

## **ACOUSTICS2008/2914 Auditory Perception of Silent Object Properties**

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While much of what we consciously hear is based on sound sources, we also hear properties of objects that are themselves silent, but act to reflect and obstruct sound. A research program has been initiated to examine the degree to which listeners can judge properties of silent, sound-structuring objects. Results of this research have revealed impressive sensitivity to many of these properties. Thus far, this work has shown that (sighted) listeners have some ability to: a) determine the location, dimensions, and general shape of sound-obstructing panels; and b) identify various rooms based on how rooms structure emitted sounds; and c) determine their location in a room based on how the room structures sound at different positions. These results indicate that listeners are sensitive to ambient, as well as emitted acoustic properties, and call for a modified conception of human audition that takes into account these sensitivities.