

As Good as the Real Thing?

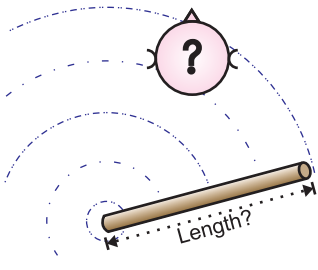
Performance Differences for Live versus Recorded Stimuli in an Everyday Listening Task

Summary

Using acoustic cues, normal-hearing subjects estimated the lengths of rods dropped onto a linoleum floor. Their length estimation accuracy was compared for three presentation methods: 1) live presentation of stimuli, 2) headphone playback of binaurally-recorded stimuli, and 3) headphone playback of monophonically-recorded stimuli.

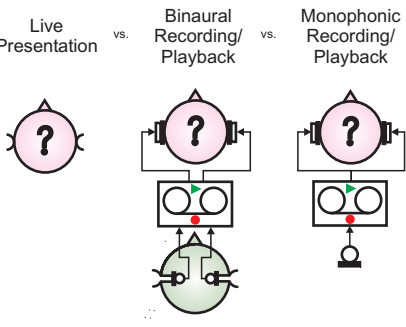
Subjects made larger errors in their length estimates when listening to mono stimuli than when performing the task live. Mono recordings are therefore not “as good as the real thing.” Inconclusively, results from binaural stimuli were not significantly different than live or mono. To their advantage however, binaural recordings were often subjectively mistaken for live stimuli.

1. Listening Task




Listening test subjects estimated the lengths of wooden dowels dropped on the floor behind them.

2. Presentation Methods




Simplified block diagrams of the three presentation methods that were compared to one another.

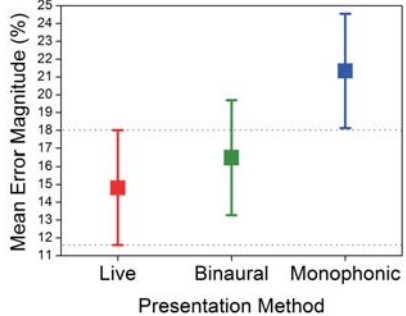
3. Dropping Apparatus



4. Listening Station



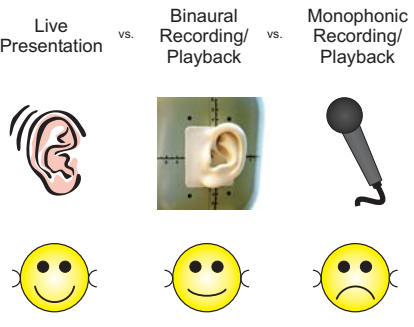
5. Length Estimation Errors



Presentation Method	Mean Error Magnitude (%)
Live	~14.5
Binaural	~16.5
Monophonic	~21.5

Mean length-estimation errors with 95% multiple-comparison confidence intervals. Mono produces larger errors than live.

6. Mono Audio Inferior



Presentation of mono recordings produces less accurate results than live presentation.