

Emotion in voices helps capture the listener's attention, but in the long run the words are not remembered as accurately

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Does the emotion in our voice have a lasting effect? According to Annett Schirmer and colleagues from the National University of Singapore, emotion helps us recognize words quicker and more accurately straight away. In the longer term however, we do not remember emotionally intoned speech as accurately as neutral speech. When we do remember the words, they have acquired an emotional value; for example words spoken in a sad voice are remembered as more negative than words spoken in a neutral voice.

The study, looking at the role of emotion in word [recognition memory](#), is published online in Springer's journal, *Cognitive, Affective & Behavioral Neuroscience*.

In anger, sadness, exhilaration or fear, speech takes on an urgency that is lacking from its normal even-tempered form. It becomes louder or softer, more hurried or delayed, more melodic, erratic or monotonous. And this [emotional](#) speech immediately captures a listener's attention. Schirmer and colleagues' work looks at whether emotion has a lasting effect on word memory.

A total of 48 men and 48 women listened to sadly and neutrally spoken words and were later shown these words in a visual test, examining [word recognition](#) and attitudes to these words. The authors also measured brain activity to look for evidence of vocal emotional coding.

Their analyses showed that participants recognized words better when they had previously heard them in the neutral tone compared with the sad tone. In addition, words were remembered more negatively if they had previously been heard in a sad voice.

The researchers also looked at gender differences in word processing. They found that women were more sensitive to the emotional elements than men, and were more likely than men to recall the emotion of the speaker's voice. Current levels of the female sex hormone estrogen predicted these differences.

Schirmer and team conclude: "Emotional voices produce changes in long-term memory, as well as capturing the listener's attention. They influence how easily spoken [words](#) are later recognized and what emotions are assigned to them. Thus voices, like other emotional signals, affect listeners beyond the immediate present."

More information: Schirmer A et al (2012). Vocal emotions influence verbal memory: neural correlates and inter-individual differences. *Cognitive, Affective & Behavioral Neuroscience*; [DOI 10.3758/s13415-012-0132-8](#)

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