

The Effect of Fatigue on Streetscape Evaluation - A Comparison between Before and After the VDT task -

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Introduction: The former research involving an evaluation of streetscape slides showed a large individual difference with regard to several aspects. Hence, the following experiment focused on identifying a factor that is capable of explaining this difference; in addition to streetscape evaluation, the personality test (Yatabe-Guilford Personality Inventory) and a questionnaire on behavior in and opinions on a city were administered. However, these items had small correlations with the evaluation differences of the slides among persons.

The following experiment focuses on fatigue as a factor that can explain the individual difference pertaining to streetscape evaluation.

Experiment: The impressions of a series of 24 streetscape slides before and after the two hours VDT task were rated on 12 semantic differential scales. The self-conscious symptom of fatigue inventory, which consists of 30 points to be checked, was also completed immediately before the streetscape slides were rated. The VDT tasks were reiterative and required the subjects to concentrate. The experiment comprised 20 subjects who were young female students aged between 20 and 22 years. The experiment lasted for a total of 5 h and 40 min including breaks.

Results: The mean values of the rating scores were calculated. The difference between the former and the latter ratings was nearly equal for almost all the impressions (283 out of 288 mean values showed the difference to be lesser than 0.7 on the 7-point scales). The largest difference, 0.9 point difference, was observed with regard to the preference for a slide of an uphill road. This indicates that fatigue mediated the evaluation through virtual activity.

The subjects were divided into two groups depending on the number of points by which their inventory scores increased. G1 comprised 7 persons, whose points increased from 1 to 5, and G2 comprised 9 persons, whose points increased from 6 to 11 (the data of 4 persons were omitted for certain reasons). With regard to the images of an uphill road, the construction of traditional old houses, abundant greenery, and so on, the mean preferences of the fatigable subjects belonging to G2 were more than 1.0 point higher than those of the subjects belonging to G1. The principal component analysis of the preference data of 16 subjects revealed that the subjects belonging to G1 preferred the large-scale urbanscapes and those belonging to G2 preferred the small-scale calm images relatively. Furthermore, with regard to artificial and busy streets, the mean preference of the latter rating was lower than that of the former one for the subjects belonging to G2.

These consequences indicate the influence of fatigability on streetscape evaluation.