

A Sound Environment Design Project for Kyoto Tower
Observation Deck (1):
A Psychological Experiment on the Interaction between
Perceptions of the View and Ambient Music

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This paper describes the project of designing a sound environment for the Kyoto Tower Observation Deck which the author is carrying out jointly with the tower's operators, Kyoto Tower KK (Shimogyo-ku, Kyoto City). The paper presents a brief overview of sound environment design and ambient music, then reports the results of a psychological laboratory experiment on the interaction between sound and visual images, and lastly discusses future directions for the design of the observation deck's sound environment.

The observation deck of Kyoto Tower, which opened 43 years ago, recently underwent a complete refurbishment, completed in late March 2007. As it was decided to include the sound environment in the improvements, to obtain basic data for its design, the author carried out a psychological experiment on audiovisual interaction using samples of the proposed ambient music and movie images of the panoramic view.

The results showed that adding ambient music to the panoramic images changed the subjects' responses overall in the direction of increased relaxation. Moreover, ratings converged for the type of ambient music added, rather than the type of image shown. These results indicate that the ambient music used as the audio stimulus most likely had a significant effect on the subjects' aesthetic judgement of the visual panorama. With regard to the selection of ambient music, greater harmony between the audio and visual responses tended to be obtained when cheerful music was combined with images filmed on a sunny day, moodier music with images filmed on a cloudy day, and soft music with images filmed on a rainy day and at night.

These results suggest that perceptions of the view and of the ambient music vary greatly depending on both the subject's emotional state and natural conditions (time of day, weather, season). Thus, in order to provide a satisfying viewing experience to a greater number of people, it will be necessary to explore the possibilities of ambient music, together with its timing.

The present experiment, conducted in conjunction with the renovation of the Kyoto Tower Observation Deck, confirmed that the sound environment, especially ambient music, has a strong influence on perceptions of the view. In environmental planning of commercial spaces such as observation decks, it is important that the design of appropriate sensory stimuli be integrated, extending not only to the visual environment but also to its interactions with the sound environment.