OPEN ACCESS
Vision Sciences Society Annual Meeting Abstract | August 2017

The unnoticed zoo: inattentional deafness of animal sounds in music

Sandra Utz; Friedericke Knauss; Claus-Christian Carbon

— Author Affiliations

Sandra Utz
Department of General Psychology & Methodology, University of Bamberg

Friedericke Knauss
Department of General Psychology & Methodology, University of Bamberg

Claus-Christian Carbon
Department of General Psychology & Methodology, University of Bamberg
Bamberg Graduate School of Affective and Cognitive Sciences (BaGrACS)

Journal of Vision August 2017, Vol.17, 1209. doi:https://doi.org/10.1167/17.10.1209

Abstract

Inattentional unawareness potentially occurs in several different sensory domains, but is mainly described in visual paradigms ("inattentional blindness", e.g., Simons & Chabris, 1999). Dalton and Fraenkel (2012) were the first to show that a clearly noticeable odd auditory stimulus can be presented without getting detected at all, thus also revealing the susceptibility to "inattentional deafness". Participants were instructed to listen binaurally to a conversation. In the middle of the presentation, a voice repeatedly said "I'm a gorilla". Although the auditory gorilla was clearly noticeable if participants paid attention, it was missed by 70% when they were focusing on the conversation. The present study investigated influences on the susceptibility to this phenomenon and extended the paradigm by using 10 excerpts of musical pieces which were modified by adding different animal sounds. Participants' task was to count varying musical features (e.g., drum beats). Furthermore, data on musical expertise, attentional focus, motivation to succeed at the counting task, and differences in musical pieces and counting tasks (feature similarity & perceptual load) were collected. Results showed that the frequency of missed animal sounds was higher in participants with higher attentional focus and motivation. All other factors did not have an influence on detecting or missing animal sounds. We could demonstrate inattentional deafness in music for highly salient and odd auditory sounds such as animal sounds and in some participants a consistent susceptibility across several musical pieces.

Meeting abstract presented at VSS 2017