

EFFECTS OF SOUNDSCAPES ON ATTENTIONAL CAPACITY

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ABSTRACT

Contemporary soundscape studies often use recordings of natural environments as an antidote to urban and industrial noise. While trends showing preference for natural soundscapes over anthropogenic soundscapes are well indicated, discussion about the cognitive reasons for the preference is typically speculative and deemed outside the scope of sound-quality investigations.

Recognizing that any act of perception is a complex, multi-modal event, the research at hand is modeled after a psychology experiment by Berto.¹ The study found that looking at an image of a natural scene significantly restores participants' attentional capacity. Attentional capacity is quantifiably measured with the Sustained Attention to Response Task (SART).

The present study proposes to extend Berto's experiment by presenting participants with audio recordings of soundscapes rather than images of landscapes. Based on prior studies where exposure to natural environments improved the subjects' cognitive performance, it is expected that exposure to natural soundscapes will have a similar effect. This approach presents an advantage over standard evaluations of soundscape effects (typically based on introspective participant surveys) in that a numeric measure of the participant's attentional capacity explicitly shows cognitive effects.

¹Rita Berto. Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology*, 25:249 – 259, 2005.