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Naïve and expert listeners use different strategies to categorize everyday sounds

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We report an experiment investigating the influence of the expertise of listeners on the strategy used to categorize sounds. A set of sixty kitchen sounds was selected, based on their causal uncertainty (ranging from very well identified to ambiguous). Thirty listeners were selected on the basis of their expertise in sound and music: fifteen "experts" and fifteen "naïves". First, they had to group together the sounds. Second, they had to describe the properties shared by the sounds in each category. Finally, they were provided with a description of different strategies of classification previously identified (acoustical, causal or semantic similarity), and required to indicate, for each category, which one they had used. The results show a strong influence of the expertise of the participants: while naive listeners made categories mainly on the basis of the events that they identified as having caused the sounds, experts made mainly categories of sounds on the basis of the perceived acoustical properties (timbre, time patterns, etc.). This result is coherent with the available literature demonstrating the coexistence of different strategies of listening, and links these strategies to the skills of the listeners. [This work is founded by the FP6 NEST Pathfinder European project CLOSED]