

C-18 CHANGES IN PHYSIOLOGICAL RESPONSE ACCORDING TO THE DIFFERENCE OF INTERPERSONAL DISTANCE

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It has been known empirically that humans maintain an appropriate interpersonal distance according to various situations. E. Hall divided this distance into four groups, which were intimate (less than 45cm), personal (about 50-130cm), social (about 4m), and public (over about 4m) space, based on interpersonal space. However, little information is available on changes in physiological responses caused by the difference between the four interpersonal distances. To investigate the physiological change according to different interpersonal distances, we measured the R-R interval, coefficient of variation of R-R interval of ECG (CV-RR), and performance rate by janken (hand-arm action; Japanese toss), using 8 healthy male students. The results indicated that 1) the difference between interpersonal distances caused a change in CV-RR, 2) the difference between interpersonal distances caused a change in performance rate by janken and 3) subjective preference differed in accordance with interpersonal distance.

C-19 Influence of Listening to Music to Respiratory Function during the Rest Time.

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The aim of this study is to investigate the influence of music to respiratory function during the rest time. Subjects were 7 male and 2 female college students.

Measurements were $\dot{V}O_2$, $\dot{V}CO_2$, $\dot{V}E$, HR and breath frequency (F). Music was 4 kinds of classical music that had different melodies and tempos each other.

The results were as follows;

- 1) $\dot{V}O_2$, $\dot{V}CO_2$, $\dot{V}E$ were lower values in listening to music.
- 2) HR and F were higher values in listening to music.
- 3) Slight differences were appeared among four kinds of music.

C-20 Evaluation of Noise Level about High-rise Dwellings by field measurements

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This paper describes an analytical and experimental approach for the evaluation of the road traffic noise about high-rise dwelling near high-way. The equivalent sound level and percent sound level were adopted for the evaluation of traffic noise. The noise level of the first floor is smallest (KAGA area 64.7 dBA, HAIN area 64.9 dBA), and becomes larger with high floor, and about the 8th floor is reached largest (KAGA area 70.1 dBA /TF, HAIN area 70.5 dBA /9F), but slow down at the highest. The above mentioned depend on the influence of absorption, reflection and reduction of sound by the acoustic boundary condition.

C-21 Japanese Culture for Soundscape:
Acoustic Environment represented in the world of Haiku

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The present study is a survey of the acoustical environment (soundscape) on the Japanese daily life by statistical analysis of Haiku. Haiku is the Japanese traditional poem consisting of only 17 letters, and some indicate it as an index of Japanese sensibility. We conducted the analysis of Haikus containing the description of sounds using Hayashi's quantification theory to show what kinds of sounds Japanese hear on the daily life, where and when they hear, and how they feel. The followings are the obtained soundscapes: 1) the sounds of a breeze and singing voices in the afternoon in spring; 2) the notes of birds and animals in the field or the mountain in summer; 3) the chirps of insects at night in autumn; 4) voices and the sounds of daily life at home in winter; 5) the sounds of festival and crowds in a town; 6) the sounds of water from the sea or the river; 7) the whistle of trains and the time signal in the evening. They are the "proto-paysage" of soundscape in Japan.

C-22 Evaluation of Men's Cologne by Female Students

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The purpose of this study was to observe the preference of men's cologne. Present study was divided into two parts, that is, open test and blind test. In the former the design of bottle and brand name of cologne was evaluated, the latter was preference test of smell. One hundred female students were served as paneller. Eleven kinds of cologne made in Japan possessed the seven main fragrance components. The feature of most preferred bottle design was transparency and roundness. "DENARI" was the best brand name. In preference of smell, female students selected "ZEPHYR" for boyfriend and "TACTICS" for their father and "PALVIS" was most disliked. The preferred cologne showed fresh or natural properties, on the other hand disliked cologne was heavy and thick. The results of factor analysis showed that the first factor meant young, the contribution ratio was 63%, and the second factor meant soft and feminine, the accumulated contribution ratio was 97%. It must be required further examination regarding the changes of fragrance put on the skin.

D-1

Toilet in stations in Kinki-district
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This study aims to design good toilets of railway stations that are ergonomic and sensational. Sixty toilets of ladies in Kinki-district were investigated in 1991. The size of booses and basens, their number, the equipment, color of toilet, sensation votes and etc. are investigated.

Results were as follows;
There are high correlations in value among total sensation, color and atmosphere. And, there are high correlations between dimensions and total sensation value and between width and total sensations. When dimensions is over about 1.3 m² and width over about 120 cm, we don't feel narrow and close. Specially improving ladies' toilets, for example, place of baggage in boose and before basen have to be wider and more mirrors or mirrors detached basens have to be placed.