

Half-heard phone conversations reduce cognitive performance

May 25 2010, By Susan Lang

(PhysOrg.com) -- A new study finds that overheard cell phone conversations are distracting because we can't predict what will be said next.

Overhearing people chatting on cell phones is not only annoying; it is so distracting that it compromises [cognitive performance](#), reports a new Cornell study to be published in an upcoming issue of [Psychological Science](#).

The researchers say that overhearing half a conversation -- a "halfalogue" -- is more distracting than other kinds of conversations because we're missing the other side of the story and so can't predict the flow of the conversation.

The findings suggest that drivers of motor vehicles may be significantly compromised by overhearing the cell phone conversations of their passengers, say Michael Goldstein, assistant professor of psychology at Cornell, and doctoral candidate Lauren Emberson, who is also affiliated with Weill Cornell Medical College's Sackler Institute for Developmental Psychobiology.

"Hearing half a conversation is distracting because we are unable to predict the succession of speech. It requires more attention," said first author Emberson. "We believe this finding helps reveal how we understand language in conversation: We actively predict what the person is going to say next, and this reduces the difficulty of [language](#)

[comprehension.](#)"

The experiments the researchers conducted showed that people overhearing cell phone conversations did more poorly on cognitive tasks that demanded the kinds of attention we use to tend to daily activities, than when overhearing both sides of a cell phone conversation or a [dialogue](#), which resulted in no decreased performance.

"Since halfalogues really are more distracting, and you can't tune them out, people become irritated [and], even more importantly, their cognitive performance is impaired," Goldstein added.

While others studies have shown that talking on a cell phone can impair driving performance in contrast to listening to the radio or talking with a passenger, "Our findings demonstrate that simply overhearing a cell phone conversation is sufficient to reduce performance ... [suggesting] that a driver's attention can be impaired by a passenger's cell phone conversation," the researchers write in their paper.

With more than 285 million wireless subscribers in the United States alone -- and about 4.6 billion cell phone subscribers worldwide, according to the International Telecommunications Union, a U.N. agency -- cell phone distraction is becoming increasingly ubiquitous in public places, from coast to coast, the researchers note.

Provided by Cornell University

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