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Title:

Physiological Responses to Soundscape Recordings in a Laboratory Experiment

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Abstract:

The evaluation of acoustic environments using the soundscape approach offers the possibility of a holistic analysis. Physiological measurements can complement this approach in order to provide continuous information on the listener's physiological response to the acoustic environment and also record unconscious responses. However, it is essential to clarify which differences in the soundscape characteristics can induce significant changes in the physiological response of the listener.

In addition to physiological measurements, listening tests in virtual reality can complement the approach to include soundscape context in laboratory studies to a greater extent. The study conducted in this paper therefore represents a preliminary study for experiments in virtual reality and investigates the reaction of the participants' skin conductance to various soundscape recordings in a laboratory setting.

The analysis of the physiological data reveals aspects of soundscapes that are more likely to elicit a stress response or relaxation and shows how much soundscape recordings need to differentiate from each other such that physiological measurements can add value to the holistic soundscape approach.