, Stimulus Materials**