Preview

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Escher for the Ear; March 1996; by Yam; 1 page(s)

When computer-generated tones are played repeatedly in certain sequences, they can appear to rise or descend endlessly in pitch. Other patterns of notes are heard to ascend by some people but to descend by others. Diana Deutsch, a psychologist at the University of California at San Diego, now reports that childhood plays a crucial role in how one perceives certain Escheresque melodies.

Using a computer, Deutsch constructed notes that lack a clear octave relation. For example, to make an ambiguous C note, she combines the harmonics of all C notes and manipulates their relative amplitudes (in essence, playing all six C notes on a keyboard simultaneously). As a result, a listener might be able to identify the note as C but remain unsure if it is middle C or the C an octave above or below.

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