
From Noise Control to Intelligibility: A History of Office Acoustics

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ABSTRACT

As historians have shown, at least since the early twentieth century, architectural acoustics has been concerned with dampening reverberant spaces into a clean, echoless acoustical ambience that came to represent the so-called ‘soundscape of modernity’ (Thompson 1995). In this paper, I show how architectural acousticians actually developed a completely different approach to noise control, shifting from acoustic noise control to managing (psycho-)acoustic intelligibility. I will discuss this shift against the context of office planning. From the 1950s onwards, new office concepts (such as the open office) were embraced for their planning flexibility, efficiency and advantages to inter-employee communication. However, they also posed new problems, as employees complained of noise, reduced concentration and lack of privacy. Professional acousticians in the 1960s and 70s addressed these complaints by modelling ‘privacy’ as a problem of speech intelligibility. They did this, among others, by repurposing the Articulation Index, a wartime standard developed to evaluate telephonic communication, into an inverted measure of privacy. Drawing on archival research, on acoustical isolation manufacturer Owens-Corning Fiberglas and office design manufacturer Herman Miller Inc., I trace how sound masking prompted a series of new technologies, materials and approaches to ‘condition’ building acoustics--yet again radically changing the architectural soundscape.

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