Auditory cortical processing in real-world listening: the auditory system going real.

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Abstract:

The auditory sense of humans transforms intrinsically senseless pressure waveforms into spectacularly rich perceptual phenomena: the music of Bach or the Beatles, the poetry of Li Bai or Omar Khayyam, or more prosaically the sense of the world filled with objects emitting sounds that is so important for those of us lucky enough to have hearing. Whereas the early representations of sounds in the auditory system are based on their physical structure, higher auditory centers are thought to represent sounds in terms of their perceptual attributes. In this symposium, we will illustrate the current research into this process, using four case studies. We will illustrate how the spectral and temporal properties of sounds are used to bind together, segregate, categorize, and interpret sound patterns on their way to acquire meaning, with important lessons to other sensory systems as well.

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