

Your spouse's voice is easier to hear—and easier to ignore

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With so many other competing voices, having a conversation on a bustling subway or at a crowded cocktail party takes a great deal of concentration. New research suggests that the familiar voice of a spouse stands out against other voices, helping to sharpen auditory perception and making it easier to focus on one voice at a time.

"Familiar voices appear to influence the way an auditory 'scene' is perceptually organized," explains lead [researcher](#) Ingrid Johnsrude of Queen's University, Canada.

Johnsrude and her colleagues asked married [couples](#), ages 44-79, to record themselves reading scripted instructions out loud. Later, each participant put on a pair of headphones and listened to the recording of his or her spouse as it played simultaneously with a recording of an unfamiliar voice.

On some trials, participants were told to report what their spouse said; on other trials, they were supposed to report what the unfamiliar voice said. The researchers wanted to see whether familiarity would make a difference in how well the participants understood what the target voice was saying.

The results, published in *Psychological Science*, a journal of the Association for Psychological Science, show a clear benefit of listening to the familiar voice.

Participants tended to be much more accurate on the task when they had to listen to their spouse's voice compared to an unfamiliar voice matched on both age and sex—they perceived their spouse's voice more clearly. Furthermore, accuracy didn't change as participants got older when they were listening to their spouse's voice.

"The benefit of familiarity is very large," Johnsrude notes. "It's on the order of the benefit you see when trying to perceptually distinguish two sounds that come from different locations compared to sounds that come from the same location."

But when participants were asked to report the unfamiliar voice, age-related differences emerged.

Middle-aged adults seemed to be relatively adept at following the unfamiliar voice, especially when it was masked by their spouse's voice—that is, they were better at understanding the unfamiliar voice when it was masked by their spouse's voice compared to when it was masked by another unfamiliar voice.

"The middle-aged adults were able to use what they knew about the familiar voice to perceptually separate and ignore it, so as to hear the unfamiliar voice better," Johnsrude explains.

But performance on these trials declined as the [participants](#) went up in age—the older the participant was, the less able he or she was to report correctly what the unfamiliar voice was saying.

"Middle-age people can ignore their spouse—older people aren't able to as much," Johnsrude concludes.

The researchers suggest that as people age, their ability to use what they know about [voices](#) to perceptually organize an auditory 'scene' may

become compromised.

While this may make it more difficult for older adults to pick out an unfamiliar voice, it has an interesting consequence: The relative benefit of having a familiar voice as the target actually increases with age.

"These findings speak to a problem that is very common amongst older individuals—difficulty hearing speech when there is background sound," Johnsrude says. "Our study identifies a cognitive factor—voice [familiarity](#)—that could help older listeners to hear better in these situations."

More information: pss.sagepub.com/content/early/.../97613482467.abstract

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